DRAFT REMEDIAL DESIGN REPORT

FOR THE FORMER FARRINGTON STREET GAS WORKS SITE

PARCEL 2

QUEENS, NY

(Site No. 241208)

Prepared for:

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

31-01 20th Avenue

Long Island City, NY 11105

Prepared by:

PARSONS

301 Plainfield Road, Suite 350
Syracuse, NY 13212

February 2025

Certification

"I, Daniel Martoccia (of Parsons Main of New York, Inc.), certify that I am currently a New York State registered professional engineer and that this Remedial Design Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and DER Green Remediation (DER-31) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications."

_____ _____

Engineer's Seal Date

PARSONS

TABLE OF CONTENTS

Page

LIST OF ACRONYMS VI

SECTION 1 INTRODUCTION 1-1

1.1 Site Location 1-1

1.2 Site History 1-2

1.3 Site Geology And Hydrogeology 1-2

1.4 Remedial Design Report Organization 1-3

SECTION 2 SUMMARY OF PREVIOUS INVESTIGATIONS 2-1

2.1 Visual NAPL Observations 2-2

2.2 NAPL Sampling Results 2-4

2.3 Groundwater Modeling 2-5

2.4 PCB Site Characterization 2-6
2.4.1 Initial PCB Site Characterization (June 2021) 2-6
2.4.2 PCB Site Characterization (2021-2024) 2-7

2.5 Geotechnical Investigation Results 2-8

2.6 Subsurface Feature Delineation 2-9

2.7 In-Situ Soil Sampling Waste Characterization Analysis 2-9

2.8 ISS Bench Scale Treatability Study 2-10

SECTION 3 REMEDIAL DESIGN 3-1

3.1 Introduction 3-1

3.2 Remedial Goals 3-1

3.3 Remedial Action Objectives 3-1

3.4 Summary of Selected Remedy 3-2

3.5 Summary of Remedial Design implementation Activities 3-2
3.5.1 Community Air Monitoring Plan 3-3
3.5.2 Site Preparation and Mobilization 3-3
3.5.3 Site Surveys 3-4
3.5.4 Erosion and Sediment Controls 3-5
3.5.5 Excavation of PCB-Impacted Soils 3-5
3.5.6 Excavation within ISS Areas 3-6
3.5.7 Implementation of ISS Treatment 3-7
3.5.8 Material Handling, Management, and Disposition 3-7
3.5.9 Decontamination Procedures 3-8
3.5.10 Site Restoration 3-9
3.5.11 Green Remediation 3-10

SECTION 4 DOCUMENTATION OF REMEDIAL ACTION 4-1

4.1 Daily Field Construction Report 4-1

4.2 Transportation Log 4-1

4.3 Weekly Community Air-Monitoring Report 4-1

4.4 Master Sample Log 4-1

4.5 Chain of Custody 4-1

4.6 Health and Safety Documentation 4-1

4.7 Project Documentation 4-1

4.8 Key Project Personnel 4-2

SECTION 5 PERMITTING AND REGULATORY REQUIREMENTS 5-1

5.1 Permitting 5-1

5.2 Regulatory Requirements 5-1

5.3 Transportation Requirements 5-2

SECTION 6 QUALITY ASSURANCE 6-1

6.1 General Quality Assurance Procedures 6-1

SECTION 7 POST-REMEDIATION ACTIVITIES 7-1

7.1 Construction Completion Report..... 7-1

7.2 Engineering and Institutional Controls..... 7-1

SECTION 8 PROJECT SCHEDULE 8-1

SECTION 9 REFERENCES 9-1

TABLE OF CONTENTS (CONTINUED)

LIST OF TABLES

Table 1a	Summary of June 2021 PCB Site Characterization Analytical Data
Table 1b	Summary of 2021-2024 PCB Site Characterization Analytical Data
Table 2	Summary of Geotechnical Laboratory Analytical Data
Table 3	Summary of In-Situ Waste Characterization Analytical Data

LIST OF FIGURES

Figure 1	Site Location Map
Figure 2	Former MGP Structures
Figure 3A	Sample Location Map, Site Characterization and Remedial Investigation
Figure 3B	Sample Location Map, Supplemental Remedial Investigation
Figure 3C	Sample Location Map, PCB Site Characterization
Figure 4	Cross-Section A-A’
Figure 5	Summary of NAPL Detected in Subsurface Soil
Figure 6	Groundwater Monitoring Program Wells

LIST OF APPENDICES

Appendix A	Zoning Map
Appendix B	Soil Boring and Test Pit Logs
Appendix C	Groundwater Modeling Report
Appendix D	PCB Self-Implementing Cleanup Plan (Reserved)
Appendix E	Design Drawings
Appendix F	ISS Treatability Study
Appendix G	Community Air Monitoring Plan
Appendix H	Technical Specifications (Reserved)
Appendix I	Stormwater Pollution Prevention Plan
Appendix J	Quality Assurance Project Plan
Appendix K	Construction Quality Assurance Project Plan

TABLE OF CONTENTS - CONTINUED

LIST OF DESIGN DRAWINGS (APPENDIX E)

453055-G-001	Cover Sheet
453055-G-002	General Notes & Legend
453055-C-001	Existing Conditions Plan
453055-C-002	Subsurface Obstruction Summary
453055-C-003	Groundwater Contour Plan
453055-C-004	Site Preparation and Demolition Plan
453055-C-005	Soil Erosion and Sediment Control Plan
453055-C-006	Phase 1 Excavation Plan
453055-C-007	Phase 2 Excavation Plan
453055-C-008	Proposed ISS Site Plan
453055-C-009	Remedial Action Cross Sections
453055-C-010	Site Restoration Plan
453055-D-001	Details (1 of 3)
453055-D-002	Details (2 of 3)

LIST OF ACRONYMS

AAR	Alternatives Analysis Report
ASTM	American Society for Testing and Materials
bgs	below ground surface
CAMP	Community Air Monitoring Plan
CCR	Construction Completion Report
CFR	U.S. Code of Federal Regulations
cm/sec	centimeters per second
Con Edison	Consolidated Edison Company of New York, Inc.
CQAPP	Construction Quality Assurance Project Plan
CSCO	Commercial Soil Cleanup Objective
CRZ	contaminant reduction zone
EC	engineering control
ESC	erosion and sediment control
F	Fahrenheit
HASP	Health and Safety Plan
IC	institutional control
ISS	*in situ* solidification/stabilization
LNAPL	light non-aqueous phase liquid
MGP	manufactured gas plant
mg/kg	milligram per kilogram
mg/L	milligram per liter
NAPL	non-aqueous phase liquid
NYCRR	New York Codes, Rules and Regulations
NYCDOB	New York City Department of Buildings
NYCDEP	New York City Department of Environmental Protection
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCB	polychlorinated biphenyl
pcf	pounds per cubic foot
PID	photoionization detector
PLS	Professional Land Surveyor
PPE	personal protective equipment
psi	pounds per square inch

OSHA	Occupational Safety and Health Administration
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RAOs	remedial action objectives
RCRA	Resource and Conservation Recovery Act
RDR	Remedial Design Report
RI	Remedial Investigation
RIR	Remedial Investigation Report
SCGs	Standards, Criteria, and Guidance Values
SC	Site Characterization
SICP	Self-Implementing Cleanup Plan
Site	Former Farrington Street Gas Works, Parcel 2
SMP	Site Management Plan
SPDES	State Pollutant Discharge Elimination System
SPLP	synthetic precipitation leaching procedure
SPT	standard penetration test
SRI	Supplemental Remedial Investigation
SRIR	Supplemental Remedial Investigation Report
SVOC	semi-volatile organic compounds
SWPPP	Stormwater Pollution Prevention Plan
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Protocol
TDS	Total Dissolved Solids
UCS	unconfined compressive strength
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compounds
W:C	water to cement
WH	weight of hammer

SECTION 1

INTRODUCTION

On behalf of Consolidated Edison Company of New York, Inc. (Con Edison), Parsons has prepared this Draft Remedial Design Report (RDR) for the former Farrington Street Gas Works - Parcel 2 (the "Site") located in Queens, New York (Figure 1). The purpose of this RDR is to present and describe the New York State Department of Environmental Conservation (NYSDEC) selected remedy to achieve the remedial goals and remedial action objectives (RAOs) for the Site as required by the NYSDEC.

A revised Alternatives Analysis Report (AAR) was submitted to the NYSDEC in January 2025, which presented remedial alternatives developed to address the RAOs for the Site. The AAR was developed utilizing field investigation data collected during Site Characterization (SC), Remedial Investigation (RI), and Supplemental Remedial Investigation (SRI) activities. This RDR describes the remedial design for *in-situ* solidification/stabilization (ISS) of non-aqueous phase liquid (NAPL)-impacted soils in Parcel 2 of the Site, as proposed in Alternative 3 of the AAR. This RDR also provides documentation of SRI field activities completed in 2021-2024, and analysis of Site-wide data and conclusions that support the implementation of the remedy for Parcel 2. Additionally, a Self-Implementing Cleanup Plan (SICP) is being developed in accordance with Title 40 of the Code of Federal Regulations (CFR) Part 761.61(a) to address polychlorinated biphenyl (PCB)-impacted soils as a component of the remedy to be completed within Parcel 2.

This RDR has been prepared in accordance with the requirements set forth in *Title 6 of the New York Codes, Rules and Regulations Part 375* (6 NYCRR Part 375) *Environmental Remediation Programs* (NYSDEC, 2006) and the *NYSDEC's Technical Guidance for Site Investigations and Remediation* (DER-10) (NYSDEC, 2010a), and the *NYSDEC's Green Remediation* (DER-31) (NYSDEC 2010b). Data contained within the Site Characterization Report (Parsons, 2010), Remedial Investigation Report (Parsons, 2017) (RIR), Supplemental Remedial Investigation Report (Parsons, 2019) (SRIR), SRI data collected in 2021 through 2024, and recommendations presented in the revised 2022 AAR, provide the basis for the development of this RDR.

1.1 SITE LOCATION

The Site is located at 31-06 and 31-24 Farrington Street in Queens, New York (Figure 1). For the purposes of describing the Site, it has been divided into Parcels 1, the Market Area (which is part of Parcel 1), and Parcel 2. This RDR presents the remedial action to be completed within the Parcel 2 area of the Site, located at 31-24 Farrington Street (Figure 2) (the "Site"). The Site is approximately 2.16 acres, located on a portion of Tax Block 4406 Lot 30, and consists of a gravel, asphalt, and concrete yard utilized by Con Edison as an equipment, storage, and lay down area. The Site is bordered to the north by 31st Drive, to the east by Farrington Street, to the south by 32nd Avenue, and to the west by Byrds Alley. The Site is located approximately 2,000 feet northeast of Flushing Creek, 1,200 feet southwest of Mill Creek, and 4,000 feet east of Flushing Bay. According to the New York City Department of City Planning, the Site and northwestern, western,

southwestern, and southern abutting properties are zoned as M2-1; medium manufacturing districts (medium performance), and the abutting properties east of Farrington Street are zoned as M1-1; light manufacturing districts (high performance) (Appendix A).

1.2 SITE HISTORY

Historical research was previously conducted and documented in the *Site History Research Report* (ENSR, 2003). Based on this report, the former Farrington Street Gas Works site was owned and/or operated as a manufactured gas plant (MGP) by several different power companies between 1887 and the late 1940s. Prior to the initiation of manufactured gas operations in 1887, the original Site boundaries included a smaller tract of land (the southwestern portion of Parcel 2), which was subdivided into smaller private properties. Flushing Gas Light Company acquired portions of the original Site property between 1859 and 1901 and operated the MGP until 1889. Between 1901 and 1905, Newton and Flushing Gas Company, a subsidiary of the New York and Queens Gas Co., operated the Site and MGP, and expanded the property boundaries into the northwestern portion of Parcel 2 in 1901. In 1905, The New York and Queens Company acquired the portion of the property previously owned by Flushing Gas Light Company and Newton and Flushing Gas Light Company. Between 1909 and 1921, New York and Queens Gas Company acquired and expanded the MGP into the eastern portions of Parcels 1 and 2. Con Edison purchased the property to the east of the Site, now known as the Farrington Gas Holder site[1], from New York and Queens Gas Company on February 26, 1924. Between 1924 and 1976, a three million cubic foot waterless gasholder and related equipment and structures occupied the Farrington Holder. After the MGP was retired in 1944, the holder at the Farrington Gas Holder site was used for storage of gas that was produced at other Con Edison plants or purchased from other utilities. New York and Queens Gas Company merged with Con Edison on June 1, 1936, at which time Con Edison assumed operation of the MGP, then located in present-day Parcels 1, 2, and the Farrington Gas Holder site (ENSR, 2003). Figure 2 depicts the approximate locations of the former historic structures at the Site.

1.3 SITE GEOLOGY AND HYDROGEOLOGY

Soil borings completed during investigation activities at the Site show mixed sand and silt present below urban fill found at the surface. Interpreted geologic cross sections for the Site including data through the 2018 SRI, generated from soil boring, monitoring well, test pit, and other sampling locations (Figures 3A, 3B, and 3C) are presented on Figure 4. Urban fill material, generally consisting of sand, gravel, and silt with various debris including cobbles, cement, brick, metal, wood fragments, and slag, ranges in thickness from 1.0 to 12.5 feet. Fill material in Parcel 2 is generally underlain by native sands, with finer grained silts and sands being observed in select borings. No bedrock was encountered during investigation activities; therefore, the bottom of the sand layer cannot be bound. However, soil borings observed sand thicknesses ranging from at least 12.5 to 50.0 feet. These thick accumulations of sands are also observed in adjacent sidewalk areas. Complete boring logs from investigation activities are presented in Appendix B.

[1] The former Farrington Street Gas Holder site, also known as Parcel 3, is located across the street from the Site to the southeast, and has been addressed separately from the former Farrington Street Gas Works site.

The most recent groundwater gauging event at the Site was completed in November 2018 during the 2018 SRI. Groundwater elevations collected from a November 2018 groundwater gauging event were used to produce a Site groundwater contour map. Groundwater contours based on the November 2018 gauging indicate that there are variable flow conditions at the Site that are driven by localized high and low groundwater elevations. Groundwater gauging results indicate high groundwater elevations to the northwest of the Site (within the adjacent Parcel 1), and lower groundwater elevations in the southeastern part of the Site (within Parcel 2), indicating a general groundwater flow direction to the southeast. A localized groundwater depression appears to be present within the north of the Parcel 2 boundary.

1.4 REMEDIAL DESIGN REPORT ORGANIZATION

This RDR has been organized in accordance with DER-10 as follows:

- Section 1 – Introduction
- Section 2 – Summary of Previous Investigations
- Section 3 – Remedial Design
- Section 4 – Documentation of Remedial Action
- Section 5 – Permitting and Regulatory Requirements
- Section 6 – Quality Assurance
- Section 7 – Post-Remediation Activities
- Section 8 – Project Schedule
- Section 9 – References

SECTION 2

SUMMARY OF PREVIOUS INVESTIGATIONS

Multiple investigations have been conducted to assess Site conditions and determine the nature and extent of MGP-impacted material. This section provides background information regarding previous investigations as well as a description of where more information pertaining to the individual investigations can be found. The following list summarizes the Site investigations:

- Site Characterization (SC) of Parcel 2 (2009)
- Remedial Investigation (RI) (2011-2015)
- 2018 Supplemental Remedial Investigation (SRI) (2018)
- 2021 – 2022 SRI
- 2021 – 2024 PCB Site Characterization

The scope of the SC, RI, and 2018 SRI investigations and a comprehensive reporting of the findings for each, including subsurface stratigraphy, hydraulic conductivity, NAPL transmissivity, and laboratory analytical data for soil, groundwater, and soil vapor, are presented in the AAR (2022). Data collected during the SC, RI and SRI were used to develop a groundwater model for the Site.

Figure 3A depicts the soil boring, monitoring well locations, and groundwater study locations at the Site investigated as a part of the various remedial field efforts. The collected data pertaining to Parcel 2 is presented in the Site Characterization Report (Parsons, 2010), the Remedial Investigation Report for the Former Farrington Street Gas Works Site (Parsons, 2017), and the Supplemental Remedial Investigation Report for the Former Farrington Street Gas Works Site (Parsons, 2019).

The scope of work associated with the 2021-2022 SRI was completed in November 2021 through March 2022, and included subsurface feature delineation, the advancement of geotechnical soil borings, the advancement of soil borings for the purpose of NAPL delineation, and the installation of additional groundwater monitoring wells. The PCB Site Characterization was implemented during the SRI and was completed between November 2021 and March 20924. Figure 3B depicts soil boring and groundwater monitoring well locations at the Site installed as part of the 2021-2022 SRI. Investigation results from the 2021-2022 SRI are further discussed in the below sections.

During a security fence upgrade project conducted within the Parcel 2 portion of the Site in 2020, PCBs were detected in Site soils in elevated concentrations. Abandoned pipes were encountered immediately below the surface along the eastern perimeter of Parcel 2 during shallow excavations to support fence installation. Soils within the abandoned pipes were collected and submitted for laboratory analysis for the purpose of waste characterization in December 2020.

PCBs were detected in soils collected from the pipes at a concentration of 360 mg/kg, exceeding the Toxic Substances Control Act (TSCA) criteria of 50 mg/kg for PCB remediation waste specified by 40 CFR 761.50(b)(3). Following the detection of PCB-impacted soils at the Site the security fence upgrade project was temporarily halted with portions of the perimeter fence unfinished. Initial PCB SC sampling efforts were completed along portions of the Parcel 2 perimeter to facilitate "make Site safe" efforts, comprised of semi-permanent fence installations along previously unfinished portions of the Site perimeter.

Subsequently, a PCB SC was conducted between 2021 and 2024 to characterize surface soils within the remaining areas of Parcel 2. Soil sampling for PCBs was completed with the sampling scheme specified in 40 CFR § 761.265(a) modified to utilize a 30-foot (approximately 9-meter) grid based on PCB analytical data generated during initial PCB sampling activities. Figure 3C depicts PCB sampling locations completed as part of the PCB SC. Comprehensive reporting associated with the PCB SC will be included in a separate SICP which is being developed in accordance with the requirements of 40 CFR § 761.61. As PCBs are not associated with MGP operations, it is believed that the source of the PCBs may be historical fill material. Results from the PCB SC are further discussed below.

2.1 VISUAL NAPL OBSERVATIONS

During each prior Site investigation soils were logged for physical characteristics (e.g., soil type, color, texture, moisture content, etc.), along with physical evidence of any impacted material (e.g., oil-like or tar-like NAPL, staining, sheens, odors, etc.). During investigation activities through 2022, NAPL was encountered in Parcel 2 soils at 41 locations (Figure 5). NAPL impacts in the form of NAPL blebs and NAPL saturation were observed in soils screened from the following monitoring well and soil boring locations and depths:

NAPL Observations in Screened Soils		
Investigation	**Boring ID**	**Depth of Observed NAPL (feet below ground surface [bgs])**
2009 Site Characterization	SB-17	13 – 17
	SB-19	13.5 - 22
	SB-22	14.5 – 17.5
	SB-23	10.5 – 19 and 24 – 24.5
	SB-25	14.5 – 20.5 and 28 - 30
	SB-26	15 - 16
	MW-14	12 - 22
	MW-15	14.5 - 20
	MW-16	14 – 20 and 22 - 24
	MW-18	16.5 - 20
	MW-19	15 - 21

2011 – 2015 Remedial Investigation	MW-25	9 – 16, 27.5 – 33, and 41 – 44
	MW-29	13 – 17
	SB-38	15 – 17
	SB-39	9 – 11 and 13 – 21
	SB-40	13 - 21
	SB-41	13 - 21
	SB-42	12 – 16 and 22.5 – 30
	SB-43	13 – 17
	SB-44	16.5 – 18
	SB-45	9 – 19, 21 – 25, and 27.5 - 33
2021-2022 Supplemental Remedial Investigation	SB-86	22 - 26
	SB-87	21 - 22
	SB-90	12.5 - 25
	SB-97	25 – 28.5
	SB-91	13 – 17; 19 - 21
	SB-93	21.5 – 22; 37.8 - 40
	SB-94	9 – 9.5; 22 - 25
	SB-96	15.5 – 17; 21 – 21.5; 24 – 29
	SB-97	25 – 28.5
	SB-98	11.5 – 16; 18.5 - 25
	SB-111	13 – 14; 17 – 19
	SB-155	21 – 21.5
	SB-201	17 – 23
	SB-202	15.5 – 17
	SB-203	17 – 17.5
	SB-204	17 – 17.5
	SB-208	17 – 18.5
	SB-209	42 – 45
	SB-210	21 – 22; 25 – 25.5; 33.5 – 34
	SB-215	16 – 20.5; 21 – 22

During groundwater sampling activities in each previous investigation, each well was monitored for the presence of NAPL. A summary of visual observations during each sampling event is provided below.

- 2009 Sampling Event – Light NAPL (LNAPL) was observed in well MW-14 (less than 0.1 feet). No sheens were noted in any of the wells.
- 2011 Sampling Event – LNAPL was observed in monitoring wells MW-15 (~0.13 feet), MW-18 (~0.31 feet), and CMW-38 (~1.41 feet). In addition, a sheen was noted on the purge water from MW-16, MW-17, and MW-19.
- 2015 Sampling Event – LNAPL was observed in monitoring wells MW-15 (~1.95 feet), MW-19 (~2.93 feet), and CMW-38 (~1.47 feet). In addition, NAPL was observed on the tape of the probe when it was retrieved from MW-18, and a heavy sheen was noted on the purge water from MW-16.
- 2018 Sampling Event – LNAPL was observed in monitoring wells MW-15 (~0.14 feet), MW-19 (~0.43 feet), and CMW-38 (~0.47 feet). A NAPL drawdown test was performed in CMW-38, and approximately 200 milliliters of NAPL were removed from the well and levels were subsequently monitored for a period of three hours, at which time only trace amounts of NAPL were measurable within the well.

During NAPL delineation boring activities completed during the 2021-2022 SRI, temporary groundwater monitoring wells were installed in each boring location and allowed to equilibrate for a period of at least 12 hours prior to gauging for the presence of NAPL. A summary of NAPL observations from temporary groundwater monitoring wells is provided below.

- SB-98 – LNAPL measured at a thickness of 0.61 feet
- SB-173 – LNAPL measured at a thickness of 0.30 feet
- SB-111 – LNAPL measured at a thickness of 0.05 feet

2.2 NAPL SAMPLING RESULTS

During the 2018 SRI, LNAPL samples were collected at MW-15, MW-19, and CMW-38 and analyzed for physical properties (density, viscosity, and interfacial tension). Analytical results from each sample were generally consistent and represented a typical MGP-type LNAPL. Physical properties were also indicative of LNAPL, which support field observations. The full laboratory analytical report pertaining to NAPL sampling is presented in the SRIR (Parsons, 2019).

The specific gravity of each NAPL sample ranged from approximately 0.89 to 0.92 (unitless) from 70 to 130 degrees Fahrenheit (F). The projected specific gravity in-situ (assuming 45 degrees F) ranged from approximately 0.905 to 0.902. Since these values are less than 1, this further confirms that the NAPL sampled is a LNAPL.

The measured viscosity varied from approximately 3.44 to 19.05 centistokes (3.02 to 17.50 centipoise) at 70 to 130 degrees F. The estimated in-situ viscosity is approximately 12 to 30 centistokes, when projecting this trend to 45 degrees F. As further discussed in the section below, NAPL mobility is inversely proportional to viscosity (as viscosity increases fluid mobility decreases proportionally). Therefore, the elevated viscosities observed in NAPL collected from the Site suggest that NAPL mobility is low.

During the 2021-2022 SRI, LNAPL samples were collected from temporary monitoring wells installed at soil boring locations SB-98, and SB-173 and submitted for analysis of physical properties (density, viscosity, and interfacial tension). While NAPL was detected at measurable

quantities in soil boring location SB-111, NAPL was not recovered in sufficient quantity to perform analysis of physical properties. The specific gravity of NAPL samples ranged from approximately 0.90 to 0.92 (unitless) at 70 to 130 degrees F. The estimated in-situ viscosity is approximately 11 to 13 centistokes. Additionally, a soil core of NAPL saturated soil was collected from soil boring location SB-90 at a depth of 15 to 19 feet bgs, flash frozen, and submitted core slabbing, digital photography, and pore fluid saturation analysis. Pore fluid saturation of NAPL within the analyzed interval of soil boring location SB-90 was approximately 13 percent.

2.3 GROUNDWATER MODELING

Using data collected during the 2018 SRI field activities, a numerical finite difference groundwater model was developed, constructed, and calibrated (with sensitivity testing) to simulate groundwater flow conditions, and to simulate groundwater particle paths and associated velocities across the Former Farrington Street Gas Works site, to include the Site. The steady state model was calibrated to one set of synoptic water levels using groundwater hydraulic information (transmissivity, regional gradients, aquifer architecture, potential for tidal influences, etc., collected during SRI field activities).

The model was calibrated using regional information (surface water bodies), field data (hydraulic head measurements), and inverse modeling processes (software algorithms). Once calibrated objectives were met and the model produced results consistent with groundwater flow results, predictive scenarios were developed. Regional recharge to the aquifer was estimated at a low value of 1.16 inches per year, but slightly above published value of 0.89 inches per year. Due to the retail building in the Market Area of Parcel 1, the recharge under the building was reduced to 0.22 inches per year to support calibration. It was observed that because of the steady state simulation, and the idealized nature of the model, elevated water mounding occurred in Parcel 1. Therefore, predictive model runs were established with calibrated recharge and zero recharge for the three parcels. While surface improvements and engineering design can further reduce recharge in the parcels, it remains unknown if recharge could be reduced to zero. As such, for the varying recharge predictive scenarios, the calibrated recharge and zero recharge simulations provide a range of groundwater velocities, and it is likely that the actual velocity would be within this range.

Initially, three groundwater modeling scenarios were considered to support the development of remedial alternatives for the Former Farrington Street Gas Works site:

- Existing Conditions
- Subsurface Barrier Wall within Parcels 1 and 2
- ISS within Parcels 1 and 2

Following initial modeling scenarios, the groundwater model was refined to include the implementation of ISS within Parcel 2 only as a component of this RDR. The ISS areas were simulated with low hydraulic conductivity zones representative of a clay material (0.0028 feet per day or 1 x 10^{-6} centimeters per second [cm/s]). The hydraulic conductivity zones were emplaced within the model to reflect the eventual Site conditions.

To evaluate the effects of the remedial design on the groundwater flow at the Former Farrington Street Gas Works site, particle tracking was performed for both existing conditions and

post-construction conditions to compare differences in the average linear velocity. For existing conditions, four particles were tracked within Parcel 1 (two within the northern parking lot area, and two within the vicinity of the Market Area), and four particles were tracked within Parcel 2. For the post construction conditions model, the same particles were tracked within Parcel 1. However, the four particles within Parcel 2 were not simulated since it is expected that there will be negligible flow within this region because of the ISS.

The average linear velocities for the 10 years following construction for the four particles tracked in both the existing conditions and the construction conditions are summarized in the table below:

Average Linear Velocity Over 10 Years			
Location	**Particle #**	**Existing Conditions (feet/year)**	**Post-Construction Conditions (feet/year)**
Parcel 1 Market Area	1	39.60	49.30
	2	34.21	43.20
Parcel 1 Parking Lot Area	7	37.93	41.22
	8	34.08	33.99

Particles within the northern parking lot area of Parcel 1 had similar average linear velocities between existing and post construction conditions. The particles within the Market Area demonstrated a slight increase in flow velocity due to particle migration around the ISS body in Parcel 2, causing a convergence of flow patterns.

Full details pertaining to groundwater modeling are presented in Appendix C.

2.4 PCB SITE CHARACTERIZATION

Based on the detected presence of PCBs in surface soils, a comprehensive PCB SC was completed within Parcel 2. Initial sampling was completed in June 2021, with additional characterization completed during field implementation of the 2021-2024 SRI. The PCB SC is summarized in the following sections. All soil samples were submitted for laboratory analysis of PCBs via EPA Method 8082A with Soxhlet extraction.

2.4.1 Initial PCB Site Characterization (June 2021)

During the 2020 fence upgrade activities, abandoned pipes were encountered immediately below the surface on the eastern boundary of Parcel 2 during shallow excavations advanced to support the fence upgrade. Soils within the abandoned pipes were collected and submitted for laboratory analysis for the purpose of waste characterization in December 2020. PCBs were detected in soils collected from the pipes at a concentration of 360 milligrams per kilogram (mg/kg), exceeding the criteria of 50 mg/kg for PCB remediation waste specified in 40 CFR 761.50(b)(3). Intrusive fence upgrade field activities were temporarily halted pending further discussion regarding PCBs in Site soils, and portions of the security fence and associated features along the western, southern, and eastern boundaries of the Site were temporarily secured.

Initial PCB SC sampling activities were completed in June 2021 along Site boundaries where unfinished fence sections existed. Sampling was completed to characterize surface soils that would

be disturbed during the "make Site safe" efforts to finish a semi-permanent construction of the security fence in the following locations:

- Southwestern corner and western 32nd Avenue area, adjacent to Byrd's Alley and 32nd Avenue
- Eastern 32nd Avenue area, along 32nd Avenue
- Entrance gate area in northeastern section of Site
- Tree stump removal area in northeast corner of Site, at the corner of Farrington Street and 31st Drive

Soil samples were collected from a total of 31 locations on approximately 10-foot horizontal intervals in locations where intrusive work was planned, as detailed on Figure 3C. Depending upon the depth of the excavation, which did not exceed 24-inches bgs, either one or two soil samples were collected from each sampling location. In locations where one soil sample was collected, the top 6-inches of soil were sampled. In locations where two soil samples were collected, the first soil sample was collected at the surface of the excavation area to a depth of 6-inches directly below the gravel cover subbase or asphalt/concrete cover (or at a depth interval of 6-inches to 12-inches bgs in bare soil areas) and the second soil sample was collected at the bottom 6-inch interval of the planned excavation depth.

A total of 60 soil samples were collected during June 2021 PCB sampling activities. A total of two PCB Aroclors (Aroclor-1254 and Aroclor 1260) were detected at least once in soil samples, and PCBs were detected at concentrations ranging from 0.01 mg/kg to 52.0 mg/kg. PCBs were detected at concentrations exceeding NYSDEC Commercial Soil Cleanup Objectives (CSCOs) (1 mg/kg) per 6 NYCRR part 375 (NYSDEC, 2006) in 13 samples, and in eight locations. Laboratory analytical results associated with June 2021 PCB SC sampling are presented in Table 1a.

Soils in locations where June 2021 PCB SC activities were completed were removed as a component of the "make Site safe" efforts to complete the security fence.

2.4.2 PCB Site Characterization (2021-2024)

Following completion of "make Site safe" PCB sampling activities completed in June 2021, a PCB SC was conducted concurrently with the 2021-2024 SRI field activities to characterize soils within the remaining areas of Parcel 2. Soil sampling utilized a 30-foot (approximately 9-meter) grid based on PCB analytical data generated during initial PCB sampling activities. Figure 3C depicts PCB sampling locations completed as part of the PCB SC.

Soil sampling was completed in a total of 116 sampling grid areas. Two soil samples were collected from each sampling location, as follows:

- One sample was collected from the 6-inch interval directly below the surface, or the 6-inch interval directly below the subbase material.
- One sample was collected from the 3.5 to 4-foot bgs interval.

Where PCBs were detected at concentrations greater than 1 mg/kg in the 3.5 to 4.0-foot bgs interval, borings were advanced, and soil samples were collected and analyzed for PCBs in discrete 0.5-foot intervals until PCBs were detected at concentrations in soil less than or equal to 1 mg/kg.

Step-out borings were completed on a 30-foot-grid and were advanced to the depth interval in which PCBs were detected in concentrations in soil greater than 1 mg/kg in the adjacent boring. Step-out borings were advanced, and soil samples were collected and analyzed for PCBs in discrete 0.5-foot samples until PCBs in soil were detected at concentrations less than or equal to 1 mg/kg. The deepest interval in which PCBs greater than 1 mg/kg were detected in soil was from 7.5 to 8.0 feet bgs. Additionally, at the request of the NYSDEC, 37 deep borings were advanced in 36 sampling grids. Samples in these deep borings were collected from an 0.5-foot interval at a depth approximately 2 feet below the targeted ISS depth associated with MGP-remediation activities (maximum boring depth 49 feet bgs).

A total of 554 soil samples were collected at the Site for PCB analysis during the 2021 – 2024 PCB Site Characterization and submitted for laboratory analysis of PCBs via EPA Method 8082A via Soxhlet extraction. PCBs in soil were detected at concentrations ranging from non-detect to 64.0 mg/kg; no soil samples had PCB concentrations exceeding 100 mg/kg. Six PCB Aroclors (Aroclor-1221, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, and Aroclor-1268) were detected at least once in soil samples.

One sampling grid contained soil with PCB concentrations greater than or equal to 50 mg/kg (soil boring SB-143). Eight sampling grids contained soil with PCB concentrations greater than 10 mg/kg but less than 50 mg/kg. Twenty-nine sampling grids contained soil with PCB concentrations greater than 1 mg/kg but less than or equal to 10 mg/kg. Seventy-eight sampling grids contained soil with PCB concentrations less than or equal to 1 mg/kg or non-detect.

The laboratory analytical results for PCBs in the soil samples collected during the 2021 – 2024 PCB Site Characterization are presented in Table 1b. As PCBs are not associated with MGP operations, it is believed that the source of the PCBs may be historical fill material.

Comprehensive reporting associated with the PCB SC will be included with the SICP. The SICP will be developed consistent with the requirements of 40 CFR § 761.61.

2.5 GEOTECHNICAL INVESTIGATION RESULTS

The following section provides a summary of the geotechnical investigation that was completed during field implementation of the 2021-2024 SRI at the Site. Geotechnical soil samples were collected from a total of 28 soil borings during SRI field activities (Figure 3B). Geotechnical soil borings were advanced to depths ranging from 24 feet bgs to 49 feet bgs based on the total ISS implementation depth that was generated during development of the AAR, with borings advanced to a depth of 2 feet below the anticipated ISS depth. Geotechnical soil borings were advanced via sonic drill rig capable of advancing split spoon samplers via automatic safety hammer. Each soil boring location was cleared to a depth of 5 feet bgs via soft digging methods for utility clearance purposes prior to boring advancement. Collected soil samples were representative of subsurface stratigraphy and materials that were present within the remediation area, as determined at the time of soil boring advancement. Soil boring logs are presented in Appendix B.

Thirty-three soil samples were submitted for laboratory analysis of Atterberg Limits (ASTM D4318), moisture content (ASTM D2216), sieve (ASTM D6913), sieve with hydrometer (ASTM D6913/D7928), USCS classification (ASTM D2487), specific gravity (ASTM D854), and organic content.

Standard Penetration Test (SPT) was completed within each boring to collect blow counts via ASTM D1586. Blow counts were collected continuously to a depth of 20 feet bgs, after which blow counts were collected on one 2-foot interval per 5 vertical feet for the remainder of the boring. SPT results ranged from weight of hammer (WH) to 56 blows per 6-inch interval.

Generally, subsurface conditions encountered during drilling activities consisted of an upper layer of fill material composed of intermixed sand, silts, gravel, and brick/concrete debris, consistent with prior investigations. Subsurface conditions below the fill material consisted predominantly of silty sands, with isolated lenses of silt or gravel encountered intermittently. Laboratory analytical results for geotechnical analyses are presented in Table 2.

2.6 SUBSURFACE FEATURE DELINEATION

Former MGP structures existed at the Site in various configurations between 1892 and 1944 when operations were discontinued and were present at the Site until at least 1954 (Figure 2). Many of the above ground surface structures were dismantled and removed, with the majority of the surface features remaining at and/or below grade. Subsurface features were initially characterized at the Site during the completion of test pitting activities during field implementation of the SC. Test pitting activities encountered brick walls, metal walls, metal coal tar bins, slabs, and other features attributed to MGP operations. Test pit locations are presented on Figure 3A. Additionally, during the initial phase of the security fence project completed at the Site, work completed along the Site perimeter encountered numerous subsurface obstructions and features.

To further characterize the nature and extent of subsurface obstructions, hand clearances were advanced to a depth of at least 4 feet bgs in 154 locations. Subsurface obstructions were identified in 48 hand clearance locations distributed throughout the Site. Obstruction depths ranged from encountered at the surface to a maximum depth of 10 feet bgs, although obstructions may exist at deeper depths.

A summary of subsurface obstructions encountered during SC, RI, and SRI field activities is presented in Design Drawing C-002-A (Appendix E).

2.7 IN-SITU SOIL SAMPLING WASTE CHARACTERIZATION ANALYSIS

In-situ soil sampling was completed during 2021-2024 SRI field activities to characterize Site soils to be excavated and transported off-site for disposal during PCB remediation and ISS implementation. Based on the anticipated volume of soils to be excavated during remediation activities, the Site was divided into 16 sampling grids approximately 75 feet by 75 feet wide, with the exception of the west side of the Site where the western boundary required modifications to the sampling grid dimensions. Sixteen composite soil samples were collected from a depth of 0 to 4 feet bgs for the purpose of in-situ waste characterization.

Waste characterization samples were submitted for laboratory analysis of Target Compound List (TCL) volatile organic compounds (VOCs), TCL semi volatile organic compounds (SVOCs), Target Analyte List (TAL) metals, cyanide, toxicity characteristic leaching protocol (TCLP) VOCs, TCLP SVOCs, TCLP metals, TCLP pesticides, TCLP herbicides, and Resource and Conservation Recovery Act (RCRA) characteristics (ignitability, corrosivity, and reactivity).

Based on laboratory analytical results, TCLP lead concentrations were detected in exceedance of regulatory limits (5.0 milligrams per liter [mg/L]) in two sampling locations (SB-172 and SB-

186), located in the northeastern most and northwestern most sampling grids within the Site, as presented in Design Drawings C-006-A and C-007-A (Appendix E). Soils excavated from within these sampling grids will be handled as described in the sections below. Laboratory analytical results for waste characterization samples are presented in Table 3.

2.8 ISS BENCH SCALE TREATABILITY STUDY

A bench scale treatability study was completed to assess the treatability and effectiveness of mixing NAPL-impacted Site soils with various ISS reagent design mixes to determine an effective reagent design mix(es) and dose requirements for achieving established performance criteria.

Performance criteria for ISS included hydraulic conductivity and unconfined compressive strength (UCS), as follows:

- Hydraulic conductivity less than 1 x 10^{-6} cm/sec
- UCS greater than 50 pounds per square inch (psi) at 28 days

Samples were collected from two discrete soil types anticipated to be encountered during implementation of ISS, based on previous Site investigations. In order to represent NAPL-impacted soils that are likely to be encountered during ISS, the bench-scale samples were also taken from average and hot-spot locations based on visual observations of NAPL, photoionization detector (PID) readings, and percent fines. The following is a summary of Site soils that were submitted for completion of the bench scale treatability study:

- Underlying Native Soils Unit
    - SB-111 (12 – 35 feet bgs)
    - SB-201 (10 – 25 feet bgs)
    - SB-211 (10 – 24 feet bgs)
- Overlying Fill Materials Unit
    - SB-203 (5 – 11 feet bgs) combined with SB-208 (5 – 11 feet bgs)
    - SB-97 (5 – 10 feet bgs) combined with SB-212 (5 – 10 feet bgs)
    - SB-205 (5 – 10 feet bgs)

The bench scale treatability study was performed in three steps:

- Step 1 – Soil Index Testing
- Step 2 – Initial Mixture Development
- Step 3 – Final Mixture Development and Confirmation Testing

During Step 1, prior to developing reagent mixtures, each of the two soil composite samples was analyzed for:

- As received moisture content

- Sieve Analysis with visual classification
- Loss On Ignition (Total Organic Content)
- Soil pH
- Soil Density (Single Point Proctor)
- Water Testing (pH, Hardness, and Total Dissolved Solids [TDS])

Based on the results of Step 1, reagent mixtures were developed for testing during Step 2. Six selected soil reagent combinations were applied to each of the two composite soil samples, for a total of 12 mixes (M-1 through M-12). The following analysis was performed on the mixes:

- Standard grout tests (e.g., pH and temperature; viscosity and density)
- Slump (visual or mini slump cone) and density
- Early UCS development monitoring using pocket penetrometer
- UCS testing following 7-day curing period
- Hydraulic conductivity testing following 7- and 10- to 12-day curing period

Based on the results of Step 2, six mixes, three from each composite soil type, were selected and further developed for additional testing during Step 3 (M-13 through M-18). The following were components of Step 3 testing to finalize mixture development:

- Standard grout tests (e.g., pH and temperature; viscosity and density)
- UCS testing following 28- or 42-day curing periods
- Hydraulic conductivity testing after samples cured for 28- or 42-days

Following completion of Step 3, four selected soil mixtures (M-13 through M-16) were submitted to Eurofins of Edison, New Jersey for laboratory analysis of the following:

- Final leachate pH for synthetic precipitation leaching procedure (SPLP) analysis
- Total SPLP VOCs
- Total SPLP SVOCs
- Total SPLP metals

Based on the second round of mixes, the following conclusions can be made for the bench scale treatability study:

- The mixes containing 6 percent and 7 percent total cement at a 2:1 slag/Portland ratio (M-15 and M-16) met the mix design objectives for UCS and hydraulic conductivity, including the target factor of safeties, for both soil types

- The mixes containing 8 percent Portland cement addition, (M-13 and M-14) met the objectives for UCS but not hydraulic conductivity
- Based on the observations from the slake immersion testing, it does not appear that the Site groundwater has a significant impact on the durability of the mixes
- The differences in the test results between the two material types (underlying sand versus overlying fill) were less pronounced in the second round of testing
- Strength development was shown to not be a concern for these addition rates and hydraulic conductivity continues to be the controlling property for mix selection
- The mixes containing slag-cement outperformed the mixes using only Portland cement.

The following conclusions were drawn from the ISS bench scale treatability study:

- Commercially available reagents were successful in achieving standard UCS and hydraulic conductivity objectives for ISS mixes with the Site soils
- Based on the results of this study, a 6 percent total cement addition using a slag to Portland ratio of 2:1, by weight of soil, can achieve the UCS and hydraulic conductivity objectives with a typical factor of safety
- If a mix of only Portland cement is used, an addition rate of at least 9 percent, by weight of soil, would likely be necessary to meet the target hydraulic conductivity of less than $1x10^{-6}$ cm/s
- The slake immersion results showed no visual evidence of a significant impact on durability of the samples from the Site groundwater
- Based on a 120 pounds per cubic foot (pcf) soil unit weight, a cement addition rate of 7 percent, and a water to cement (W:C) ratio of 1.3, the grout volume to be added is approximately 30 percent of the initial soil treatment volume. This would result in a minimum anticipated spoils volume of 30 percent of the treatment volume. The spoils volume could be higher depending on the swell factor of the soils being disturbed but can also be offset from particle rearrangement from the wet-mixing process

The ISS bench scale treatability study report, along with laboratory analytical data, is presented in Appendix F.

SECTION 3

REMEDIAL DESIGN

3.1 INTRODUCTION

The remedy selected by the NYSDEC for the Site involves shallow soil excavation and implementation of ISS in areas where NAPL-impacted material is present in the subsurface. This remedial approach will be supplemented by a targeted removal of PCB-impacted soils and the use of engineering controls (ECs) and institutional controls (ICs) to achieve the remedial goals for the Site. Additional considerations to minimize potential adverse effects from Site-related contamination during the remedial construction are considered as part of this design and further discussed in this section.

3.2 REMEDIAL GOALS

The remedial goals for the Site are to ensure that NAPL-impacted material does not present a threat to human health or the environment considering the manner that the Site is used. Information gathered from the previous Site investigations summarized in Section 2 have been evaluated in consideration to the application of multiple alternatives for achieving remedial goals as documented in the AAR.

3.3 REMEDIAL ACTION OBJECTIVES

RAOs are medium-specific objectives which achieve protection of public health and the environment. RAOs developed for the Site were established based on contaminated media, identified contaminants of concern, standards, criteria, and guidance (SCGs), and results of the exposure assessment. SCGs are promulgated requirements and non-promulgated guidance which guide site activities during investigation and remediation. The standards and criteria are set forth in federal or New York State law and they are either directly applicable or relevant and appropriate to a contaminant, remedial action, location, or other circumstance. Additional guidance including non-promulgated criteria has been considered for this remediation. The following generic RAOs are identified on the NYSDEC website and are to be used for various media, where applicable:

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil
- Prevent inhalation exposure to contaminants volatilizing from soil

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater contamination

Groundwater

RAOs for Public Health Protection

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

RAOs for Environmental Protection

- Restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable
- Prevent the discharge of contaminants to surface water
- Remove the source of groundwater or surface water contamination

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at the Site

3.4 SUMMARY OF SELECTED REMEDY

The NYSDEC-selected remedy for the Site consists of the following major components:

- Removal and disposal of surface material to the extent necessary to allow for the management of swelling material associated with ISS reagent
- ISS of NAPL-impacted soils
- Establishment of ECs and ICs for remaining Site contamination

3.5 SUMMARY OF REMEDIAL DESIGN IMPLEMENTATION ACTIVITIES

The components of the remedial design described in this document are as follows:

- Community air monitoring
- Site preparation and mobilization
- Site Surveys
- Erosion and sediment controls
- Excavation of PCB-impacted soils
- Excavation within ISS areas

- Implementation of ISS treatment
- Material handling, management, and disposition
- Installation of ECs
- Decontamination procedures
- Site restoration
- Implementation of ICs

3.5.1 Community Air Monitoring Plan

A primary concern for air pollution is the generation of dust associated with the removal and storage of contaminated materials and soils during the implementation of remedial construction activities. To protect public health and to prevent exposure to Site-generated contamination via airborne particulates, air monitoring will be performed during intrusive remedial activities in accordance with the New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan (CAMP). The CAMP includes measures for monitoring both fugitive dust and organic vapors. In addition, the CAMP identifies action levels during construction and appropriate mitigation methods to address any exceedances of the action levels. The CAMP is presented in Appendix G.

Summaries of all air monitoring data will be provided to the appropriate parties' regulatory agencies on a weekly basis to facilitate the transfer of information related to potential health risks. The NYSDOH project manager must be notified of any exceedances as soon as possible after the event.

3.5.2 Site Preparation and Mobilization

The following is a summary of pre-mobilization activities to be completed prior to implementation of the remedy:

- Development of citizen participation notice and fact sheet in partnership with NYSDEC
- Preparation of applications and securement of applicable regulatory permits
- Pre-construction conditions survey
- Preparation, submittal, and approval of pre-mobilization submittals

Prior to the commencement of remedial construction activities, the Site will require preparation activities to address existing Site facilities and features as well as to establish additional controls required for the safe and effective implementation of the remediation. Currently, the Site is utilized by Con Edison as a storage yard for construction equipment, supplies, and materials. The Site will require temporary relocation of portions of the existing security fencing, existing facilities and the installation of required controls prior to commencement of remedial activities.

The Contractor will be required to develop plans detailing the phases of construction and areas which may be utilized by Con Edison during construction, as well as Site access, security, and the establishment of work zones (e.g., exclusion zone, contamination reduction zone, etc.).

Site Access

The Site is currently secured by security fencing around the perimeter of the Site. Site access is managed via an automated gate on the eastern side of the Site which allows for the entry of vehicle traffic. There is an additional gate on the southern side of the Site that may be operated manually. A pedestrian gate on the Site's eastern perimeter allows for personnel access. Consideration for Site access and security will be addressed in the remedial construction phase plans to be submitted by the Contractor.

Work Zone Establishment

An exclusion zone will be established around the areas of intrusive construction activities (excavation activities, soil mixing, etc.). The limits of the exclusion zone will be adjusted during construction to limit the size of the exclusion zone and allow for non-remedial construction activities to occur. Orange construction fencing or other similar moveable barricades, along with appropriate signage (e.g., "Restricted Area – Authorized Personnel Only"), will be installed around the perimeter of the exclusion zone to prevent unauthorized personnel from entering intrusive and/or excavation areas.

A contamination reduction zone (CRZ) will be established in a location immediately adjacent to the work area to facilitate the decontamination of personnel and equipment that may encounter contaminated soils. Personnel working inside the exclusion zone will decontaminate or dispose of soiled clothing in the CRZ when exiting the exclusion zone. Appropriate equipment, supplies, and personal protective equipment (PPE) will be made available in the CRZ to facilitate the protection and decontamination of personnel working in the exclusion zone.

The CRZ setup will involve the construction of up to two temporary decontamination pads. The primary decontamination pad will be used for decontaminating large equipment. The pad will be constructed with a minimum of two layers of 10-mil polyethylene sheeting with raised berms and overspray guards around the perimeter to maintain wash fluids on the pad. A portable spill containment pad with drive-through berms and side panels or similar equipment may be used in lieu of the building a temporary equipment decontamination pad. All wash water from the decontamination pads will be collected in a low spot and managed in accordance with the Technical Specifications. A second, smaller decontamination pad will be constructed, if necessary, for the decontamination of personnel and small hand tools.

3.5.3 Site Surveys

A Professional Land Surveyor (PLS) registered in the State of New York will be retained to provide initial benchmarks and Site layout of proposed remediation field activities. This initial survey will be used to confirm and maintain horizontal and vertical limits as the remediation field work proceeds. The PLS will also survey and document the progress of the remediation field work, remediation quantities and as-built drawings of Site conditions following completion of remediation field activities, and Site restoration, as presented in the Technical Specifications.

Additionally, visual pre-condition and post-condition survey reports will be required to document conditions and changes from the pre-conditions survey of buildings, structures, and utilities after intrusive work activities are complete.

3.5.4 Erosion and Sediment Controls

Prior to commencement of Site remediation activities, temporary erosion and sediment control (ESC) measures will be installed in accordance with the Stormwater Pollution Prevention Plan (SWPPP) (Appendix I) to prevent off-site migration of soil/sediment as a result of stormwater runoff. Site-wide ESC measures are a dynamic project element and will require modification as the construction needs change over time. Applicable ESC methods include the installation of sediment barriers, inlet protection, and stabilized construction entrance(s). Proposed temporary ESC locations and details are provided on the Design Drawings (Appendix E). Additionally, the Site will be graded during construction activities to facilitate the control and capture of stormwater to allow for treatment through installed ESC features. Fugitive dust that may be generated during construction activities will be controlled using water trucks and/or spraying to wet the soils to prevent creation of airborne dust particles.

The existing Site conditions (consisting of concrete, asphalt, gravel and/or soil) are expected to remain intact in portions of the Site in which no intrusive activities are conducted. These conditions will help minimize groundwater infiltration and potential contact with remaining underlying contamination.

ESC and stormwater management practices utilized during remedial Site construction will be inspected and maintained in accordance with the Site SWPPP (Appendix I).

3.5.5 Excavation of PCB-Impacted Soils

Prior to the start of ISS activities at the Site, excavations will be completed in accordance with the U.S. Environmental Agency (USEPA)-approved SICP to predetermined limits (horizontal and vertical) based on the results of the PCB SC to remove soil with PCB concentrations greater than 10 mg/kg. Excavation depths range from 1.0 to 7.0 feet bgs, and the anticipated volume of PCB-impacted material that will be generated during excavation is approximately 2,500 cubic yards. Excavation will be sequenced so that soil with PCB concentrations greater than or equal to 50 mg/kg will be direct-loaded into dump trucks, roll-offs, and/or sealed shipping containers that will be used to transport and dispose of the material offsite. After soils with PCB concentrations greater than or equal to 50 mg/kg have been excavated and disposed of offsite, excavation and offsite disposal of soil containing PCB concentrations greater than 10 mg/kg will be completed.

Excavation slopes will comply with Occupational Safety and Health Administration (OSHA) requirements (29 CFR 1926.650 to 1926.652). The Contractor will be responsible for providing support to all utilities, structures, etc., as needed to complete the work.

Post-excavation verification sampling for PCBs will include the collection of confirmatory soil samples at a sample frequency of one excavation bottom sample per 900 square feet (i.e., 30-foot by 30-foot grid) and one excavation sidewall sample for every 30 linear feet of sidewall as an approval under 40 CFR § 761.61(c). If PCB concentrations are detected above the excavation endpoint (10 mg/kg), or if an unexpected condition is encountered, the excavation will be expanded. When post-excavation sampling indicates compliance with the excavation endpoint, the

excavations will be backfilled and/or regraded in areas outside of the ISS Areas. Within the ISS Areas, excavations will be partially backfilled and/or remain open to facilitate the management of ISS swell as further described below in Section 3.5.6.

Following completion of the excavation of PCB-impacted soils, all equipment, tools, and other materials that have contacted PCB-impacted soil at the Site will be decontaminated prior to leaving the construction work area or beginning the next phase of excavation on the Site, as described below in Section 3.5.9 and in the approved SICP.

3.5.6 Excavation within ISS Areas

Following completion of PCB-impacted soil excavation, additional excavation within the ISS Areas will be required to account for bulking due to swelling of the ISS reagent. Therefore, excavation of surface soils will be required to maintain the current grade elevation subsequent to ISS treatment. The bulking factor due to the ISS reagent swell is expected to be around 30 percent, as estimated during the bench scale treatability study summarized in Section 2.8. Removal of surface soils will proceed to the depth necessary to account for swelling, or 1 foot above the water table (to provide adequate ground support for mixing equipment), whichever is shallower. Additional ISS material, grout, and/or soil cuttings brought to the surface during mixing will require handling and off-site treatment/disposal as described in Section 3.5.8. In select locations of the ISS area, excavations to accommodate ISS swell will be completed as a component of the excavation of PCB-impacted soils as outlined in Section 3.5.5 above.

In addition to the surface soil excavation described above, demolition and removal of subsurface structures will be necessary prior to implementation of ISS to facilitate the remedial activities. During investigation activities, a former gas holder, a suspected tar tank, components of other remnant structures, and various clay and metal piping were encountered at depths ranging from 1 to 10 feet bgs in Parcel 2 and may be encountered deeper. The vertical and horizontal extent of subsurface features were delineated to the extent practicable during field implementation of the 2021-2024 SRI, as described in Section 2.6. See the Design Drawings (Appendix E) for additional details. In addition, a detailed utility survey will be required to determine whether any unknown utility lines (active or inactive) are present within the proposed remediation areas, and measures to address any discovered utilities (e.g., removal, relocation, or temporary re-routing) will need to be evaluated.

Excavation slopes will comply with OSHA requirements (29 CFR 1926.650 to 1926.652). The selected Contractor will be responsible for providing support to all utilities, structures, etc., as needed to complete the remediation field activities.

The horizontal and vertical limits of ISS Excavation Area are shown in the Design Drawings (Appendix E). The ISS Excavation Area has a footprint of 66,630 square feet. It is anticipated that the ISS excavation to facilitate management of ISS volume swell will be to a depth of 4 feet bgs not including the open and/or partially backfilled excavations remaining from the removal of PCB-impacted soils at the Site. The excavation of obstructions below the water table will be conducted to the extent that it does not require dewatering or shoring, and that sidewall stability can be safely maintained. Excavation to clear deep obstructions will be conducted to the extent practicable as indicated above to allow advancement of ISS. A total of approximately 10,200 cubic yards of material is anticipated to be removed during the ISS excavation based on an average excavation depth of 4 feet bgs.

3.5.7 Implementation of ISS Treatment

The remedy for Parcel 2 involves ISS treatment of subsurface soils to address NAPL-impacted soils identified during Site investigation activities. The mechanism of treatment is via the application of a binding reagent into the soils effectively stabilizing the soils thereby preventing contaminant migration and mobility. This technique results in solidification of the soils, creating a solid structural monolith that mechanically binds the contaminants of concern within the stabilized mixture. The implementation of ISS treatment is typically accomplished by one or a combination of two methods; mixing reagent with impacted soils using an excavator bucket, or through the addition of a reagent using soil augers which pump and mix the specified reagent into impacted soils.

The selected Contractor will conduct ISS in accordance with the Design Drawings (Appendix E) and the Technical Specification (Appendix H). The horizontal limits of ISS are shown in the Design Drawings (Appendix E). The ISS area consists of an approximately 66,600 square feet area and a total in-place volume of approximately 57,400 cubic yards. The ISS area will descend vertically into the Site subsurface soils (up to 47 feet bgs) and is divided into 11 subareas which range in total depth of ISS treatment from 22 feet bgs to 47 bgs. From field observations the average depth of NAPL-impacted soils is approximately 33 feet bgs.

Soil will be solidified using bucket mixing, auger mixing, a combination of the two methods, or another proposed methodology to create a solidified monolithic mass (i.e., solidified material) within the horizontal and vertical limits of ISS as shown on the Design Drawings (Appendix E). Should auger mixing be selected, the selected Contractor is responsible for auger selection and sizing to advance ISS treatment to the full depth required. Quality control (QC) testing of the solidified material will be conducted to confirm that the material meets the performance criteria.

The effectiveness of ISS implementation will be measured after the solidified material has cured. Post cure samples will be collected and tested for permeability and UCS. The Technical Specifications (Appendix H) designate the requirements for post cure sampling and testing.

Samples will be collected and tested for the performance criteria for every 500 cubic yards of material solidified or once per day, whichever is more frequent, and in accordance with the Technical Specifications (Appendix H). Additional samples will be collected as-needed based on encountered conditions, and at the discretion of the Engineer. ISS samples submitted for analysis will be composed of formed cylinders collected by the Contractor from target locations and depths. The following is the performance criteria samples of solidified material collected in the field:

- UCS of 50 psi or greater after 28 days of curing by ASTM D 1633-00 — Standard Test Method for Compressive Strength of Molded Soil Cement Cylinders
- Hydraulic conductivity less than 1 x 10^{-6} cm/sec after 28 days of curing by ASTM D 5 084-00 — Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter
- Visual verification of continuity of ISS treatment in accordance with NYSDEC Standards

3.5.8 Material Handling, Management, and Disposition

Soils and ISS reagent swell material to be excavated will be characterized for disposal in accordance with the Quality Assurance Project Plan (QAPP; Appendix J) during the remedial

action by the Contractor. This waste characterization data will be used to facilitate the profiling and acceptance of the materials by the intended disposal facility. The Contractor's Implementation Plan will contain details pertaining to how underlying soils and ISS reagent swell material are to be managed to mitigate the potential for tracking of PCB-impacted material by heavy equipment from areas where PCB concentrations greater than 1 mg/kg and less than 10 mg/kg were identified during the PCB SC to areas where PCBs were not detected. The Engineer will provide relevant data to the Contractor.

The use of liners, berms and leachate controls during material handling and management will be required during the remedial construction. Odors associated with disturbed materials leaving the work area are unacceptable. If odors are detected off-site, operations at the Site will be suspended until odor issues are resolved. On-site storage will take place in accordance with all laws and regulations dealing with the type of waste being stored. Liquid wastes will be stored in appropriate tanks or drums. Other (non-soil) solid materials will be stored in roll-off containers or covered stockpiles. Temporary lined soil containment pads will be constructed within the exclusion zone to stage materials awaiting characterization and/or off-site disposal. Soil containment pads are further described in the Technical Specifications (Appendix H).

Debris generated during demolition and excavation may require decontamination to meet facility acceptance requirements. Decontamination will be completed as outlined in Section 3.5.9, below.

Any solid wastes will be collected and placed in appropriate containers on Site to prevent discharge with stormwater. Solid waste containers will be emptied periodically and disposed by the Contractor. The Contractor will be required to maintain the work area(s) daily and collect any solid waste or litter for disposal.

All waste management activities, including handling and loading, will be done in such a manner that odors and vapors are controlled, in accordance with the CAMP (Appendix G).

The Contractor will load, transport, stockpile, and dispose of the excavated material. Waste materials will be transported in dump or tanker trucks to the receiving disposal facilities. Transportation of impacted materials from the Site will be performed in accordance with hazardous waste, non-hazardous waste, and transportation regulatory requirements.

3.5.9 Decontamination Procedures

Equipment and tools used during work activities will be decontaminated to minimize the potential for cross contamination. Decontamination of excavation and material management equipment after PCB-impacted material excavation activities and prior to equipment removal from the Site will be performed using hand-wiping with appropriate solvent in accordance with decontamination procedures required under 40 CFR § 761.79(c), or by using the double wash/rinse method for decontaminating non-porous surfaces under 40 CFR 761 Subpart S. Decontamination procedures associated with remediation of NAPL-impacted materials are outlined below.

Excavation and Material Management Equipment:

Upon completion of the excavations and prior to the equipment or tools leaving the Site, equipment will be wiped down to remove any material accumulated on the equipment and

decontamination using the double wash/rinse procedure with citrus based solvent will be performed, to include the following:

1. Scrub with undiluted citrus based solvent for one minute
2. Rinse with potable water (1 gallon per square foot)
3. Rinse with citrus based solvent
4. Rinse with potable water

Spent decontamination wash and rinse liquids generated during sampling, excavation, and material management equipment decontamination will be containerized on Site in 55-gallon U.S. Department of Transportation (DOT)-approved drums and labeled appropriately.

Sampling Equipment

Prior to and after soil sampling, all non-dedicated sampling equipment (e.g., hand augers, bowls, spoons, etc.) will be decontaminated prior to sample collection. The decontamination procedure for all non-disposable sampling equipment will consist of the following double wash/rinse procedure:

1. Scrub with potable water and a citrus based solvent (e.g., CitriKleen HD, terpene hydrocarbons, etc.)
2. Rinse with potable water
3. Rinse with citrus based solvent
4. Rinse with deionized water

Between rinses, non-dedicated sampling equipment will be placed on polyethylene sheets or aluminum foil, if necessary. At no time will washed sampling equipment be placed directly on the ground. Soil sampling tools will be wrapped in polyethylene plastic or aluminum foil when transporting between the excavation areas. Decontamination will take place at the sampling location and all liquids will be initially contained in pails, buckets, etc. prior to being containerized on-site in 55-gallon DOT approved drums and labeled appropriately.

3.5.10 Site Restoration

Following implementation of ISS within Parcel 2, portions of the Site in which intrusive remedial activities have been completed will require restoration. The Site is proposed to be restored to pre-construction conditions, unless otherwise directed by Con Edison. The Site is currently covered with either concrete, asphalt pavement, or gravel, and surface soil within the remediation areas of Parcel 2. The existing Site surface materials will be removed during implementation of the remedy. Once intrusive remediation activities have been completed, the disturbed areas will be restored with backfill material from the top of the solidified/stabilized material grade (i.e., 4 feet bgs) to a final Site grade. The surface restoration will be consistent with the future use plans for the Site and will consist of a gravel cover. The purpose of the backfilled depth below the gravel cover and above the solidified/stabilized material is to provide a utility corridor for future Site improvements and to maintain solidified/stabilized materials below the frost zone. The proposed backfill of the ISS area consists of structural fill placed on top of the ISS monolith, followed by an approximately 6-inch layer of subbase material, and a 6-inch layer of stabilized gravel surface

course. The ISS cap will serve as an EC to protect the ISS monolith from freeze-thaw cycles and as a boundary to direct contact exposure.

Additionally, for areas outside of the limits of ISS where soil with concentrations of PCBs greater than 1 mg/kg and less than or equal to 10 mg/kg remains on the Site, a low-permeability cap will serve as an EC as a boundary to direct contact exposure. In accordance with the requirements of 40 CFR § 761.61(a)(7) and the approved SICP, the cap will be constructed of a minimum of 10 inches of compacted soil overlain by a geotextile demarcation and gravel subbase, and/or a cap of 6 inches of concrete or asphalt, depending on Site restoration requirements and end use. Soil used for the construction of the 10-inch soil cap will comply with the permeability, sieve, liquid limit, and plasticity index parameters outlined in 40 CFR §§ 761.75(b)(1)(ii) through (v).

The final proposed Site topography and cross sections of the final Site cover area are shown on the Design Drawings (Appendix E). The Contractor will be required to submit a final Site restoration plan which satisfies Con Edison requirements for the Site regarding the reinstallation/restoration of Site facilities (i.e., buildings, trailers, utilities, etc.).

The existing Site cover is expected to remain intact in portions of the Site in which no intrusive remedial activities are conducted. These conditions will minimize groundwater infiltration and potential contact with remaining underlying contamination.

3.5.11 Green Remediation

Green remediation is the practice of considering all environmental effects of remedy implementation and incorporating options to minimize the environmental footprint of cleanup actions (NYSDEC 2010b). Green remediation concepts and techniques have been considered in this RDR with the goal of improving sustainability of the cleanup to the extent feasible in the design, implementation, and site management of the remedy in accordance with DER-31. Major green remediation concepts have been considered and incorporated into the design as outlined below.

Long-term Environmental Impacts of Treatment Technologies and Stewardship

The remedy includes the consideration of the environmental impacts of treatment technologies and remedy stewardship over the long-term. This consideration will be addressed through the use of natural processes such as long-term treatment technologies and incorporate construction means and methods into long-term treatment technologies (i.e., ISS).

Greenhouse Gas and Other Emissions Reduction

The remedy includes the reduction of direct and indirect greenhouse gases and other emissions as outlined below:

- Reduce vehicle idling in all vehicles, both on and off-road, and shut off vehicles when not in use for more than five minutes
- Use ultra-low sulfur diesel in off-road vehicles, where possible
- Replace or retrofit older engines or use newer efficient models in vehicles and equipment, where practicable, and maintain engines in accordance with manufacturers' standards

- Where possible, use locally manufactured materials (i.e., manufactured within 150 miles of the Site) in material sourcing and procurement to avoid unnecessary transportation emissions

Energy Efficiency

Practices in energy efficiency will be implemented during the remedy and have been considered in long-term source removal as outlined below:

- Use environmentally friendly products such as compact fluorescent lights or light-emitting diode (LED) lightbulbs in temporary facilities;
- Use environmentally friendly electronics, such as ENERGY STAR-rated products, in temporary facilities;
- Turn off lighting in temporary facilities when not occupied and maintain energy efficient temperature set-points in temporary facilities;
- Use efficiently-designed pumps for water treatment and management activities;

Waste Reduction and Recycling

Waste reduction will be completed during the remedy by developing an on-site recycling program and by reusing acceptable Site materials which would otherwise be disposed of and/or imported using the following methods:

- Implement an on-site recycling program during the remedy for personal consumables (i.e., paper, plastics, and aluminum)
- Use recycled-content material in temporary facilities and day-to-day Site operations where practicable

Future Building Development

Building construction is not proposed at the Site as a part of the remedy. Should building construction be required at the Site, future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of constructions.

SECTION 4

DOCUMENTATION OF REMEDIAL ACTION

Documentation of remedial construction activities will be conducted in accordance with the requirements set forth in DER-10.

4.1 DAILY FIELD CONSTRUCTION REPORT

A daily field construction report will be prepared by the project coordinator to document daily on-site activities. The daily field construction report will be submitted at the end of each week in an electronic format to the NYSDEC project manager.

4.2 TRANSPORTATION LOG

A transportation log will be prepared by the project coordinator to document all loads of solid or liquid waste that are transported off-site. The transportation log will be submitted at the end of each week in an electronic format to the NYSDEC project manager.

4.3 WEEKLY COMMUNITY AIR-MONITORING REPORT

A weekly community air-monitoring report will be prepared by the sampling technician to document daily air-monitoring results. The weekly community air-monitoring report will be submitted at the end of each week in an electronic form to the NYSDEC project manager and pertinent NYSDOH personnel.

4.4 MASTER SAMPLE LOG

A database will be maintained for the documentation of collected samples.

4.5 CHAIN OF CUSTODY

A chain-of-custody form will document custody of all samples from the field to the laboratory.

4.6 HEALTH AND SAFETY DOCUMENTATION

All documentation required by the Health and Safety Plan (HASP) will be completed as necessary and maintained.

4.7 PROJECT DOCUMENTATION

During the course of the work, the Contractor will provide the following to the Engineer, including but not limited to:

- Submittals as defined in the Technical Specifications
- Daily Field Reports
- ISS Mix Reports
- Equipment and material testing records
- Weigh tickets for material imported to the Site, and transported off Site for disposal

- Decontamination logs
- Field Change Forms (as required)

During the course of the work, weekly progress meetings will be conducted with attendance by NYSDEC and NYSDOH, if necessary. Con Edison or it's Engineer will provide weekly progress reports to the NYSDEC. Progress reports will include:

- The previous week's actions
- Next week's planned actions
- Sampling and analytical results
- Design changes and other modifications to the design
- Revised project schedules

4.8 KEY PROJECT PERSONNEL

The following is a summary of key project personnel:

Name/Entity	Address	Contact Information
Con Edison		
Yelena Skorobogatov Technical Specialist – EH&S Remediation, MGP Program	31-01 20th Avenue – Building 136 Floor 2 Long Island City, New York 11105	T: 917-658-6715 skorobogatovy@coned.com
NYSDEC		
Javier Perez-Moldonado Project Manager	625 Broadway Albany, New York 12233	T: 518-402-8172 Javier.perez-moldonado@dec.ny.gov
NYSDOH		
Anthony Perretta	Empire State Plaza Corning Tower Room 1787 Albany, NY 12237	T: (518) 402-7860 Anthony.perretta@health.ny.gov
Design Engineer (Parsons)		
Stephen Liberatore Project Manager Daniel Martoccia, P.E. Engineer of Record	301 Plainfield Road Suite 350 Syracuse, New York 13212 1011 US-22W, Suite 201 Bridgewater, New Jersey 08807	T: 315-418-8767 stephen.liberatore@parsons.com T: 732-537-3557 daniel.martoccia@parsons.com
Remediation Engineer		
To be determined		
Contractor		
To be determined		

SECTION 5

PERMITTING AND REGULATORY REQUIREMENTS

5.1 PERMITTING

The design has been prepared to meet permitting and other regulatory requirements of federal, state, and local laws and regulations.

No federal permits are anticipated for the remedial action. USEPA authorization to complete the PCB removals under 40 CFR § 761.61 will be obtained by Con Edison prior to the start of work.

The remedial action will be completed under a NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities, Permit No. GP-0-20-001 (or current) permit equivalency. The project SWPPP is included in Appendix I. No additional state permits are anticipated to complete the work.

The remedial action will require permits and/or authorization from the New York City Department of Buildings (NYCDOB), New York City Department of Environmental Protection (NYCDEP) and/or other local agencies. The Contractor will be required to determine and procure all NYCDOB, NYCDEP, and other local agency permits and/or authorizations that are necessary to complete the work.

5.2 REGULATORY REQUIREMENTS

Environmental regulations regarding hazardous and non-hazardous waste management apply to this work and will be implemented accordingly. These include provisions for the containment and cleanup of spills and other standard provisions that may be included in this work.

Regulations promulgated by OSHA specify safety and health requirements for work procedures at all workplaces and specifically at construction sites and hazardous waste sites.

Industry standards for work at hazardous waste sites presented in 29 CFR 1910.120 describe specific requirements, including the following:

- Preparation of a project HASP
- Training and medical monitoring of personnel who may be exposed to hazardous substances
- Air monitoring, respiratory protection, and PPE

Procedures outlined in the HASP include daily health and safety review meetings, proper use of safety equipment, proper mechanical equipment use, and other policies. At a minimum, the PPE to be worn on Site will include safety glasses, hard hat, and steel-toed shoes or boots.

The subjects to be covered in the HASP, at a minimum, include:

- Health and Safety Risk Analysis
- PPE

- OSHA Air Monitoring & Action Levels
- Site Control
- Decontamination
- Emergency Response Plan
- Lockout/Tagout procedures
- Heavy Equipment Operations
- Excavation and Trenching
- Material Safety Data Sheets
- Health and Safety Records and Reports

The Contractor will prepare a Site HASP as a bid submittal. The Contractor's HASP will be subject to the Engineer's review and NYSDEC's approval. The Contractor will follow the requirements of their own HASP throughout the work.

Prior to the work, the selected Contractor will provide to the Engineer written evidence of the following items for each person who will be entering the work zone:

- Date of respirator fit test
- Date of OSHA 40-hour training (or 8-hour refresher training)
- Date of annual physical

Persons without these items, both up-to-date and on file with the Engineer will not be allowed to enter the work zone.

5.3 TRANSPORTATION REQUIREMENTS

The DOT has developed requirements which regulate the transportation of hazardous materials by road and rail. Among the hazardous materials identified in these regulations are coal tar distillates. In addition, as discussed above, hazardous waste regulations specify that shipments of hazardous wastes must meet certain requirements presented in the federal and applicable state regulations.

Specific requirements for hazardous material shipments include the following:

- All truckers must have valid Part 364 Waste Transporter Permits
- Shipping papers must include a description of hazardous materials included in the shipment along with the DOT designated identification number and hazard class. Hazardous wastes may not be shipped without a manifest (49 CFR 172.200)

- Each container, package, or vehicle containing a hazardous material must be marked or labeled with the DOT shipping name, technical name, identification number, and hazard class (49 CFR 172.300 and .400)
- Each vehicle or container containing a hazardous material must be appropriately placarded (49 CFR 172.500)
- When hazardous materials are transported, emergency response information must be available at the point of loading, unloading, and during transport
- Truck routes to and from the Site will comply with applicable regulations

SECTION 6

QUALITY ASSURANCE

Quality assurance (QA) procedures will be implemented during the work to ensure that it is in conformance with the remedial design, and to provide the basis for implementation of contingency actions, if necessary, to bring the work into conformance with the remedial design. Additional QA measures are detailed in the Construction Quality Assurance Project Plan (CQAPP) (Appendix K).

6.1 GENERAL QUALITY ASSURANCE PROCEDURES

The following quality assurance procedures and tests will be implemented as required under DER-10:

- Submittal, by the Contractor, of weight tickets for all materials transported to or from the Site
- Submittal, by the Contractor prior to the work, of sieve analyses for all imported earthen materials
- Evaluation by the Engineer of the Contractor's proposed borrow source(s) for imported earthen materials. The Contractor will provide to the Engineer analytical data indicating that imported material meets the requirements of DER-10
- Surveying of the work limits
- Field verification by the Engineer of excavation, ISS treatment, and placed material depths, areas, and volumes
- Field observations and QA/QC sampling by the Engineer of ISS treatment as described in Section 3.5.7

SECTION 7

POST-REMEDIATION ACTIVITIES

After completion of remediation activities at the Site, a Construction Completion Report (CCR) will be prepared to document the remediation activities. Since contamination will remain on the Site, a Site Management Plan (SMP) will be prepared to document the Site ECs (i.e., low permeability cap, ISS monolith) and ICs (i.e., deed restriction).

7.1 CONSTRUCTION COMPLETION REPORT

A CCR will be prepared upon completion of the remedial action that documents construction implementation and the creation of ICs and ECs. The CCR will be prepared in accordance with NYSDEC DER-10 (NYSDEC 2010a) and the NYSDEC Generic Template for Final Engineering Reports. At minimum, the CCR will present the following information:

- Description of the remediation activities, including variations, if any, from the NYSDEC-approved RD Report
- Record ("as-built") drawings, tables, and figures detailing the remediation activities completed and indicating that acceptance criteria were met
- Information and documentation regarding the final quantities and disposition of materials disposed of/treated off site during implementation of the remediation activities, including executed manifests and bills of laden
- Summaries of field observations, tests performed, laboratory samples collected, and monitoring results obtained during construction
- Summaries of problems and deficiencies encountered during construction, including recurring problems and/or deficiencies discovered
- Representative photographs taken during implementation of the remediation activities
- Copies of regulatory permits and other key regulatory agency correspondence related to the permits and permit compliance
- Certification statement signed and sealed by a Professional Engineer licensed in New York State

A draft CCR will be submitted to NYSDEC for review. Following receipt of NYSDEC comments, the CCR will be revised accordingly and a stamped/signed final version of the CCR will be submitted to NYSDEC.

7.2 ENGINEERING AND INSTITUTIONAL CONTROLS

Details pertaining to ECs employed at the Site following remedial activities will be detailed in the SMP. Following field implementation of the remedy, it is anticipated that a Site perimeter

fence will be maintained, a groundwater monitoring well network (to include NAPL recovery wells, where necessary) will be utilized for long-term groundwater monitoring, and caps will be utilized in both MGP- and PCB-remediation areas.

After completion of remediation activities at the Site, as an IC, a deed restriction will be filed with the County Clerk within 60 days in accordance with 40 CFR §761.61(a)(8) and NYSDEC requirements. The deed restriction (environmental easement) will serve as an IC that documents the location of the ECs to be maintained (i.e., perimeter fence, low permeability cap, ISS monolith, groundwater monitoring wells).

In accordance with NYSDEC DER-10, an SMP will be prepared following completion of Site remedial activities. The SMP will outline the process by which ECs and ICs, as well as short- and long-term monitoring and operations and maintenance activities, will be implemented to address both PCB and MGP contamination remaining at the Site. The proposed remedy includes an IC in the form of a deed restriction (environmental easement). Adherence to this IC will be required by the SMP. Additionally, a long-term monitoring program for groundwater will be required, utilizing the groundwater monitoring wells designated on Figure 6.

SECTION 8

PROJECT SCHEDULE

The preliminary schedule for remediation activities is presented as follows:

- Submit Draft Remedial Design to NYSDEC – February 2025
- Receive Comments from NYSDEC – April 2025
- Submit Final Remedial Design to NYSDEC – May 2025
- Receive Approval Letter from NYSDEC – June 2025
- Regulatory Notifications and Permitting – June 2025 through September 2025
- Remedial Contractor Procurement – September through January 2026
- Remedial Construction Activities – February 2026 through February 2027

SECTION 9

REFERENCES

Parsons, 2010. *Site Characterization Report for the Former Farrington Street Gas Works Site*.

Parsons, 2017. *Remedial Investigation Report for the Former Farrington Street Gas Works Site – Queens, New York*. Parsons, May 2017.

Parsons, 2019. *Supplemental Remedial Investigation Report for the Former Farrington Street Gas Works Site – Queens, New York*. Parsons, June 2019.

Parsons, 2022. *Alternatives Analysis Report for the Former Farrington Street Gas Works Site – Queens, New York*. Parsons, June 2022.

Newell, C.J., H.S. Rafai, J.T. Wilson, J.A. Connor, J.A. Aziz, and M.P. Suarez. *Groundwater Issue: Calculation and use of first-order rate constants for monitored natural attenuation studies, EPA/540/S-02/500*. USEPA, 2002.

NYSDEC. 1998. *Division of Water Technical and Operational Guidance Series (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*. June 1998.

NYSDEC, 2002. *Draft Voluntary Cleanup Program Guide*. NYSDEC, May 2002.

NYSDEC, 2006. *6 NYCRR Part 375 Environmental Remediation Programs, New York State Department of Environmental Conservation*. December 14, 2006.

NYSDEC, 2010a. *DER-10 Technical Guidance for Site Investigation and Remediation.* New York State Department of Environmental Conservation. May 2010.

NYSDEC. 2010b. *DER-31 Green Remediation*. New York State Department of Environmental Conservation. August 2010.

NYSDEC, 2016. *NYSDEC ISS QA/QC Guidance Document*. New York State Department of Environmental Conservation. February 22, 2016.

NYSDEC, 2020. NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity, Permit No. GP-0-20-001. January 29, 2020.

TABLES

Table 1a
Summary of June 2021 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Preliminary PCB Analytical Data		6 NYCRR Part 375 Commercial SCOs	Location ID: Sample ID: Depth: Lab Sample ID: SDG: Matrix: Sampled: Sample Type:	PCB-A PCB-A_0.0-0.5_06152021 0 - 0.5 460-236616-11 4602366161 SO 6/15/2021 N		PCB-A PCB-A_0.5-1.0_06152021 0.5 - 1 460-236616-12 4602366161 SO 6/15/2021 N		PCB-B PCB-B_0.0-0.5_06152021 0 - 0.5 460-236616-9 4602366161 SO 6/15/2021 N		PCB-B PCB-B_0.5-1.0_06152021 0.5 - 1 460-236616-10 4602366161 SO 6/15/2021 N		PCB-C PCB-C_0.0-0.5_06152021 0 - 0.5 460-236616-7 4602366161 SO 6/15/2021 N	
CAS NO.	COMPOUND		UNITS										
	Polychlorinated Biphenyls (PCBs)												
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.20		0.10		0.18		0.17		0.04	
	Total PCBs	1	mg/kg	0.20		0.10		0.18		0.17		0.04	

(1) Laboratory analytical results compared to NYSDEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives (CSCOs)
(2) ND indicates compound was not detected
(3) J indicates an estimated concentration
(4) Grey shaded values exceed NYSDEC Part 375 Unrestricted Soil Criteria

Table 1a
Summary of June 2021 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Preliminary PCB Analytical Data		6 NYCRR Part 375 Commercial SCOs	Location ID: Sample ID: Depth: Lab Sample ID: SDG: Matrix: Sampled: Sample Type:	PCB-C PCB-C_0.5-1.0_06152021 0.5 - 1 460-236616-8 4602366161 SO 6/15/2021 N		PCB-D1 PCB-D1_0.0-0.5_06152021 0 - 0.5 460-236616-5 4602366161 SO 6/15/2021 N		PCB-D1 PCB-D1_0.5-1.0_06152021 0.5 - 1 460-236616-6 4602366161 SO 6/15/2021 N		PCB-D2 PCB-D2_0.0-0.5_06152021 0 - 0.5 460-236616-3 4602366161 SO 6/15/2021 N		PCB-D2 PCB-D2_0.5-1.0_06152021 0.5 - 1 460-236616-4 4602366161 SO 6/15/2021 N	
CAS NO.	COMPOUND		UNITS										
	Polychlorinated Biphenyls (PCBs)												
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.08		0.44		0.03		0.17		0.20	
	Total PCBs	1	mg/kg	0.08		0.44		0.03		0.17		0.20	

(1) Laboratory analytical results compared to NYSDEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives (CSCOs)
(2) ND indicates compound was not detected
(3) J indicates an estimated concentration
(4) Grey shaded values exceed NYSDEC Part 375 Unrestricted Soil Criteria

Table 1a
Summary of June 2021 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Preliminary PCB Analytical Data		6 NYCRR Part 375 Commercial SCOs	Location ID: Sample ID: Depth: Lab Sample ID: SDG: Matrix: Sampled: Sample Type:	PCB-E PCB-E_0.0-0.5_06152021 0 - 0.5 460-236616-1 4602366161 SO 6/15/2021 N		PCB-E PCB-E_0.5-1.0_06152021 0.5 - 1 460-236616-2 4602366161 SO 6/15/2021 N		PCB-F PCB-F_0.0-0.5_06142021 0 - 0.5 460-236514-13 4602365141 SO 6/14/2021 N		PCB-F CB-F_0.0-0.5_06142021-DU 0 - 0.5 460-236514-14 4602365141 SO 6/14/2021 FD		PCB-F PCB-F_0.5-1.0_06142021 0.5 - 1 460-236514-15 4602365141 SO 6/14/2021 N	
CAS NO.	COMPOUND		UNITS										
	Polychlorinated Biphenyls (PCBs)												
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.42		0.18		0.10	J	0.06	J	0.21	
	Total PCBs	1	mg/kg	0.42		0.18		0.10		0.06		0.21	

(1) Laboratory analytical results compared to NYSDEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives (CSCOs)
(2) ND indicates compound was not detected
(3) J indicates an estimated concentration
(4) Grey shaded values exceed NYSDEC Part 375 Unrestricted Soil Criteria

Table 1a
Summary of June 2021 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Preliminary PCB Analytical Data		6 NYCRR Part 375 Commercial SCOs	Location ID: Sample ID: Depth: Lab Sample ID: SDG: Matrix: Sampled: Sample Type:	PCB-G PCB-G_0.0-0.5_06142021 0 - 0.5 460-236514-11 4602365141 SO 6/14/2021 N		PCB-G PCB-G_0.5-1.0_06142021 0.5 - 1 460-236514-12 4602365141 SO 6/14/2021 N		PCB-H PCB-H_0.0-0.5_06142021 0 - 0.5 460-236514-9 4602365141 SO 6/14/2021 N		PCB-H PCB-H_0.5-1.0_06142021 0.5 - 1 460-236514-10 4602365141 SO 6/14/2021 N		PCB-I PCB-I_0.0-0.5_06142021 0 - 0.5 460-236514-7 4602365141 SO 6/14/2021 N	
CAS NO.	COMPOUND		UNITS										
	Polychlorinated Biphenyls (PCBs)												
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		**2.60**		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.04	J	0.26		0.45		0.84		0.09	
	Total PCBs	1	mg/kg	0.04		0.26		0.45		**3.44**		0.09	

(1) Laboratory analytical results compared to NYSDEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives (CSCOs)
(2) ND indicates compound was not detected
(3) J indicates an estimated concentration
(4) Grey shaded values exceed NYSDEC Part 375 Unrestricted Soil Criteria

Table 1a
Summary of June 2021 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Preliminary PCB Analytical Data		6 NYCRR Part 375 Commercial SCOs	Location ID: Sample ID: Depth: Lab Sample ID: SDG: Matrix: Sampled: Sample Type:	PCB-I PCB-I_0.5-1.0_06142021 0.5 - 1 460-236514-8 4602365141 SO 6/14/2021 N		PCB-J PCB-J_0.0-0.5_06142021 0 - 0.5 460-236514-5 4602365141 SO 6/14/2021 N		PCB-J PCB-J_0.5-1.0_06142021 0.5 - 1 460-236514-6 4602365141 SO 6/14/2021 N		PCB-K PCB-K_0.0-0.5_06142021 0 - 0.5 460-236514-3 4602365141 SO 6/14/2021 N		PCB-K PCB-K_0.5-1.0_06142021 0.5 - 1 460-236514-4 4602365141 SO 6/14/2021 N	
CAS NO.	COMPOUND		UNITS										
	Polychlorinated Biphenyls (PCBs)												
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.86		0.03		0.21		0.99		**1.70**	
	Total PCBs	1	mg/kg	0.86		0.03		0.21		0.99		**1.70**	

(1) Laboratory analytical results compared to NYSDEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives (CSCOs)
(2) ND indicates compound was not detected
(3) J indicates an estimated concentration
(4) Grey shaded values exceed NYSDEC Part 375 Unrestricted Soil Criteria

Table 1a
Summary of June 2021 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Preliminary PCB Analytical Data		6 NYCRR Part 375 Commercial SCOs	Location ID: Sample ID: Depth: Lab Sample ID: SDG: Matrix: Sampled: Sample Type:	PCB-L PCB-L_0.0-0.5_06142021 0 - 0.5 460-236514-1 4602365141 SO 6/14/2021 N		PCB-L PCB-L_0.5-1.0_06142021 0.5 - 1 460-236514-2 4602365141 SO 6/14/2021 N		PCB-M PCB-M_0.0-0.5_06112021 0 - 0.5 460-236321-4 4602363211 SO 6/11/2021 N		PCB-M PCB-M_0.5-1.0_06112021 0.5 - 1 460-236321-5 4602363211 SO 6/11/2021 N		PCB-M CB-M_0.5-1.0_06112021-DU 0.5 - 1 460-236321-6 4602363211 SO 6/11/2021 FD	
CAS NO.	COMPOUND		UNITS										
	Polychlorinated Biphenyls (PCBs)												
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**1.90**		**3.80**		**52.00**		**46.00**		**47.00**	
	Total PCBs	1	mg/kg	**1.90**		**3.80**		**52.00**		**46.00**		**47.00**	

(1) Laboratory analytical results compared to NYSDEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives (CSCOs)
(2) ND indicates compound was not detected
(3) J indicates an estimated concentration
(4) Grey shaded values exceed NYSDEC Part 375 Unrestricted Soil Criteria

Table 1a
Summary of June 2021 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Preliminary PCB Analytical Data		6 NYCRR Part 375 Commercial SCOs	Location ID: Sample ID: Depth: Lab Sample ID: SDG: Matrix: Sampled: Sample Type:	PCB-N PCB-N_0.0-0.5_06092021 0 - 0.5 460-236136-11 4602361361 SO 6/9/2021 N		PCB-N PCB-N_0.5-1.0_06092021 0.5 - 1 460-236136-12 4602361361 SO 6/9/2021 N		PCB-O PCB-O_0.0-0.5_06102021 0 - 0.5 460-236210-1 4602362101 SO 6/10/2021 N		PCB-O PCB-O_0.5-1.0_06102021 0.5 - 1 460-236210-2 4602362101 SO 6/10/2021 N		PCB-P PCB-P_0.0-0.5_06092021 0 - 0.5 460-236136-10 4602361361 SO 6/9/2021 N	
CAS NO.	COMPOUND		UNITS										
	Polychlorinated Biphenyls (PCBs)												
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**4.50**		**1.90**		0.04		0.04		0.47	
	Total PCBs	1	mg/kg	**4.50**		**1.90**		0.04		0.04		0.47	

(1) Laboratory analytical results compared to NYSDEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives (CSCOs)
(2) ND indicates compound was not detected
(3) J indicates an estimated concentration
(4) Grey shaded values exceed NYSDEC Part 375 Unrestricted Soil Criteria

Table 1a
Summary of June 2021 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Preliminary PCB Analytical Data		6 NYCRR Part 375 Commercial SCOs	Location ID: Sample ID: Depth: Lab Sample ID: SDG: Matrix: Sampled: Sample Type:	PCB-Q PCB-Q_0.0-0.5_06092021 0 - 0.5 460-236136-8 4602361361 SO 6/9/2021 N		PCB-Q PCB-Q_0.5-1.0_06092021 0.5 - 1 460-236136-9 4602361361 SO 6/9/2021 N		PCB-R PCB-R_0.0-0.5_06092021 0 - 0.5 460-236136-6 4602361361 SO 6/9/2021 N		PCB-R PCB-R_0.5-0.9_06092021 0.5 - 0.9 460-236136-7 4602361361 SO 6/9/2021 N		PCB-S PCB-S_0.0-0.5_06092021 0 - 0.5 460-236136-4 4602361361 SO 6/9/2021 N	
CAS NO.	COMPOUND		UNITS										
	Polychlorinated Biphenyls (PCBs)												
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**3.40**		0.91		**13.00**		**25.00**		0.01	J
	Total PCBs	1	mg/kg	**3.40**		0.91		**13.00**		**25.00**		0.01	

(1) Laboratory analytical results compared to NYSDEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives (CSCOs)
(2) ND indicates compound was not detected
(3) J indicates an estimated concentration
(4) Grey shaded values exceed NYSDEC Part 375 Unrestricted Soil Criteria

Table 1a
Summary of June 2021 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Preliminary PCB Analytical Data		6 NYCRR Part 375 Commercial SCOs	Location ID: Sample ID: Depth: Lab Sample ID: SDG: Matrix: Sampled: Sample Type:	PCB-S PCB-S_0.5-1.0_06092021 0.5 - 1 460-236136-5 4602361361 SO 6/9/2021 N		PCB-T PCB-T_0.0-0.5_06092021 0 - 0.5 460-236136-1 4602361361 SO 6/9/2021 N		PCB-U PCB-U_0.0-0.5_06092021 0 - 0.5 460-236136-2 4602361361 SO 6/9/2021 N		PCB-U PCB-U_1.0-1.5_06092021 1 - 1.5 460-236136-3 4602361361 SO 6/9/2021 N		PCB-V PCB-V_0.0-0.5_06112021 0 - 0.5 460-236321-2 4602363211 SO 6/11/2021 N	
CAS NO.	COMPOUND		UNITS										
	Polychlorinated Biphenyls (PCBs)												
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.09		0.03		0.11		0.02	J	0.62	
	Total PCBs	1	mg/kg	0.09		0.03		0.11		0.02		0.62	

(1) Laboratory analytical results compared to NYSDEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives (CSCOs)
(2) ND indicates compound was not detected
(3) J indicates an estimated concentration
(4) Grey shaded values exceed NYSDEC Part 375 Unrestricted Soil Criteria

Table 1a
Summary of June 2021 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Preliminary PCB Analytical Data		6 NYCRR Part 375 Commercial SCOs	Location ID: Sample ID: Depth: Lab Sample ID: SDG: Matrix: Sampled: Sample Type:	PCB-W PCB-W_0.0-0.5_06112021 0 - 0.5 460-236321-3 4602363211 SO 6/11/2021 N		PCB-X PCB-X_0.0-0.5_06112021 0 - 0.5 460-236321-1 4602363211 SO 6/11/2021 N		PCB-AA PCB-AA_0.0-0.5_06102021 0 - 0.5 460-236210-15 4602362101 SO 6/10/2021 N		PCB-AA PCB-AA_0.5-1.0_06102021 0.5 - 1 460-236210-16 4602362101 SO 6/10/2021 N		PCB-AB PCB-AB_0.0-0.5_06102021 0 - 0.5 460-236210-13 4602362101 SO 6/10/2021 N	
CAS NO.	COMPOUND		UNITS										
	Polychlorinated Biphenyls (PCBs)												
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.30		0.08		0.28		0.22		0.12	
	Total PCBs	1	mg/kg	0.30		0.08		0.28		0.22		0.12	

(1) Laboratory analytical results compared to NYSDEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives (CSCOs)
(2) ND indicates compound was not detected
(3) J indicates an estimated concentration
(4) Grey shaded values exceed NYSDEC Part 375 Unrestricted Soil Criteria

Table 1a
Summary of June 2021 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Preliminary PCB Analytical Data		6 NYCRR Part 375 Commercial SCOs	Location ID: Sample ID: Depth: Lab Sample ID: SDG: Matrix: Sampled: Sample Type:	PCB-AB PCB-AB_0.5-1.0_06102021 0.5 - 1 460-236210-14 4602362101 SO 6/10/2021 N		PCB-AC PCB-AC_0.0-0.5_06102021 0 - 0.5 460-236210-11 4602362101 SO 6/10/2021 N		PCB-AC PCB-AC_0.5-1.0_06102021 0.5 - 1 460-236210-12 4602362101 SO 6/10/2021 N		PCB-AD PCB-AD_0.0-0.5_06102021 0 - 0.5 460-236210-8 4602362101 SO 6/10/2021 N		PCB-AD PCB-AD_0.5-1.0_06102021 0.5 - 1 460-236210-9 4602362101 SO 6/10/2021 N	
CAS NO.	COMPOUND		UNITS										
	Polychlorinated Biphenyls (PCBs)												
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.63		ND		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.59		0.49		0.56		0.51		0.66	
	Total PCBs	1	mg/kg	**1.22**		0.49		0.56		0.51		0.66	

(1) Laboratory analytical results compared to NYSDEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives (CSCOs)
(2) ND indicates compound was not detected
(3) J indicates an estimated concentration
(4) Grey shaded values exceed NYSDEC Part 375 Unrestricted Soil Criteria

Table 1a
Summary of June 2021 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Preliminary PCB Analytical Data		6 NYCRR Part 375 Commercial SCOs	Location ID: Sample ID: Depth: Lab Sample ID: SDG: Matrix: Sampled: Sample Type:	PCB-AE PCB-AE_0.0-0.5_06102021 0 - 0.5 460-236210-5 4602362101 SO 6/10/2021 N		PCB-AE B-AE_0.0-0.5_06102021-D 0 - 0.5 460-236210-6 4602362101 SO 6/10/2021 FD		PCB-AE PCB-AE_0.5-1.0_06102021 0.5 - 1 460-236210-7 4602362101 SO 6/10/2021 N		PCB-AF PCB-AF_0.0-0.5_06102021 0 - 0.5 460-236210-3 4602362101 SO 6/10/2021 N		PCB-AF PCB-AF_0.5-1.0_06102021 0.5 - 1 460-236210-4 4602362101 SO 6/10/2021 N	
CAS NO.	COMPOUND		UNITS										
	Polychlorinated Biphenyls (PCBs)												
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.33	J	0.55		0.90		0.55		0.85	
	Total PCBs	1	mg/kg	0.33		0.55		0.90		0.55		0.85	

(1) Laboratory analytical results compared to NYSDEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives (CSCOs)
(2) ND indicates compound was not detected
(3) J indicates an estimated concentration
(4) Grey shaded values exceed NYSDEC Part 375 Unrestricted Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-100 0.5 - 1 SB_100_20211208_0.5-1.0 460-248749-13 4602487491 SO N 12/8/2021		SB-100 3.5 - 4 SB_100_20211208_3.5-4.0 460-248749-14 4602487491 SO N 12/8/2021		SB-91 23.5 - 24 SB-91_20220228-23.5-24.0 460-253443-12 4602534431 SO N 2/28/2022		SB-109 0.5 - 1 SB-109_20211129-0.5-1.0 460-248139-3 4602481391 SO N 11/29/2021		SB-109 3.5 - 4 SB-109_20211129-3.5-4.0 460-248139-4 4602481391 SO N 11/29/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS										
	Polychlorinated Biphenyls (PCBs)												
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		0.09		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.05		0.05		ND		0.11		0.02	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.05		0.05		ND		0.20		0.02	J

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-98 0.5 - 1 SB-98_20211202-0.5-1.0 460-248387-1 4602483871 SO N 12/2/2021		SB-98 3.5 - 4 SB-98_20211202-3.5-4.0 460-248387-2 4602483871 SO N 12/2/2021		SB-98 33 - 33.5 SB-98_20220209-33.0-33.5 460-252311-2 4602523111 SO N 2/9/2022		SB-129 0.5 - 1 SB-129_20211230-0.5-1.0 460-250018-16 4602500181 SO N 12/30/2021		SB-129 2.5 - 3 SB-129_20211230-2.5-3.0 460-250018-17 4602500181 SO N 12/30/2021		SB-129 3.5 - 4 SB-129_20220121-3.5-4.0 460-251087-6 4602510871 SO N 1/21/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		0.09		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.54		0.13		ND		0.21		0.14		0.02	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.54		0.13		ND		0.30		0.14		0.02	J

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-197 0.5 - 1 SB-197_20211214-0.5-1.0 460-249126-9 4602491261 SO N 12/14/2021		SB-197 3.5 - 4 SB-197_20211214-3.5-4.0 460-249126-10 4602491261 SO N 12/14/2021		SB-209 48.5 - 49 SB-209_20220302-48.5-49.0 460-253603-1 4602536031 SO N 3/2/2022		SB-198 0.5 - 1 SB-198_20211122-0.5-1.0 460-247852-11 4602478521 SO N 11/22/2021		SB-198 3.5 - 4 SB-198_20211122-3.5-4.0 460-247852-12 4602478521 SO N 11/22/2021		SB-101 0.5 - 1 SB-101_20211230-0.5-1.0 460-250018-18 4602500181 SO N 12/30/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		ND		0.06	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.24		0.03		ND		**7.70**	J	0.57		0.09	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.24		0.03		ND		**7.70**		0.57		0.15	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-101 2 - 2.5 SB-101_20211230-2.0-2.5 460-250018-19 4602500181 SO N 12/30/2021		SB-110 0.5 - 1 SB-110_20211203-0.5-1.0 460-248387-3 4602483871 SO N 12/3/2021		SB-110 3.5 - 4 SB-110_20211203-3.5-4.0 460-248387-4 4602483871 SO N 12/3/2021		SB-119 0.5 - 1 SB-119_20211129-0.5-1.0 460-248139-1 4602481391 SO N 11/29/2021		SB-119 3.5 - 4 SB-119_20211129-3.5-4.0 460-248139-2 4602481391 SO N 11/29/2021		SB-130 0.5 - 1 SB-130_20211220-0.5-1.0 460-249597-5 4602495971 SO N 12/20/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		ND		0.06	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.17		0.13		0.01	J	0.28		0.44		0.05	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.17		0.13		0.01	J	0.28		0.44		0.10	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-130 3.5 - 4 SB-130_20211220-3.5-4.0 460-249597-6 4602495971 SO N 12/20/2021		SB-138 0.5 - 1 SB-138_20211214_0.5-1.0 460-249289-1 4602492891 SO N 12/14/2021		SB-138 3.5 - 4 SB-138_20211214_3.5-4.0 460-249289-2 4602492891 SO N 12/14/2021		SB-93 0.5 - 1 SB-93_20211123-0.5-1.0 460-247852-13 4602478521 SO N 11/23/2021		SB-93 0.5 - 1 SB-93_20211123-0.5-1.0_D 460-247852-14 4602478521 SO FD 11/23/2021		SB-93 3.5 - 4 SB-93_20211123-3.5-4.0 460-247852-15 4602478521 SO N 11/23/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		0.21	J	ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.05		0.03		0.20		0.19	J	0.11	J	**3.00**	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.05		0.03		0.20		0.19	J	0.32	J	**3.00**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-93 4 - 4.5 SB-93-20221014-4.0-4.5 460-267541-32 4602675411 SO N 10/14/2022		SB-93 4.5 - 5 SB-93-20221014-4.5-5.0 460-267541-33 4602675411 SO N 10/14/2022		SB-93 8.5 - 9 SB-93-20221014-8.5-9.0 460-267541-41 4602675411 SO N 10/14/2022		SB-93 9 - 9.5 SB-93-20221014-9.0-9.5 460-267541-42 4602675411 SO N 10/14/2022		SB-93 9.5 - 10 SB-93-20221014-9.5-10.0 460-267541-43 4602675411 SO N 10/14/2022		SB-93 48.5 - 49 SB-93_20220209-48.5-49.0 460-252311-1 4602523111 SO N 2/9/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.03	U	0.03	U	ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.03	U	0.03	U	ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.03	U	0.03	U	ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.03	U	0.03	U	ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.03	U	0.04		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.03	U	0.03	U	ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.08		0.09		0.35		0.26		0.13		ND	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.03	U	0.03	U	ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.03	U	0.03	U	ND	
	Total PCBs	1	mg/kg	0.08		0.09		0.35		0.26		0.17		ND	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-153 0.5 - 1 SB-153_20211122-0.5-1.0 460-247852-5 4602478521 SO N 11/22/2021		SB-153 3.5 - 4 SB-153_20211122-3.5-4.0 460-247852-6 4602478521 SO N 11/22/2021		SB-153 4 - 4.5 SB-153_20230309-4.0-4.5 460-276043-2 4602760431 SO N 3/9/2023		SB-153 4 - 4.5 SB-153_20230309-4.0-4.5-A 460-276043-3 4602760431 SO FD 3/9/2023		SB-153 4.5 - 5 SB-153_20230309-4.5-5.0 460-276043-4 4602760431 SO N 3/9/2023		SB-153 5 - 5.5 SB-153_20230309-5.0-5.5 460-276043-5 4602760431 SO N 3/9/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		0.03	U	0.11	U	0.24	U	0.03	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		0.03	U	0.11	U	0.24	U	0.03	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		0.03	U	0.11	U	0.24	U	0.03	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		0.03	U	0.11	U	0.24	U	0.03	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		0.03	U	0.11	U	0.24	U	0.03	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.63		0.39		0.15	J	**1.50**	J	0.32	J+	0.03	U
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.72		0.50		0.28	J	**2.40**	J	0.43	J+	0.10	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		0.03	U	0.11	U	0.24	U	0.03	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		0.21	J	0.11	UJ	0.79	J+	0.03	U
	Total PCBs	1	mg/kg	**1.40**		0.89		0.64	J	**3.90**	J	**1.50**	J+	0.10	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-163 0.5 - 1 SB-163_20211118-0.5-1.0 460-247558-12 4602475581 SO N 11/18/2021		SB-163 3.5 - 4 SB-163_20211118-3.5-4.0 460-247558-13 4602475581 SO N 11/18/2021		SB-163 4 - 4.5 SB-163_20220125-4.0-4.5 460-251246-2 4602512461 SO N 1/25/2022		SB-163 4.5 - 5 SB-163_20220125-4.5-5.0 460-251246-3 4602512461 SO N 1/25/2022		SB-163 5 - 5.5 SB-163_20220218-5.0-5.5 460-252831-7 4602528311 SO N 2/18/2022		SB-163 5.5 - 6 SB-163-20231024-5.5-6.0 460-292442-18 4602924421 SO N 10/24/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		1.10	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		1.10	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		1.10	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		1.10	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		1.10	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	**2.40**		**2.50**		**5.60**	**J**	**2.00**		ND		1.10	U
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**2.70**		**2.20**		**6.60**	**J**	**2.20**		ND		**16.00**	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		1.10	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		1.10	U
	Total PCBs	1	mg/kg	**5.10**		**4.70**		**12.20**	**J**	**4.20**		ND		**16.00**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-163 6 - 6.5 SB-163-20231024-6.0-6.5 460-292442-19 4602924421 SO N 10/24/2023		SB-163 6.5 - 7 SB-163-20231024-6.5-7.0 460-292442-20 4602924421 SO N 10/24/2023		SB-163 7 - 7.5 SB-163-20231024-7.0-7.5 460-292442-21 4602924421 SO N 10/24/2023		SB-163 7.5 - 8 SB-163-20231024-7.5-8.0 460-292442-22 4602924421 SO N 10/24/2023		SB-163 8 - 8.5 SB-163-20231024-8.0-8.5 460-292442-23 4602924421 SO N 10/24/2023		SB-171 0.5 - 1 SB-171_20211118-0.5-1.0 460-247558-10 4602475581 SO N 11/18/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.43	U	0.11	U	0.11	U	0.03	U	0.02	U	ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.43	U	0.11	U	0.11	U	0.03	U	0.02	U	ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.43	U	0.11	U	0.11	U	0.03	U	0.02	U	ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.43	U	0.11	U	0.11	U	0.03	U	0.02	U	ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.43	U	0.11	U	0.11	U	0.03	U	0.02	U	ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.43	U	0.11	U	0.11	U	0.03	U	0.02	U	ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**8.50**		**1.80**		**2.10**		0.03	J	0.02	J	0.10	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.43	U	0.11	U	0.11	U	0.03	U	0.02	U	ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.43	U	0.11	U	0.11	U	0.03	U	0.02	U	ND	
	Total PCBs	1	mg/kg	**8.50**		**1.80**		**2.10**		0.03	J	0.02	J	0.10	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-171 3.5 - 4 SB-171_20211118 460-247558-11 4602475581 SO N 11/18/2021		SB-171 4 - 4.5 SB-171_20220126-4.0-4.5 460-251525-1 4602515251 SO N 1/26/2022		SB-171 4.5 - 5 SB-171_20220126-4.5-5.0 460-251525-2 4602515251 SO N 1/26/2022		SB-171 5 - 5.5 SB-171_20220218-5.0-5.5 460-252831-1 4602528311 SO N 2/18/2022		SB-171 5.5 - 6 SB-171_20220218-5.5-6.0 460-252831-2 4602528311 SO N 2/18/2022		SB-171 5.5 - 6 SB-171_20231027-5.5-6.0 460-291385-47 4602913851 SO N 10/27/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	**2.20**		**1.60**		0.64		**1.70**		0.05		0.09	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**1.90**		**1.30**		0.66		**1.50**		0.05		0.09	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
	Total PCBs	1	mg/kg	**4.10**		**2.90**		**1.30**		**3.20**		0.10		0.17	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-171 6 - 6.5 SB-171_20231027-6.0-6.5 460-291385-48 4602913851 SO N 10/27/2023		SB-171 6.5 - 7 SB-171_20231027-6.5-7.0 460-291385-49 4602913851 SO N 10/27/2023		SB-171 7 - 7.5 SB-171_20231027-7.0-7.5 460-291385-50 4602913851 SO N 10/27/2023		SB-171 7.5 - 8 SB-171_20231027-7.5-8.0 460-291385-51 4602913851 SO N 10/27/2023		SB-171 8 - 8.5 SB-171_20231027-8.0-8.5 460-291385-52 4602913851 SO N 10/27/2023		SB-180 0.5 - 1 SB-180_20211115-0.5-1.0 460-247512-1 4602475121 SO N 11/15/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.04	U	0.04	U	0.23	U	0.02	U	0.03	U	ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.04	U	0.04	U	0.23	U	0.02	U	0.03	U	ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.04	U	0.04	U	0.23	U	0.02	U	0.03	U	ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.04	U	0.04	U	0.23	U	0.02	U	0.03	U	ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.04	U	0.04	U	0.23	U	0.02	U	0.03	U	ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.73		0.56		**5.70**		0.72		0.35		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**1.10**		0.65		**3.50**		0.52		0.60		ND	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.04	U	0.04	U	0.23	U	0.02	U	0.03	U	ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.04	U	0.04	U	0.23	U	0.02	U	0.03	U	ND	
	Total PCBs	1	mg/kg	**1.80**		**1.20**		**9.20**		**1.20**		0.95		ND	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-180 3.5 - 4 SB-180_20211115-3.5-4.0 460-247512-2 4602475121 SO N 11/15/2021		SB-180 4 - 4.5 SB-180_20220105-4.0-4.5 460-250148-11 4602501481 SO N 1/5/2022		SB-180 4.5 - 5 SB-180_20220105-4.5-5.0 460-250148-12 4602501481 SO N 1/5/2022		SB-180 5 - 5.5 SB-180_20220211-5.0-5.5 460-252378-1 4602523781 SO N 2/11/2022		SB-180 5.5 - 6 SB-180_20220211-5.5-6.0 460-252378-2 4602523781 SO N 2/11/2022		SB-180 6 - 6.5 SB-180_20230620-6.0-6.5 460-282692-26 4602826921 SO N 6/20/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		0.04	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		0.04	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		0.04	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		0.04	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		0.04	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		**1.70**		0.74		ND		ND		0.92	J
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**4.70**		**2.80**		**1.50**		**6.60**		0.17		**1.10**	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		0.04	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		0.04	U
	Total PCBs	1	mg/kg	**4.70**		**4.50**		**2.24**		**6.60**		0.17		**2.00**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-180 6.5 - 7 SB-180_20230620-6.5-7.0 460-282692-27 4602826921 SO N 6/20/2023		SB-180 7 - 7.5 SB-180_20230620-7.0-7.5 460-282692-28 4602826921 SO N 6/20/2023		SB-180 7.5 - 8 SB-180_20230620-7.5-8.0 460-282692-29 4602826921 SO N 6/20/2023		SB-180 8 - 8.5 SB-180_20230620-8.0-8.5 460-282692-30 4602826921 SO N 6/20/2023		SB-200 1.5 - 2 SB-200_20220103-1.5-2.0 460-250148-5 4602501481 SO N 1/3/2022		SB-200 3.5 - 4 SB-200_20220103-3.5-4.0 460-250148-6 4602501481 SO N 1/3/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.05	U	0.02	U	0.05	U	0.11	U	ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.05	U	0.02	U	0.05	U	0.11	U	ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.05	U	0.02	U	0.05	U	0.11	U	ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.05	U	0.02	U	0.05	U	0.11	U	ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.05	U	0.02	U	0.05	U	0.11	U	ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.78	JN	0.78	JN	0.60		0.13		0.23	J	0.87	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.87	JN	0.77	J	0.88		0.21		0.58	J	**2.20**	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.05	U	0.02	U	0.05	U	0.11	U	ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.05	U	0.02	U	0.05	U	0.11	U	ND		ND	
	Total PCBs	1	mg/kg	**1.70**		**1.60**		**1.50**		0.34		0.81	J	**3.07**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-200 4 - 4.5 SB-200_20220114-4.0-4.5 460-250735-3 4602507351 SO N 1/14/2022		SB-200 4.5 - 5 SB-200-20230316-4.5-5.0 460-276493-2 4602764931 SO N 3/16/2023		SB-200 5 - 5.5 SB-200-20230316-5.0-5.5 460-276493-3 4602764931 SO N 3/16/2023		SB-200 5.5 - 6 SB-200-20230316-5.5-6.0 460-276493-4 4602764931 SO N 3/16/2023		SB-200 6 - 6.5 SB-200-20230316-6.0-6.5 460-276493-5 4602764931 SO N 3/16/2023		SB-200 6.5 - 7 SB-200_20231027-6.5-7.0 460-291385-39 4602913851 SO N 10/27/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		0.04	U	0.02	U	0.24	U	0.03	U	0.11	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		0.04	U	0.02	U	0.24	U	0.03	U	0.11	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		0.04	U	0.02	U	0.24	U	0.03	U	0.11	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		0.04	U	0.02	U	0.24	U	0.03	U	0.11	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		0.04	U	0.02	U	0.24	U	0.03	U	0.11	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		0.37		0.55		**4.70**		0.04		**1.90**	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.41		0.68		0.62		**3.90**		0.05		**2.20**	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		0.04	U	0.02	U	0.24	U	0.03	U	0.11	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		0.04	U	0.02	U	0.24	U	0.03	U	0.11	U
	Total PCBs	1	mg/kg	0.41		**1.10**		**1.20**		**8.60**		0.09		**4.10**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-200 7 - 7.5 SB-200_20231027-7.0-7.5 460-291385-40 4602913851 SO N 10/27/2023		SB-200 7.5 - 8 SB-200_20231027-7.5-8.0 460-291385-41 4602913851 SO N 10/27/2023		SB-102 0.5 - 1 SB-102_20211213-0.5-1.0 460-249126-1 4602491261 SO N 12/13/2021		SB-102 3.5 - 4 SB-102_20211213-3.5-4.0 460-249126-2 4602491261 SO N 12/13/2021		SB-111 0.5 - 1 SB-111_20211213-0.5-1.0 460-249126-3 4602491261 SO N 12/13/2021		SB-111 3.5 - 4 SB-111_20211213-3.5-4.0 460-249126-4 4602491261 SO N 12/13/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.11	U	0.02	U	ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.11	U	0.02	U	ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.11	U	0.02	U	ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.11	U	0.02	U	ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.11	U	0.02	U	ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	**1.10**		0.27		ND		ND		0.21		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**1.90**		0.38		0.08		0.16		0.17		ND	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.11	U	0.02	U	ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.11	U	0.02	U	ND		ND		ND		ND	
	Total PCBs	1	mg/kg	**3.00**		0.65		0.08		0.16		0.38		ND	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-111 34.5 - 35 SB-111_20220209-34.5-35.0 460-252311-5 4602523111 SO N 2/10/2022		SB-120 0.5 - 1 SB-120_20211129-0.5-1.0 460-248139-5 4602481391 SO N 11/29/2021		SB-120 3.5 - 4 SB-120_20211129-3.5-4.0 460-248139-7 4602481391 SO N 11/29/2021		SB-131 0.5 - 1 SB-131_20211215_0.5-1.0 460-249289-7 4602492891 SO N 12/15/2021		SB-131 3.5 - 4 SB-131_20211215_3.5-4.0 460-249289-8 4602492891 SO N 12/15/2021		SB-210 36.5 - 37 SB-210_20220209-36.5-37.0 460-252311-4 4602523111 SO N 2/9/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	ND		0.11		ND		0.03		0.01	J	ND	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	ND		0.11		ND		0.03		0.01	J	ND	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-90 25.5 - 26 SB-90_20220214-25.5-26.0 460-252569-2 4602525691 SO N 2/14/2022		SB-139 0.5 - 1 SB-139_20211230-0.5-1.0 460-250018-20 4602500181 SO N 12/30/2021		SB-139 3.5 - 4 SB-139_20211230-3.5-4.0 460-250018-21 4602500181 SO N 12/30/2021		SB-148 0.5 - 1 SB-148_20211122-0.5-1.0 460-247852-9 4602478521 SO N 11/22/2021		SB-148 3.5 - 4 SB-148_20211122-3.5-4.0 460-247852-10 4602478521 SO N 11/22/2021		SB-148 4 - 4.5 SB-148_20231024-4.0-4.5 460-291128-2 4602911281 SO N 10/24/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		ND		0.02	UJ
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	ND		0.47		0.25		0.08		0.19		0.31	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
	Total PCBs	1	mg/kg	ND		0.47		0.25		0.08		0.19		0.31	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-148 4 - 4.5 SB-148_20231024-4.0-4.5-A 460-291128-3 4602911281 SO FD 10/24/2023		SB-148 4.5 - 5 SB-148_20231024-4.5-5.0 460-291128-4 4602911281 SO N 10/24/2023		SB-148 4.5 - 5 SB-148_20231024-4.5-5.0-A 460-291128-5 4602911281 SO FD 10/24/2023		SB-148 5 - 5.5 SB-148_20231024-5.0-5.5 460-291128-6 4602911281 SO N 10/24/2023		SB-154 0.5 - 1 SB-154_20211119-0.5-1.0 460-247647-4 4602476471 SO N 11/19/2021		SB-154 3.5 - 4 SB-154_20211119-3.5-4.0 460-247647-5 4602476471 SO N 11/19/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS														
	Polychlorinated Biphenyls (PCBs)																
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.03	U	0.02	U	0.02	U	0.02	U	ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.03	U	0.02	U	0.02	U	0.02	U	ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.03	U	0.02	U	0.02	U	0.02	U	ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.03	U	0.02	U	0.02	U	0.02	U	ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.03	U	0.02	U	0.02	U	0.02	U	ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.07	J	0.26	J	0.02	UJ	0.02	U	ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.18	J	0.58	J	0.24	J	0.14		0.10		0.26	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.03	U	0.02	U	0.02	U	0.02	U	ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.03	U	0.02	U	0.02	U	0.02	U	ND		ND	
	Total PCBs	1	mg/kg	0.25	J	0.84	J	0.24	J	0.14		0.10		0.26	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-154 4 - 4.5 SB-154_20230616-4.0-4.5 460-282586-29 4602825861 SO N 6/16/2023		SB-154 4.5 - 5 SB-154_20230616-4.5-5.0 460-282586-30 4602825861 SO N 6/16/2023		SB-154 5 - 5.5 SB-154_20230616-5.0-5.5 460-282586-31 4602825861 SO N 6/16/2023		SB-154 5.5 - 6 SB-154_20230616-5.5-6.0 460-282586-32 4602825861 SO N 6/16/2023		SB-164 0.5 - 1 SB-164_20211119-0.5-1.0 460-247647-7 4602476471 SO N 11/19/2021		SB-164 0.5 - 1 SB-164_20211119-0.5-1.0_D 460-247647-8 4602476471 SO FD 11/19/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.04	U	0.04	U	0.02	U	0.02	U	ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.04	U	0.04	U	0.02	U	0.02	U	ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.04	U	0.04	U	0.02	U	0.02	U	ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.04	U	0.04	U	0.02	U	0.02	U	ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.04	U	0.04	U	0.02	U	0.02	U	ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.69	J	0.67	J	0.78		0.22		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	1.00		1.00		0.90		0.21		0.26	J	0.43	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.04	U	0.04	U	0.02	U	0.02	U	ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.04	U	0.04	U	0.02	U	0.02	U	ND		ND	
	Total PCBs	1	mg/kg	**1.70**		**1.70**		**1.70**		0.43		0.26	J	0.43	J

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-164 3.5 - 4 SB-164_20211119-3.5-4.0 460-247647-9 4602476471 SO N 11/19/2021		SB-164 4 - 4.5 SB-164_20230313-4.0-4.5 460-276286-16 4602762861 SO N 3/13/2023		SB-164 4.5 - 5 SB-164_20230313-4.5-5.0 460-276286-17 4602762861 SO N 3/13/2023		SB-164 5 - 5.5 SB-164_20230313-5.0-5.5 460-276286-18 4602762861 SO N 3/13/2023		SB-164 5.5 - 6 SB-164_20230313-5.5-6.0 460-276286-19 4602762861 SO N 3/13/2023		SB-164 6 - 6.5 SB-164_20230313-6.0-6.5 460-276286-20 4602762861 SO N 3/13/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		0.50		0.53	J	0.02	U	0.03		0.09	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.43	J	0.67		0.91	J	0.36		0.05		0.03	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
	Total PCBs	1	mg/kg	0.43	J	**1.20**		**1.40**		0.36		0.07		0.11	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-164 23 - 23.5 SB-164_20220208-23.0-23.5 460-252132-7 4602521321 SO N 2/8/2022		SB-172 0.5 - 1 SB-172_20211118-0.5-1.0 460-247558-8 4602475581 SO N 11/18/2021		SB-172 3.5 - 4 SB-172_20211118-3.5-4.0 460-247558-9 4602475581 SO N 11/18/2021		SB-172 4 - 4.5 SB-172_20220111-4.0-4.5 460-250511-15 4602505111 SO N 1/11/2022		SB-172 4.5 - 5 SB-172_20220111-4.5-5.0 460-250511-16 4602505111 SO N 1/11/2022		SB-172 5 - 5.5 SB-172_20220228-5.0-5.5 460-253443-2 4602534431 SO N 2/28/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		0.64		**5.10**		**4.40**		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	ND		**8.50**		1.00		**14.00**		**12.00**		**1.70**	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		**1.80**		ND	
	Total PCBs	1	mg/kg	ND		**8.50**		**1.64**		**19.10**		**18.20**		**1.70**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-172 5.5 - 6 SB-172_20220228-5.5-6.0 460-253443-3 4602534431 SO N 2/28/2022		SB-172 6 - 6.5 SB-172_20220228-6.0-6.5 460-253443-4 4602534432 SO N 2/28/2022		SB-172 6 - 6.5 SB-172-20231027-6.0-6.5 460-292442-31 4602924421 SO N 10/27/2023		SB-172 6.5 - 7 SB-172-20231027-6.5-7.0 460-292442-32 4602924421 SO N 10/27/2023		SB-172 7 - 7.5 SB-172-20231027-7.0-7.5 460-292442-33 4602924421 SO N 10/27/2023		SB-172 7.5 - 8 SB-172-20231027-7.5-8.0 460-292442-34 4602924421 SO N 10/27/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		0.11	U	0.05	U	0.02	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		0.11	U	0.05	U	0.02	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		0.11	U	0.05	U	0.02	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		0.11	U	0.05	U	0.02	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		0.11	U	0.64		0.02	U	0.08	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.26		ND		**2.70**		**1.20**		0.24		0.16	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.88		0.03	J	**1.60**		0.95		0.81		0.15	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		0.11	U	0.05	U	0.02	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		0.11	U	0.05	U	0.02	U	0.02	U
	Total PCBs	1	mg/kg	**1.14**		0.03	J	**4.30**		**2.80**		**1.10**		0.39	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-172 8 - 8.5 SB-172-20231027-8.0-8.5 460-292442-35 4602924421 SO N 10/27/2023		SB-181 0.5 - 1 SB-181_20211116-0.5-1.0 460-247512-3 4602475121 SO N 11/16/2021		SB-181 0.5 - 1 SB-181_20211116-0.5-1.0_D 460-247512-4 4602475121 SO FD 11/16/2021		SB-181 3.5 - 4 SB-181_20211116-3.5-4.0 460-247512-5 4602475121 SO N 11/16/2021		SB-181 4 - 4.5 SB-181_20220110-4.0-4.5 460-250511-13 4602505111 SO N 1/10/2022		SB-181 4.5 - 5 SB-181_20220110-4.5-5.0 460-250511-14 4602505111 SO N 1/10/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.39		ND		ND		**3.50**		**2.60**		**3.40**	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.58		**2.40**		**2.50**		**2.00**		**2.00**		**2.30**	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	ND		ND		ND		ND		0.22	J
	Total PCBs	1	mg/kg	0.97		**2.40**		**2.50**		**5.50**		**4.60**		**5.92**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-181 5 - 5.5 SB-181_20220211-5.0-5.5 460-252378-6 4602523781 SO N 2/11/2022		SB-181 5.5 - 6 SB-181_20230309-5.5-6.0 460-276043-27 4602760431 SO N 3/9/2023		SB-181 6 - 6.5 SB-181_20230309-6.0-6.5 460-276043-28 4602760431 SO N 3/9/2023		SB-181 6.5 - 7 SB-181_20230309-6.5-7.0 460-276043-29 4602760431 SO N 3/9/2023		SB-181 7 - 7.5 SB-181_20230309-7.0-7.5 460-276043-30 4602760431 SO N 3/9/2023		SB-181 7.5 - 8 SB-181_20230309-7.5-8.0 460-276043-31 4602760431 SO N 3/9/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		0.10	U	0.25	U	0.02	U	0.02	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		0.10	U	0.25	U	0.02	U	0.02	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		0.10	U	0.25	U	0.02	U	0.02	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		0.10	U	0.25	U	0.02	U	0.02	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		0.10	U	0.25	U	0.02	U	0.02	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.44		**2.10**		**4.20**		0.20		0.03		0.30	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.39		**1.50**		**3.50**		0.34		0.07		0.29	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		0.10	U	0.25	U	0.02	U	0.02	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		0.10	U	0.25	U	0.02	U	0.02	U	0.02	U
	Total PCBs	1	mg/kg	0.83		**3.60**		**7.70**		0.54		0.09		0.59	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-192 1.5 - 2 SB-192_20220104-1.5-2.0 460-250148-7 4602501481 SO N 1/4/2022		SB-192 3 - 3.5 SB-192_20220104-3.0-3.5 460-250148-8 4602501481 SO N 1/4/2022		SB-192 4 - 4.5 SB-192_20220114-4.0-4.5 460-250735-1 4602507351 SO N 1/14/2022		SB-192 4.5 - 5 SB-192_20220114-4.5-5.0 460-250735-2 4602507351 SO N 1/14/2022		SB-192 5 - 5.5 SB-192_20230613-5.0-5.5 460-282313-2 4602823131 SO N 6/13/2023		SB-192 5.5 - 6 SB-192_20230613-5.5-6.0 460-282313-3 4602823131 SO N 6/13/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		0.05	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		0.05	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		0.05	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		0.05	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		0.05	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.87		**1.50**		**1.50**		0.53		**1.10**		0.22	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**1.70**		**3.10**		**1.70**		0.44		**1.60**		0.35	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		0.05	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		0.05	U	0.02	U
	Total PCBs	1	mg/kg	**2.57**		**4.60**		**3.20**		0.97		**2.70**		0.57	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-192 6 - 6.5 SB-192_20230613-6.0-6.5 460-282313-4 4602823131 SO N 6/13/2023		SB-192 6.5 - 7 SB-192_20230613-6.5-7.0 460-282313-5 4602823131 SO N 6/13/2023		SB-192 7 - 7.5 SB-192_20230613-7.0-7.5 460-282313-6 4602823131 SO N 6/13/2023		SB-192 7.5 - 8 SB-192_20230613-7.5-8.0 460-282313-7 4602823131 SO N 6/13/2023		SB-103 0.5 - 1 SB-103_20211209-0.5-1.0 460-249126-5 4602491261 SO N 12/9/2021		SB-103 3.5 - 4 SB-103_20211209-3.5-4.0 460-249126-6 4602491261 SO N 12/9/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.09	U	0.45	UJ	0.11	UJ	0.02	UJ	ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.09	U	0.45	UJ	0.11	UJ	0.02	UJ	ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.09	U	0.45	UJ	0.11	UJ	0.02	UJ	ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.09	U	0.45	UJ	0.11	UJ	0.02	UJ	ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.09	U	0.45	UJ	0.11	UJ	0.02	UJ	ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.69		**10.00**	J	0.34	J	0.09	J	ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.54		**4.50**	J	1.00	J	0.10	J	0.29		0.04	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.09	U	0.45	UJ	0.11	UJ	0.02	UJ	ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.09	U	0.45	UJ	0.11	UJ	0.02	UJ	ND		ND	
	Total PCBs	1	mg/kg	**1.20**		**15.00**	J	**1.30**	J	0.18	J	0.29		0.04	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-112 0.5 - 1 SB-112_20211202-0.5-1.0 460-248300-13 4602483001 SO N 12/2/2021		SB-112 3.5 - 4 SB-112_20211202-3.5-4.0 460-248300-14 4602483001 SO N 12/2/2021		SB-121 0.5 - 1 SB-121_20211129-0.5-1.0 460-248139-14 4602481391 SO N 11/29/2021		SB-121 3.5 - 4 SB-121_20211129-3.5-4.0 460-248139-15 4602481391 SO N 11/29/2021		SB-132 0.5 - 1 SB-132_20211215_0.5-1.0 460-249289-3 4602492891 SO N 12/15/2021		SB-132 3.5 - 4 SB-132_20211215_3.5-4.0 460-249289-4 4602492891 SO N 12/15/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.23		0.03		0.07		0.08		0.03		0.02	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.23		0.03		0.07		0.08		0.03		0.02	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-140 0.5 - 1 SB-140_20211215_0.5-1.0 460-249289-10 4602492891 SO N 12/15/2021		SB-140 3.5 - 4 SB-140_20211215_3.5-4.0 460-249289-11 4602492891 SO N 12/15/2021		SB-94 0.5 - 1 SB-94_20211122-0.5-1.0 460-247852-7 4602478521 SO N 11/22/2021		SB-94 3.5 - 4 SB-94_20211122-3.5-4.0 460-247852-8 4602478521 SO N 11/22/2021		SB-94 36.5 - 37 SB-94_20220214-36.5-37.0 460-252569-5 4602525691 SO N 2/14/2022		SB-94 4 - 4.5 SB-94-20231024-4.0-4.5 460-292442-1 4602924421 SO N 10/24/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.18	J	ND		ND		ND		ND		0.02	U
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.47	J	0.03	J	0.50		0.23		ND		0.09	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
	Total PCBs	1	mg/kg	0.65	J	0.03	J	0.50		0.23		ND		0.09	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-94 4.5 - 5 SB-94-20231024-4.5-5.0 460-292442-2 4602924421 SO N 10/24/2023		SB-155 0.5 - 1 SB-155_20211118-0.5-1.0 460-247647-1 4602476471 SO N 11/18/2021		SB-155 3.5 - 4 SB-155_20211118-3.5-4.0 460-247647-2 4602476471 SO N 11/18/2021		SB-155 23 - 23.5 SB-155_20220211-23.0-23.5 460-252378-14 4602523781 SO N 2/11/2022		SB-155 4 - 4.5 SB-155_20231026-4.0-4.5 460-291385-15 4602913851 SO N 10/26/2023		SB-155 4.5 - 5 SB-155_20231026-4.5-5.0 460-291385-16 4602913851 SO N 10/26/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	ND		ND		ND		0.02	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	ND		ND		ND		0.02	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	ND		ND		ND		0.02	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	ND		ND		ND		0.02	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	ND		ND		ND		0.02	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.02	U	ND		ND		ND		0.04		0.08	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.12		0.43		0.06		ND		0.04		0.06	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	ND		ND		ND		0.02	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	ND		ND		ND		0.02	U	0.02	U
	Total PCBs	1	mg/kg	0.12		0.43		0.06		ND		0.09		0.14	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-155 5 - 5.5 SB-155_20231026-5.0-5.5 460-291385-17 4602913851 SO N 10/26/2023		SB-155 5.5 - 6 SB-155_20231026-5.5-6.0 460-291385-18 4602913851 SO N 10/26/2023		SB-155 6 - 6.5 SB-155_20231026-6.0-6.5 460-291385-19 4602913851 SO N 10/26/2023		SB-165 0.5 - 1 SB-165_20211118-0.5-1.0 460-247647-3 4602476471 SO N 11/18/2021		SB-165 3.5 - 4 SB-165_20211119-3.5-4.0 460-247647-6 4602476471 SO N 11/19/2021		SB-165 4 - 4.5 SB-165_20230619-4.0-4.5 460-282692-2 4602826921 SO N 6/19/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.03	U	0.03	U	ND		ND		0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.03	U	0.03	U	ND		ND		0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.03	U	0.03	U	ND		ND		0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.03	U	0.03	U	ND		ND		0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.03	U	0.03	U	ND		ND		0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.02		0.12		0.09		ND		ND		0.32	J
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.04		0.12		0.15		0.11	J	0.50	J	0.69	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.03	U	0.03	U	ND		ND		0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.03	U	0.03	U	ND		ND		0.02	U
	Total PCBs	1	mg/kg	0.07		0.24		0.24		0.11	J	0.50	J	1.00	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-165 4.5 - 5 SB-165_20230619-4.5-5.0 460-282692-3 4602826921 SO N 6/19/2023		SB-165 5 - 5.5 SB-165_20230619-5.0-5.5 460-282692-4 4602826921 SO N 6/19/2023		SB-165 5.5 - 6 SB-165_20230619-5.5-6.0 460-282692-5 4602826921 SO N 6/19/2023		SB-165 6 - 6.5 SB-165_20230619-6.0-6.5 460-282692-6 4602826921 SO N 6/19/2023		SB-173 0.5 - 1 SB-173_20211117-0.5-1.0 460-247558-6 4602475581 SO N 11/17/2021		SB-173 3.5 - 4 SB-173_20211117-3.5-4.0 460-247558-7 4602475581 SO N 11/17/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.02	U	0.04	U	0.02	U	ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.02	U	0.04	U	0.02	U	ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.02	U	0.04	U	0.02	U	ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.02	U	0.04	U	0.02	U	ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.02	U	0.04	U	0.02	U	ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.33	J	0.02	U	**1.60**		0.23	JN	0.37		**3.10**	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.75	J	0.51	JN	0.04	U	0.02	U	0.58		**2.40**	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.02	U	0.04	U	0.02	U	ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.02	U	0.04	U	0.02	U	ND		ND	
	Total PCBs	1	mg/kg	**1.10**		0.51		**1.60**		0.23	J+	0.95		**5.50**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-173 4 - 4.5 SB-173_20221013-4.0-4.5 460-267463-17 4602674631 SO N 10/13/2022		SB-173 4.5 - 5 SB-173_20221013-4.5-5.0 460-267463-19 4602674631 SO N 10/13/2022		SB-173 5 - 5.5 SB-173_20221013-5.0-5.5 460-267463-21 4602674631 SO N 10/13/2022		SB-173 5.5 - 6 SB-173_20221013-5.5-6.0 460-267463-22 4602674631 SO N 10/13/2022		SB-173 6 - 6.5 SB-173_20221013-6.0-6.5 460-267463-23 4602674631 SO N 10/13/2022		SB-173 6.5 - 7 SB-173_20221013-6.5-7.0 460-267463-24 4602674631 SO N 10/13/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.03	U	0.02	U	0.02	UJ	0.02	UJ	0.02	UJ	0.02	UJ
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.03	U	0.02	U	0.02	UJ	0.02	UJ	0.02	UJ	0.02	UJ
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.03	U	0.02	U	0.02	UJ	0.02	UJ	0.02	UJ	0.02	UJ
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.03	U	0.02	U	0.02	UJ	0.02	UJ	0.02	UJ	0.02	UJ
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.03	U	0.02	U	0.02	UJ	0.02	UJ	0.02	UJ	0.02	UJ
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.03	U	0.02	U	0.05	J	0.02	UJ	0.02	UJ	0.02	UJ
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.73	J	0.31	J	0.12	J	0.04	J	0.02	UJ	0.02	UJ
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.03	U	0.02	U	0.02	UJ	0.02	UJ	0.02	UJ	0.02	UJ
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.03	U	0.02	U	0.02	UJ	0.02	UJ	0.02	UJ	0.02	UJ
	Total PCBs	1	mg/kg	0.73	J	0.31	J	0.17	J	0.04	J	0.02	UJ	0.02	UJ

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-173 7 - 7.5 SB-173_20221013-7.0-7.5 460-267463-25 4602674631 SO N 10/13/2022		SB-173 7.5 - 8 SB-173_20221013-7.5-8.0 460-267463-26 4602674631 SO N 10/13/2022		SB-173 24.5 - 25 SB-173_20220207-24.5-25.0 460-252132-1 4602521321 SO N 2/7/2022		SB-92 0.5 - 1 SB-92_20211116-0.5-1.0 460-247512-6 4602475121 SO N 11/16/2021		SB-92 3.5 - 4 SB-92_20211116-3.5-4.0 460-247558-1 4602475581 SO N 11/16/2021		SB-92 4 - 4.5 SB-92_20221017-4.0-4.5 460-267624-2 4602676241 SO N 10/17/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	UJ	0.02	UJ	ND		ND		ND		0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	UJ	0.02	UJ	ND		ND		ND		0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	UJ	0.02	UJ	ND		ND		ND		0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	UJ	0.02	UJ	ND		ND		ND		0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	UJ	0.02	UJ	ND		ND		ND		0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.02	UJ	0.02	UJ	ND		ND		**4.80**		0.02	U
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.02	UJ	0.10	J	ND		**2.80**		**3.00**		0.63	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	UJ	0.02	UJ	ND		ND		ND		0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	UJ	0.02	UJ	ND		ND		ND		0.02	U
	Total PCBs	1	mg/kg	0.02	UJ	0.10	J	ND		**2.80**		**7.80**		0.63	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-92 4.5 - 5 SB-92_20221017-4.5-5.0 460-267624-3 4602676241 SO N 10/17/2022		SB-92 5 - 5.5 SB-92_20221017-5.0-5.5 460-267624-4 4602676241 SO N 10/17/2022		SB-92 5.5 - 6 SB-92_20221017-5.5-6.0 460-267624-5 4602676241 SO N 10/17/2022		SB-92 6 - 6.5 SB-92_20221017-6.0-6.5 460-267624-6 4602676241 SO N 10/17/2022		SB-92 6.5 - 7 SB-92_20221017-6.5-7.0 460-267624-7 4602676241 SO N 10/17/2022		SB-92 7 - 7.5 SB-92_20221017-7.0-7.5 460-267624-8 4602676241 SO N 10/17/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.14	U	0.11	U	0.13	UJ	0.11	UJ	0.24	UJ	0.12	UJ
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.14	U	0.11	U	0.13	U	0.11	UJ	0.24	UJ	0.12	UJ
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.14	U	0.11	U	0.13	U	0.11	UJ	0.24	UJ	0.12	UJ
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.14	U	0.11	U	0.13	U	0.11	UJ	0.24	UJ	0.12	UJ
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.14	U	0.11	U	0.13	U	0.11	UJ	**2.10**	J	0.12	UJ
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	**1.80**		**1.10**		**1.20**		**4.50**	J	**6.30**	J	**1.60**	J
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**2.30**		**1.70**		**2.20**	J-	**2.10**	J	**6.00**	J	**2.10**	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.14	U	0.11	U	0.13	U	0.11	UJ	0.24	UJ	0.12	UJ
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.14	U	0.11	U	0.13	U	0.11	UJ	0.24	UJ	0.12	UJ
	Total PCBs	1	mg/kg	**4.10**		**2.80**		**3.40**		**6.60**	J	**14.00**	J	**3.70**	J

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-92 7.5 - 8 SB-92_20221017-7.5-8.0 460-267624-9 4602676241 SO N 10/17/2022		SB-92 24.5 - 25 SB-92_20220222-24.5-25.0 460-253218-2 4602532181 SO N 2/22/2022		SB-188 1.5 - 2 SB-188_20220104-1.5-2.0 460-250148-9 4602501481 SO N 1/4/2022		SB-188 3.5 - 4 SB-188_20220104-3.5-4.0 460-250148-10 4602501481 SO N 1/4/2022		SB-188 4 - 4.5 SB-188-20230316-4.0-4.5 460-276493-14 4602764931 SO N 3/16/2023		SB-188 4 - 4.5 SB-188-20230316-4.0-4.5-A 460-276493-15 4602764931 SO FD 3/16/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	UJ	ND		ND		ND		0.04	U	0.23	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	UJ	ND		ND		ND		0.04	U	0.23	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	UJ	ND		ND		ND		0.04	U	0.23	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	UJ	ND		ND		ND		0.04	U	0.23	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	UJ	ND		ND		ND		0.04	U	0.23	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.02	UJ	ND		**1.50**		0.19	J	**1.30**	J	**4.80**	J
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.03	J	ND		**2.80**		0.38	J	**1.80**	J	**5.20**	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	UJ	ND		ND		ND		0.04	U	0.23	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	UJ	ND		ND		ND		0.04	U	0.23	U
	Total PCBs	1	mg/kg	0.03	J	ND		**4.30**		0.57	J	**3.10**	J	**10.00**	J

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-188 4.5 - 5 SB-188-20230316-4.5-5.0 460-276493-16 4602764931 SO N 3/16/2023		SB-188 4.5 - 5 SB-188-20230316-4.5-5.0-A 460-276493-17 4602764931 SO FD 3/16/2023		SB-188 5 - 5.5 SB-188-20230316-5.0-5.5 460-276493-18 4602764931 SO N 3/16/2023		SB-188 5.5 - 6 SB-188-20230316-5.5-6.0 460-276493-19 4602764931 SO N 3/16/2023		SB-188 6 - 6.5 SB-188-20230316-6.0-6.5 460-276493-20 4602764931 SO N 3/16/2023		SB-188 6.5 - 7 SB-188-20230316-6.5-7.0 460-276493-21 4602764931 SO N 3/16/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.05	U	0.21	U	0.20	U	0.21	U	0.02	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.05	U	0.21	U	0.20	U	0.21	U	0.02	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.05	U	0.21	U	0.20	U	0.21	U	0.02	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.05	U	0.21	U	0.20	U	0.21	U	0.02	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.05	U	0.21	U	0.20	U	0.21	U	0.02	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	**1.60**	J	**3.70**	J	**2.40**		**3.50**		0.02	U	0.02	U
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**2.20**	J	**4.80**	J	**2.80**		**3.20**		0.02	U	0.02	U
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.05	U	0.21	U	0.20	U	0.21	U	0.02	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.05	U	0.21	U	0.20	U	0.21	U	0.02	U	0.02	U
	Total PCBs	1	mg/kg	**3.80**	J	**8.50**	J	**5.20**		**6.70**		0.02	U	0.02	U

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-188 7 - 7.5 SB-188-20230316-7.0-7.5 460-276493-22 4602764931 SO N 3/16/2023		SB-188 7.5 - 8 SB-188-20230316-7.5-8.0 460-276493-23 4602764931 SO N 3/16/2023		SB-88 0.5 - 1 SB-88_20211209_0.5-1.0 460-248749-17 4602487491 SO N 12/9/2021		SB-88 0.5 - 1 SB-88_20211209_0.5-1.0_D 460-248749-18 4602487491 SO FD 12/9/2021		SB-88 3.5 - 4 SB-88_20211209_3.5-4.0 460-248749-19 4602487491 SO N 12/9/2021		SB-88 21.5 - 22 SB-88_20220218-21.5-22.0 460-253012-2 4602530121 SO N 2/18/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.02	U	ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.02	U	ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.02	U	ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.02	U	ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.02	U	ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.02	U	0.02	U	ND		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.02	U	0.02	U	0.12		0.12		0.01	J	ND	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.02	U	ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.02	U	ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.02	U	0.02	U	0.12		0.12		0.01	J	ND	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-113 0.5 - 1 SB-113_20211202-0.5-1.0 460-248300-15 4602483001 SO N 12/2/2021		SB-113 3.5 - 4 SB-113_20211202-3.5-4.0 460-248300-16 4602483001 SO N 12/2/2021		SB-87 31.5 - 32 SB-87_20220301-31.5-32.0 460-253603-2 4602536031 SO N 3/1/2022		SB-123 0.5 - 1 SB-123_20211129-0.5-1.0 460-248139-6 4602481391 SO N 11/29/2021		SB-123 3.5 - 4 SB-123_20211129-3.5-4.0 460-248139-13 4602481391 SO N 11/29/2021		SB-96 0.5 - 1 SB-96_20211214-0.5-1.0 460-249126-7 4602491261 SO N 12/14/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		0.06		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.12		ND		ND		0.05		ND		0.48	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.12		ND		ND		0.11		ND		0.48	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-96 3.5 - 4 SB-96_20211214-3.5-4.0 460-249126-8 4602491261 SO N 12/14/2021		SB-96 36.5 - 37 SB-96_20220211-36.5-37.0 460-252569-1 4602525691 SO N 2/11/2022		SB-141 0.5 - 1 SB-141_20211215_0.5-1.0 460-249289-5 4602492891 SO N 12/15/2021		SB-141 0.5 - 1 SB-141_20211215_0.5-1.0_D 460-249289-9 4602492891 SO FD 12/15/2021		SB-141 3.5 - 4 SB-141_20211215_3.5-4.0 460-249289-6 4602492891 SO N 12/15/2021		SB-141 4 - 4.5 SB-141-20240312-4.0-4.5 460-300065-2 4603000651 SO N 3/12/2024	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.03		ND		0.36		0.45		0.04		0.47	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		0.02	U
	Total PCBs	1	mg/kg	0.03		ND		0.36		0.45		0.04		0.47	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-141 4 - 4.5 SB-141-20240312-4.0-4.5A 460-300065-3 4603000651 SO FD 3/12/2024		SB-141 4.5 - 5 SB-141-20240312-4.5-5.0 460-300065-4 4603000651 SO N 3/12/2024		SB-149 0.5 - 1 SB-149_20211122-0.5-1.0 460-247852-3 4602478521 SO N 11/22/2021		SB-149 3.5 - 4 SB-149_20211122-3.5-4.0 460-247852-4 4602478521 SO N 11/22/2021		SB-149 4 - 4.5 SB-149_20231025-4.0-4.5 460-291128-19 4602911281 SO N 10/25/2023		SB-149 4 - 4.5 SB-149_20231025-4.0-4.5-A 460-291128-20 4602911281 SO FD 10/25/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.03	U	ND		ND		0.02	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.03	U	ND		ND		0.02	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.03	U	ND		ND		0.02	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.03	U	ND		ND		0.02	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.03	U	ND		ND		0.35	JN	0.02	UJ
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.02	U	0.03	U	0.20		ND		0.71	JN	0.45	JN
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.44		0.22		0.25		0.03		0.48	JN	0.42	JN
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.03	U	ND		ND		0.02	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.03	U	ND		ND		0.02	U	0.02	U
	Total PCBs	1	mg/kg	0.44		0.22		0.45		0.03		**1.50**		0.87	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-149 4.5 - 5 SB-149_20231025-4.5-5.0 460-291128-21 4602911281 SO N 10/25/2023		SB-149 4.5 - 5 SB-149_20231025-4.5-5.0-A 460-291128-22 4602911281 SO FD 10/25/2023		SB-149 5 - 5.5 SB-149_20231025-5.0-5.5 460-291128-23 4602911281 SO N 10/25/2023		SB-149 5.5 - 6 SB-149_20231025-5.5-6.0 460-291128-24 4602911281 SO N 10/25/2023		SB-149 6 - 6.5 SB-149_20231025-6.0-6.5 460-291128-25 4602911281 SO N 10/25/2023		SB-156 0.5 - 1 SB-156_20211122-0.5-1.0 460-247852-1 4602478521 SO N 11/22/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.26	J	0.02	UJ	0.02	U	0.02	U	0.02	U	ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.63		0.40	JN	0.26	JN	0.02	U	0.02	U	0.27	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.39	J	0.50	JN	0.14	J	0.02	U	0.02	U	0.45	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	ND	
	Total PCBs	1	mg/kg	**1.30**		0.90		0.40		0.02	U	0.02	U	0.72	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-156 3.5 - 4 SB-156_20211122-3.5-4.0 460-247852-2 4602478521 SO N 11/22/2021		SB-156 4 - 4.5 SB-156_20230615-4.0-4.5 460-282586-2 4602825861 SO N 6/15/2023		SB-156 4 - 4.5 SB-156_20230615-4.0-4.5-A 460-282586-3 4602825861 SO FD 6/15/2023		SB-156 4.5 - 5 SB-156_20230615-4.5-5.0 460-282586-4 4602825861 SO N 6/15/2023		SB-156 5 - 5.5 SB-156_20230615-5.0-5.5 460-282586-5 4602825861 SO N 6/15/2023		SB-156 5.5 - 6 SB-156_20230615-5.5-6.0 460-282586-6 4602825861 SO N 6/15/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		0.22	U	0.02	U	0.02	U	0.09	U	0.10	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		0.22	U	0.02	U	0.02	U	0.09	U	0.10	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		0.22	U	0.02	U	0.02	U	0.09	U	0.10	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		0.22	U	0.02	U	0.02	U	0.09	U	0.10	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		0.22	U	0.02	U	0.02	U	0.09	U	0.10	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		**2.80**	J	0.40	JN	0.22		**1.30**		**2.20**	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.03		**5.30**	J	0.79	JN	0.51		**1.80**		**1.50**	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		0.22	U	0.02	U	0.02	U	0.09	U	0.10	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		0.22	U	0.02	U	0.02	U	0.09	U	0.10	U
	Total PCBs	1	mg/kg	0.03		**8.10**	J	**1.20**	J	0.73		**3.10**		**3.70**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-156 6 - 6.5 SB-156_20230615-6.0-6.5 460-282586-7 4602825861 SO N 6/15/2023		SB-156 6.5 - 7 SB-156_20230615-6.5-7.0 460-282586-8 4602825861 SO N 6/15/2023		SB-204 0.5 - 1 SB-204_20211119-0.5-1.0 460-247647-10 4602476471 SO N 11/19/2021		SB-204 3.5 - 4 SB-204_20211119-3.5-4.0 460-247647-11 4602476471 SO N 11/19/2021		SB-204 4 - 4.5 SB-204_20230310-4.0-4.5 460-276072-2 4602760721 SO N 3/10/2023		SB-204 4 - 4.5 SB-204_20230310-4.0-4.5-A 460-276072-3 4602760721 SO FD 3/10/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.02	UJ	ND		ND		0.02	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.02	UJ	ND		ND		0.02	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.02	UJ	ND		ND		0.02	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.03	J	ND		ND		0.02	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.02	UJ	ND		ND		0.02	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.83		0.02	UJ	ND		ND		0.08		0.08	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.31		0.03	J	0.14	J	0.04		0.21		0.17	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.02	UJ	ND		ND		0.02	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.02	UJ	ND		ND		0.02	U	0.02	U
	Total PCBs	1	mg/kg	**1.10**		0.06	J	0.14	J	0.04		0.29		0.25	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD) is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-204 4.5 - 5 SB-204_20230310-4.5-5.0 460-276072-4 4602760721 SO N 3/10/2023		SB-204 4.5 - 5 SB-204_20230310-4.5-5.0-A 460-276072-5 4602760721 SO FD 3/10/2023		SB-204 5 - 5.5 SB-204_20230310-5.0-5.5 460-276072-6 4602760721 SO N 3/10/2023		SB-204 5.5 - 6 SB-204_20230310-5.5-6.0 460-276072-7 4602760721 SO N 3/10/2023		SB-204 6 - 6.5 SB-204_20230310-6.0-6.5 460-276072-8 4602760721 SO N 3/10/2023		SB-204 6.5 - 7 SB-204_20230310-6.5-7.0 460-276072-9 4602760721 SO N 3/10/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.02	U	0.03	U	0.02	U	0.02	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.02	U	0.03	U	0.02	U	0.02	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.02	U	0.03	U	0.02	U	0.02	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.02	U	0.03	U	0.02	U	0.02	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.02	U	0.03	U	0.02	U	0.02	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.05		0.07		0.03	U	0.20		0.35	J	0.04	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.08	J	0.15	J	0.03	U	0.38		0.68		0.06	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.02	U	0.03	U	0.02	U	0.02	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.02	U	0.03	U	0.02	U	0.02	U	0.02	U
	Total PCBs	1	mg/kg	0.13	J	0.22	J	0.03	U	0.58		**1.00**		0.10	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-204 24.5 - 25 SB-204_20220207-24.5-25.0 460-252132-5 4602521321 SO N 2/7/2022		SB-174 0.5 - 1 SB-174_20211117-0.5-1.0 460-247558-4 4602475581 SO N 11/17/2021		SB-174 3.5 - 4 SB-174_20211117-3.5-4.0 460-247558-5 4602475581 SO N 11/17/2021		SB-174 4 - 4.5 SB-174_20221013-4.0-4.5 460-267463-1 4602674631 SO N 10/13/2022		SB-174 4.5 - 5 SB-174_20221013-4.5-5.0 460-267463-3 4602674631 SO N 10/13/2022		SB-174 5 - 5.5 SB-174_20230310-5.0-5.5 460-276072-17 4602760721 SO N 3/10/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		0.04	U	0.02	U	0.10	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		0.04	U	0.02	U	0.10	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		0.04	U	0.02	U	0.10	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		0.04	U	0.02	U	0.10	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		0.04	U	0.02	U	0.80	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.03		0.75		**3.60**		0.04	U	0.02	U	**2.00**	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.02	J	0.55		**5.80**		**1.20**		0.81		**1.30**	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		0.04	U	0.02	U	0.10	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		0.04	U	0.02	U	0.10	U
	Total PCBs	1	mg/kg	0.05		**1.30**		**9.40**		**1.20**		0.81		**4.10**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-174 5.5 - 6 SB-174_20230310-5.5-6.0 460-276072-18 4602760721 SO N 3/10/2023		SB-174 6 - 6.5 SB-174_20230310-6.0-6.5 460-276072-19 4602760721 SO N 3/10/2023		SB-174 6.5 - 7 SB-174_20230310-6.5-7.0 460-276072-20 4602760721 SO N 3/10/2023		SB-182 0.5 - 1 SB-182_20211117-0.5-1.0 460-247558-2 4602475581 SO N 11/17/2021		SB-182 3.5 - 4 SB-182_20211117-3.5-4.0 460-247558-3 4602475581 SO N 11/17/2021		SB-182 4 - 4.5 SB-182_20221017-4.0-4.5 460-267624-13 4602676241 SO N 10/17/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.20	U	0.11	U	0.02	U	ND		ND		0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.20	U	0.11	U	0.02	U	ND		ND		0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.20	U	0.11	U	0.02	U	ND		ND		0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.20	U	0.11	U	0.02	U	ND		ND		0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.95		0.11	U	0.02	U	ND		ND		0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	**2.80**		0.11	U	0.19		0.52		**13.00**		0.02	U
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**4.30**		**1.40**		0.17		0.92		**10.00**		0.90	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.20	U	0.11	U	0.02	U	ND		ND		0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.20	U	0.11	U	0.02	U	ND		ND		0.02	U
	Total PCBs	1	mg/kg	**8.10**		**1.40**		0.36		**1.44**		**23.00**		0.90	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-182 4.5 - 5 SB-182_20221017-4.5-5.0 460-267624-14 4602676241 SO N 10/17/2022		SB-182 5 - 5.5 SB-182_20221017-5.0-5.5 460-267624-15 4602676241 SO N 10/17/2022		SB-182 5.5 - 6 SB-182_20221017-5.5-6.0 460-267624-16 4602676241 SO N 10/17/2022		SB-182 6 - 6.5 SB-182_20221017-6.0-6.5 460-267624-17 4602676241 SO N 10/17/2022		SB-182 6.5 - 7 SB-182_20221017-6.5-7.0 460-267624-18 4602676241 SO N 10/17/2022		SB-182 7 - 7.5 SB-182_20221017-7.0-7.5 460-267624-19 4602676241 SO N 10/17/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.02	UJ	0.02	UJ	0.02	UJ	0.03	UJ	0.03	UJ
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.02	UJ	0.02	UJ	0.02	UJ	0.03	UJ	0.03	UJ
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.02	UJ	0.02	UJ	0.02	UJ	0.03	UJ	0.03	UJ
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.02	UJ	0.02	UJ	0.02	UJ	0.03	UJ	0.03	UJ
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.02	UJ	0.02	UJ	0.02	UJ	0.03	UJ	0.03	UJ
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.02	U	0.67	J	0.48	J	0.02	UJ	0.10	J	0.03	UJ
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.86		0.76	J	0.39	J	0.04	J	0.06	J	0.03	UJ
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.02	UJ	0.02	UJ	0.02	UJ	0.03	UJ	0.03	UJ
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.02	UJ	0.02	UJ	0.02	UJ	0.03	UJ	0.03	UJ
	Total PCBs	1	mg/kg	0.86		**1.40**	J	0.87	J	0.04	J	0.16	J	0.03	UJ

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-182 7.5 - 8 SB-182_20221017-7.5-8.0 460-267624-20 4602676241 SO N 10/17/2022		SB-190 1 - 1.5 SB-190_20220105-1.0-1.5 460-250148-13 4602501481 SO N 1/5/2022		SB-190 3.5 - 4 SB-190_20220105-3.5-4.0 460-250148-14 4602501481 SO N 1/5/2022		SB-190 4 - 4.5 SB-190_20220117-4.0-4.5 460-250876-2 4602508761 SO N 1/17/2022		SB-190 4.5 - 5 SB-190_20220117-4.5-5.0 460-250876-3 4602508761 SO N 1/17/2022		SB-190 5 - 5.5 SB-190-20221005-5.0-5.5 460-266868-1 4602668681 SO N 10/5/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.03	UJ	ND		ND		ND		ND		0.13	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.03	UJ	ND		ND		ND		ND		0.13	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.03	UJ	ND		ND		ND		ND		0.13	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.03	UJ	ND		ND		ND		ND		0.13	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.03	UJ	ND		ND		ND		ND		0.13	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.03	UJ	**1.60**		**2.40**		**1.50**		**9.00**		0.13	U
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.03	UJ	**2.90**		**3.60**		**2.50**		**12.00**		**3.80**	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.03	UJ	ND		ND		ND		ND		0.13	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.03	UJ	ND		ND		ND		ND		0.13	U
	Total PCBs	1	mg/kg	0.03	UJ	**4.50**		**6.00**		**4.00**		**21.00**		**3.80**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-190 5.5 - 6 SB-190-20221005-5.5-6.0 460-266868-2 4602668681 SO N 10/5/2022		SB-190 6 - 6.5 SB-190-20221005-6.0-6.5 460-266868-3 4602668681 SO N 10/5/2022		SB-190 6.5 - 7 SB-190-20221005-6.5-7.0 460-266868-4 4602668681 SO N 10/5/2022		SB-190 7 - 7.5 SB-190-20221005-7.0-7.5 460-266868-5 4602668681 SO N 10/5/2022		SB-190 7.5 - 8 SB-190-20221005-7.5-8.0 460-266868-6 4602668681 SO N 10/5/2022		SB-104 0.5 - 1 SB-104_20211209_0.5-1.0 460-248749-15 4602487491 SO N 12/9/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.12	U	0.26	U	0.22	U	0.12	UJ	0.02	UJ	ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.12	U	0.26	U	0.22	U	0.12	UJ	0.02	UJ	ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.12	U	0.26	U	0.22	U	0.12	UJ	0.02	UJ	ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.12	U	0.26	U	0.22	U	0.12	UJ	0.02	UJ	ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.12	U	0.26	U	0.22	U	**1.20**	J	0.02	UJ	ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.12	U	**5.60**		**6.10**		**1.80**	J	0.02	UJ	ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**1.80**		**4.00**		**7.00**		**2.70**	J	0.37	J	0.68	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.12	U	0.26	U	0.22	U	0.12	UJ	0.02	UJ	ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.12	U	0.26	U	0.22	U	0.12	UJ	0.02	UJ	ND	
	Total PCBs	1	mg/kg	**1.80**		**9.60**		**13.00**		**5.70**	J	0.37	J	0.68	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-104 3.5 - 4 SB-104_20211209_3.5-4.0 460-248749-16 4602487491 SO N 12/9/2021		SB-114 0.5 - 1 SB-114_20211201-0.5-1.0 460-248300-9 4602483001 SO N 12/1/2021		SB-114 3.5 - 4 SB-114_20211201-3.5-4.0 460-248300-10 4602483001 SO N 12/1/2021		SB-124 0.5 - 1 SB-124_20211229-0.5-1.0 460-250018-1 4602500181 SO N 12/29/2021		SB-124 3.5 - 4 SB-124_20220117-3.5-4.0 460-250876-4 4602508761 SO N 1/17/2022		SB-133 0.5 - 1 SB-133_20211230-0.5-1.0 460-250018-22 4602500181 SO N 12/30/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		0.03		ND		0.02	J
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.21		0.06		ND		0.05		ND		0.02	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.21		0.06		ND		0.08		ND		0.04	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-133 1.5 - 2 SB-133_20211230-1.5-2.0 460-250018-23 4602500181 SO N 12/30/2021		SB-133 3.5 - 4 SB-133_20220124-3.5-4.0 460-251246-1 4602512461 SO N 1/24/2022		SB-142 0.5 - 1 SB-142_20211220-0.5-1.0 460-249597-3 4602495971 SO N 12/20/2021		SB-142 3.5 - 4 SB-142_20211220-3.5-4.0 460-249597-4 4602495971 SO N 12/20/2021		SB-142 4 - 4.5 SB-142-20230315-4.0-4.5 460-276374-2 4602763741 SO N 3/15/2023		SB-142 4 - 4.5 SB-142-20230315-4.0-4.5-A 460-276374-3 4602763741 SO FD 3/15/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		0.02	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		0.02	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		0.02	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		0.02	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		0.02	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.12		ND		ND		ND		0.02	UJ	0.07	J
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.40		ND		0.34		0.09		0.29		0.22	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		0.02	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		0.02	U	0.02	U
	Total PCBs	1	mg/kg	0.52		ND		0.34		0.09		0.29		0.29	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-142 4.5 - 5 SB-142-20230315-4.5-5.0 460-276374-4 4602763741 SO N 3/15/2023		SB-142 5 - 5.5 SB-142-20230315-5.0-5.5 460-276374-5 4602763741 SO N 3/15/2023		SB-142 5.5 - 6 SB-142-20230315-5.5-6.0 460-276374-6 4602763741 SO N 3/15/2023		SB-142 6 - 6.5 SB-142-20230315-6.0-6.5 460-276374-7 4602763741 SO N 3/15/2023		SB-150 0.5 - 1 SB-150_20211220-0.5-1.0 460-249597-7 4602495971 SO N 12/20/2021		SB-150 3.5 - 4 SB-150_20211220-3.5-4.0 460-249597-8 4602495971 SO N 12/20/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.12		0.02	U	0.02	U	0.02	U	ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.33		0.02	U	0.03		0.02	U	**1.30**		0.39	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	ND		ND	
	Total PCBs	1	mg/kg	0.45		0.02	U	0.03		0.02	U	**1.30**		0.39	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-150 4 - 4.5 SB-150_20230614-4.0-4.5 460-282313-43 4602823131 SO N 6/14/2023		SB-150 4 - 4.5 SB-150_20230614-4.0-4.5-A 460-282313-44 4602823131 SO FD 6/14/2023		SB-150 4.5 - 5 SB-150_20230614-4.5-5.0 460-282313-45 4602823131 SO N 6/14/2023		SB-150 4.5 - 5 SB-150_20230614-4.5-5.0-A 460-282313-46 4602823131 SO FD 6/14/2023		SB-150 5 - 5.5 SB-150_20230614-5.0-5.5 460-282313-47 4602823131 SO N 6/14/2023		SB-150 5 - 5.5 SB-150_20230614-5.5-6.0 460-282313-48 4602823131 SO N 6/14/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.04	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.04	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.04	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.04	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.04	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.24	JN	0.11	J	0.02	UJ	0.15	J	0.14		0.45	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.81	JN	0.33	JN	0.77	JN	0.65		0.31		0.36	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.04	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.04	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
	Total PCBs	1	mg/kg	**1.10**	J	0.44	J	0.77		0.80		0.45		0.81	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-157 0.5 - 1 SB-157_20211220-0.5-1.0 460-249597-9 4602495971 SO N 12/20/2021		SB-157 3.5 - 4 SB-157_20211220-3.5-4.0 460-249597-10 4602495971 SO N 12/20/2021		SB-157 4 - 4.5 SB-157_20231026-4.0-4.5 460-291385-2 4602913851 SO N 10/26/2023		SB-157 4.5 - 5 SB-157_20231026-4.5-5.0 460-291385-3 4602913851 SO N 10/26/2023		SB-157 5 - 5.5 SB-157_20231026-5.0-5.5 460-291385-4 4602913851 SO N 10/26/2023		SB-157 5.5 - 6 SB-157_20231026-5.5-6.0 460-291385-5 4602913851 SO N 10/26/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.30		0.04		0.02	U	0.02	U	0.23	J	0.44	J
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.30		0.06		0.14		0.13		0.27	J	0.36	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
	Total PCBs	1	mg/kg	0.60		0.10		0.14		0.13		0.50		0.80	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-157 6 - 6.5 SB-157_20231026-6.0-6.5 460-291385-6 4602913851 SO N 10/26/2023		SB-166 0.5 - 1 SB-166_20211220-0.5-1.0 460-249597-11 4602495971 SO N 12/20/2021		SB-166 3.5 - 4 SB-166_20211220-3.5-4.0 460-249597-12 4602495971 SO N 12/20/2021		SB-166 4 - 4.5 SB-166_20230615-4.0-4.5 460-282586-16 4602825861 SO N 6/15/2023		SB-166 4.5 - 5 SB-166_20230615-4.5-5.0 460-282586-17 4602825861 SO N 6/15/2023		SB-166 5 - 5.5 SB-166_20230615-5.0-5.5 460-282586-18 4602825861 SO N 6/15/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	ND		ND		0.06	U	0.06	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	ND		ND		0.06	U	0.06	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	ND		ND		0.06	U	0.06	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	ND		ND		0.06	U	0.06	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	ND		ND		0.06	U	0.06	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.02	U	0.15		ND		0.26		0.28		0.48	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.02	U	0.33		0.03		0.41		0.44		0.25	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	ND		ND		0.06	U	0.06	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	ND		ND		0.06	U	0.06	U	0.02	U
	Total PCBs	1	mg/kg	0.02	U	0.48		0.03		0.67		0.72		0.73	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-166 5.5 - 6 SB-166_20230615-5.5-6.0 460-282586-19 4602825861 SO N 6/15/2023		SB-166 6 - 6.5 SB-166_20230615-6.0-6.5 460-282586-20 4602825861 SO N 6/15/2023		SB-166 6.5 - 7 SB-166_20230615-6.5-7.0 460-282586-21 4602825861 SO N 6/15/2023		SB-175 0.5 - 1 SB-175_20220118-0.5-1.0 460-250876-5 4602508761 SO N 1/18/2022		SB-175 3.5 - 4 SB-175_20220118-3.5-4.0 460-250876-6 4602508761 SO N 1/18/2022		SB-175 4 - 4.5 SB-175_20221012-4.0-4.5 460-267348-15 4602673481 SO N 10/12/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.11	U	0.02	UJ	ND		ND		0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.11	U	0.02	UJ	ND		ND		0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.11	U	0.02	UJ	ND		ND		0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.11	U	0.02	UJ	ND		ND		0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.11	U	0.02	UJ	ND		ND		0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.12		0.30		0.02	J	0.66		0.53		0.02	U
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.03		0.11	U	0.01	J	**1.10**		0.97		0.85	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.11	U	0.02	UJ	ND		ND		0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.11	U	0.02	UJ	ND		ND		0.02	U
	Total PCBs	1	mg/kg	0.15		0.30		0.04	J	**1.76**		**1.50**		0.85	J

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-175 4.5 - 5 SB-175_20221012-4.5-5.0 460-267348-17 4602673481 SO N 10/12/2022		SB-175 5 - 5.5 SB-175_20230619-5.0-5.5 460-282692-15 4602826921 SO N 6/19/2023		SB-175 5.5 - 6 SB-175_20230619-5.5-6.0 460-282692-16 4602826921 SO N 6/19/2023		SB-175 6 - 6.5 SB-175_20230619-6.0-6.5 460-282692-17 4602826921 SO N 6/19/2023		SB-175 6.5 - 7 SB-175_20230619-6.5-7.0 460-282692-18 4602826921 SO N 6/19/2023		SB-183 0.5 - 1 SB-183_20211222_0.5-1.0 460-249756-1 4602497561 SO N 12/22/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	0.02	UJ	ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	0.02	UJ	ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	0.02	UJ	ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	0.02	UJ	ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	0.02	UJ	ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.02	U	0.14		0.17		0.83		0.02	UJ	0.38	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.68		0.19		0.26		0.60		0.02	UJ	0.64	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	0.02	UJ	ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	0.02	UJ	ND	
	Total PCBs	1	mg/kg	0.68		0.33		0.43		**1.40**		0.02	UJ	**1.02**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-183 3.5 - 4 SB-183_20211222_3.5-4.0 460-249756-2 4602497561 SO N 12/22/2021		SB-183 4 - 4.5 SB-183_20221012-4.0-4.5 460-267348-26 4602673481 SO N 10/12/2022		SB-183 4.5 - 5 SB-183_20221012-4.5-5.0 460-267348-28 4602673481 SO N 10/12/2022		SB-183 5 - 5.5 SB-183_20230309-5.0-5.5 460-276043-16 4602760431 SO N 3/9/2023		SB-183 5.5 - 6 SB-183_20230309-5.5-6.0 460-276043-17 4602760431 SO N 3/9/2023		SB-183 6 - 6.5 SB-183_20230309-6.0-6.5 460-276043-18 4602760431 SO N 3/9/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		0.11	U	0.03	U	0.11	U	0.22	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		0.11	U	0.03	U	0.11	U	0.22	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		0.11	U	0.03	U	0.11	U	0.22	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		0.11	U	0.03	U	0.11	U	0.22	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		0.11	U	0.03	U	0.11	U	0.22	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	**1.10**		0.11	U	0.03	U	**1.10**		**2.10**		0.58	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**1.90**		**2.90**		0.52		**1.60**		**3.90**		0.72	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		0.11	U	0.03	U	0.11	U	0.22	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		0.11	U	0.03	U	0.11	U	0.22	U	0.02	U
	Total PCBs	1	mg/kg	**3.00**		**2.90**		0.52		**2.70**		**6.00**		**1.30**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-183 6.5 - 7 SB-183_20230309-6.5-7.0 460-276043-19 4602760431 SO N 3/9/2023		SB-183 24 - 24.5 SB-183_20220207-24.0-24.5 460-252132-4 4602521321 SO N 2/7/2022		SB-195 1 - 1.5 SB-195_20220105-1.0-1.5 460-250511-1 4602505111 SO N 1/5/2022		SB-195 3.5 - 4 SB-195_20220105-3.5-4.0 460-250511-2 4602505111 SO N 1/5/2022		SB-195 4 - 4.5 SB-195_20221004-4.0-4.5 460-266791-4 4602667911 SO N 10/4/2022		SB-195 4.5 - 5 SB-195_20221004-4.5-5.0 460-266791-5 4602667911 SO N 10/4/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	ND		ND		ND		0.12	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	ND		ND		ND		0.12	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	ND		ND		ND		0.12	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	ND		ND		ND		0.12	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	ND		ND		ND		0.12	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.05		ND		0.60		**1.50**		0.12	U	0.02	U
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.02	JN	ND		0.65		**2.60**		**2.10**		0.50	JN
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	ND		ND		ND		0.12	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	ND		ND		ND		0.12	U	0.02	U
	Total PCBs	1	mg/kg	0.07		ND		**1.25**		**4.10**		**2.10**		0.50	JN

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-195 5 - 5.5 SB-195-20221005-5.0-5.5 460-266868-18 4602668681 SO N 10/5/2022		SB-195 5.5 - 6 SB-195-20221005-5.5-6.0 460-266868-19 4602668681 SO N 10/5/2022		SB-195 6 - 6.5 SB-195-20221005-6.0-6.5 460-266868-20 4602668681 SO N 10/5/2022		SB-195 6.5 - 7 SB-195-20221005-6.5-7.0 460-266868-21 4602668681 SO N 10/5/2022		SB-195 7 - 7.5 SB-195-20221005-7.0-7.5 460-266868-22 4602668681 SO N 10/5/2022		SB-195 7.5 - 8 SB-195-20221005-7.5-8.0 460-266868-23 4602668681 SO N 10/5/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	UJ	0.03	UJ	0.03	UJ	0.03	UJ	0.02	UJ	0.02	UJ
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	UJ	0.03	UJ	0.03	UJ	0.03	UJ	0.02	UJ	0.02	UJ
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	UJ	0.03	UJ	0.03	UJ	0.03	UJ	0.02	UJ	0.02	UJ
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	UJ	0.03	UJ	0.03	UJ	0.03	UJ	0.02	UJ	0.02	UJ
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	UJ	0.03	UJ	0.03	UJ	0.03	UJ	0.02	UJ	0.02	UJ
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.02	UJ	0.03	UJ	0.03	UJ	0.03	UJ	0.02	UJ	0.02	UJ
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.24	J	0.07	J	0.03	UJ	0.03	UJ	0.02	UJ	0.02	UJ
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	UJ	0.03	UJ	0.03	UJ	0.03	UJ	0.02	UJ	0.02	UJ
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	UJ	0.03	UJ	0.03	UJ	0.03	UJ	0.02	UJ	0.02	UJ
	Total PCBs	1	mg/kg	0.24	J	0.07	J	0.03	UJ	0.03	UJ	0.02	UJ	0.02	UJ

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-105 0.5 - 1 SB-105_20211208_0.5-1.0 460-248749-11 4602487491 SO N 12/8/2021		SB-105 3.5 - 4 SB-105_20211208_3.5-4.0 460-248749-12 4602487491 SO N 12/8/2021		SB-86 28.5 - 29 SB-86_20220218-28.5-29.0 460-252831-15 4602528311 SO N 2/18/2022		SB-115 0.5 - 1 SB-115_20211201-0.5-1.0 460-248300-5 4602483001 SO N 12/1/2021		SB-115 3.5 - 4 SB-115_20211201-3.5-4.0 460-248300-6 4602483001 SO N 12/1/2021		SB-97 0.5 - 1 SB-97_20211130-0.5-1.0 460-248300-1 4602483001 SO N 11/30/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		0.39		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		0.32		ND		0.09	J	ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.06		0.22		ND		0.16	J	ND		0.31	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.06		0.93		ND		0.25	J	ND		0.31	J

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-97 3.5 - 4 SB-97_20211130-3.5-4.0 460-248300-2 4602483001 SO N 11/30/2021		SB-97 28.5 - 29 SB-97_20220221-28.5-59.0 460-253012-3 4602530121 SO N 2/21/2022		SB-134 0.5 - 1 SB-134_20211216_0.5-1.0 460-249289-12 4602492891 SO N 12/16/2021		SB-134 3.5 - 4 SB-134_20211216_3.5-4.0 460-249289-13 4602492891 SO N 12/16/2021		SB-134 4 - 4.5 SB-134_20230314-4.0-4.5 460-276286-43 4602762861 SO N 3/14/2023		SB-134 4.5 - 5 SB-134_20230314-4.5-5.0 460-276286-44 4602762861 SO N 3/14/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		0.02	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		0.02	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		0.02	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		0.02	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		0.02	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		0.03		0.03	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.02	J	ND		0.01	J	0.02	J	0.05		0.05	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		0.02	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		0.02	U	0.02	U
	Total PCBs	1	mg/kg	0.02	J	ND		0.01	J	0.02	J	0.08		0.09	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-134 5 - 5.5 SB-134_20230314-5.0-5.5 460-276286-45 4602762861 SO N 3/14/2023		SB-134 5.5 - 6 SB-134_20230314-5.5-6.0 460-276286-46 4602762861 SO N 3/14/2023		SB-134 6 - 6.5 SB-134_20230314-6.0-6.5 460-276286-47 4602762861 SO N 3/14/2023		SB-143 0.5 - 1 SB-143_20211216_0.5-1.0 460-249289-14 4602492891 SO N 12/16/2021		SB-143 3.5 - 4 SB-143_20211216_3.5-4.0 460-249289-15 4602492891 SO N 12/16/2021		SB-208 24.5 - 25 SB-208_20220211-24.5-25.0 460-252378-13 4602523781 SO N 2/11/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.02	U	0.02	U	**7.70**	J	**3.60**	J	ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		**1.20**	J	ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.04		0.02	U	0.02	U	ND		0.74	J	ND	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
	Total PCBs	1	mg/kg	0.04		0.02	U	0.02	U	**7.70**	J	**5.54**	J	ND	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-143 4 - 4.5 SB-143-20221014-4.0-4.5 460-267541-17 4602675411 SO N 10/14/2022		SB-143 4.5 - 5 SB-143-20221014-4.5-5.0 460-267541-19 4602675411 SO N 10/14/2022		SB-143 5 - 5.5 SB-143-20221014-5.0-5.5 460-267541-21 4602675411 SO N 10/14/2022		SB-143 5.5 - 6 SB-143-20221014-5.5-6.0 460-267541-22 4602675411 SO N 10/14/2022		SB-143 6 - 6.5 SB-143-20221014-6.0-6.5 460-267541-23 4602675411 SO N 10/14/2022		SB-143 6.5 - 7 SB-143-20221014-6.5-7.0 460-267541-24 4602675411 SO N 10/14/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	**2.20**	U	**1.00**	U	**1.10**	U	**2.10**	UJ	**2.10**	UJ	0.02	UJ
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	**2.20**	U	**1.00**	U	**1.10**	U	**2.10**	U	**2.10**	UJ	0.02	UJ
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	**2.20**	U	**1.00**	U	**1.10**	U	**2.10**	U	**2.10**	UJ	0.02	UJ
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	**2.20**	U	**1.00**	U	**1.10**	U	**52.00**		**59.00**	J	0.02	UJ
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	**57.00**		**48.00**		**39.00**		**2.10**	U	**2.10**	UJ	0.18	J
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	**5.50**		**1.00**	U	**1.10**	U	**2.10**	U	**2.10**	UJ	0.05	J
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**1.10**	J	**2.70**		**1.10**	J+	**2.80**	J-	**2.10**	UJ	0.03	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	**2.20**	U	**1.00**	U	**1.10**	U	**2.10**	U	**2.10**	UJ	0.02	UJ
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	**2.20**	U	**1.00**	U	**1.10**	U	**2.10**	U	**2.10**	UJ	0.02	UJ
	Total PCBs	1	mg/kg	**64.00**		**51.00**		**40.00**		**55.00**		**59.00**	J	0.26	J

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-99 0.5 - 1 SB-99_20220112-0.5-1.0 460-250686-1 4602506861 SO N 1/12/2022		SB-99 3.5 - 4 SB-99_20220112-3.5-4.0 460-250686-2 4602506861 SO N 1/12/2022		SB-99 4 - 4.5 SB-99_20230313-4.0-4.5 460-276286-2 4602762861 SO N 3/13/2023		SB-99 4 - 4.5 SB-99_20230313-4.0-4.5-A 460-276286-3 4602762861 SO FD 3/13/2023		SB-99 4.5 - 5 SB-99_20230313-4.5-5.0 460-276286-4 4602762861 SO N 3/13/2023		SB-99 5 - 5.5 SB-99_20230313-5.0-5.5 460-276286-5 4602762861 SO N 3/13/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.03	U	0.04	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.03	U	0.04	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.03	U	0.04	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.03	U	0.04	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.03	U	0.04	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.03	U	0.15	J
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.39	J	ND		0.35	J	0.06	J	0.05		0.39	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.03	U	0.04	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.03	U	0.04	U
	Total PCBs	1	mg/kg	0.39	J	ND		0.35	J	0.06	J	0.05		0.63	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-99 5.5 - 6 SB-99_20230313-5.5-6.0 460-276286-6 4602762861 SO N 3/13/2023		SB-99 6 - 6.5 SB-99_20230313-6.0-6.5 460-276286-7 4602762861 SO N 3/13/2023		SB-99 24.5 - 25 SB-99_20220224-24.5-25.0 460-253266-3 4602532661 SO N 2/25/2022		SB-158 0.5 - 1 SB-158_20211221-0.5-1.0 460-249597-13 4602495971 SO N 12/21/2021		SB-158 3.5 - 4 SB-158_20211221-3.5-4.0 460-249597-14 4602495971 SO N 12/21/2021		SB-158 4 - 4.5 SB-158_20230614-4.0-4.5 460-282313-28 4602823131 SO N 6/14/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.02	U	ND		ND		ND		0.11	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.02	U	ND		ND		ND		0.11	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.02	U	ND		ND		ND		0.11	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.02	U	ND		ND		ND		0.11	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.02	U	ND		ND		ND		0.11	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.29		0.02	U	ND		0.15		ND		0.87	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.77		0.02	U	ND		0.16		0.03		**1.90**	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.02	U	ND		ND		ND		0.11	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.02	U	ND		ND		ND		0.11	U
	Total PCBs	1	mg/kg	**1.10**		0.02	U	ND		0.31		0.03		**2.80**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-158 4 - 4.5 SB-158_20230614-4.0-4.5-A 460-282313-29 4602823131 SO FD 6/14/2023		SB-158 4.5 - 5 SB-158_20230614-4.5-5.0 460-282313-30 4602823131 SO N 6/14/2023		SB-158 4.5 - 5 SB-158_20230614-4.5-5.0-A 460-282313-31 4602823131 SO FD 6/14/2023		SB-158 5 - 5.5 SB-158_20230614-5.0-5.5 460-282313-32 4602823131 SO N 6/14/2023		SB-158 5.5 - 6 SB-158_20230614-5.5-6.0 460-282313-33 4602823131 SO N 6/14/2023		SB-203 0.5 - 1 SB-203_20211221-0.5-1.0 460-249597-17 4602495971 SO N 12/21/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.11	U	0.11	U	0.13	U	0.08	U	0.02	U	ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.11	U	0.11	U	0.13	U	0.08	U	0.02	U	ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.11	U	0.11	U	0.13	U	0.08	U	0.02	U	ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.11	U	0.11	U	0.13	U	0.08	U	0.02	U	ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.11	U	0.11	U	0.13	U	0.08	U	0.02	U	ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.57		0.72		0.87		0.08	U	0.05		0.08	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**1.20**		**1.60**		**2.10**		0.11		0.02	J	0.14	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.11	U	0.11	U	0.13	U	0.08	U	0.02	U	ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.11	U	0.11	U	0.13	U	0.08	U	0.02	U	ND	
	Total PCBs	1	mg/kg	**1.80**		**2.30**		**3.00**		0.11		0.07		0.22	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-203 3.5 - 4 SB-203_20211221-3.5-4.0 460-249597-18 4602495971 SO N 12/21/2021		SB-203 4 - 4.5 SB-203_20231030-4.0-4.5 460-291529-3 4602915291 SO N 10/30/2023		SB-203 4.5 - 5 SB-203_20231030-4.5-5.0 460-291529-4 4602915291 SO N 10/30/2023		SB-203 24.5 - 25 SB-203_20220207-24.5-25.0 460-252132-3 4602521321 SO N 2/7/2022		SB-176 0.5 - 1 SB-176_20211221-0.5-1.0 460-249597-22 4602495971 SO N 12/21/2021		SB-176 3.5 - 4 SB-176_20211221-3.5-4.0 460-249597-23 4602495971 SO N 12/21/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		0.02	UJ	0.02	U	ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		0.02	UJ	0.02	U	ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		0.02	UJ	0.02	U	ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		0.02	UJ	0.02	U	ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		0.02	UJ	0.02	U	ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		0.02	UJ	0.02	U	ND		ND		**2.30**	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	ND		0.02	UJ	0.09		0.01	J	0.12		**1.70**	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		0.02	UJ	0.02	U	ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		0.02	UJ	0.02	U	ND		ND		ND	
	Total PCBs	1	mg/kg	ND		0.02	UJ	0.09		0.01	J	0.12		**4.00**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-176 4 - 4.5 SB-176_20221012-4.0-4.5 460-267348-1 4602673481 SO N 10/12/2022		SB-176 4.5 - 5 SB-176_20221012-4.5-5.0 460-267348-3 4602673481 SO N 10/12/2022		SB-176 5 - 5.5 SB-176_20231026-5.0-5.5 460-291385-28 4602913851 SO N 10/26/2023		SB-176 5.5 - 6 SB-176_20231026-5.5-6.0 460-291385-29 4602913851 SO N 10/26/2023		SB-176 6 - 6.5 SB-176_20231026-6.0-6.5 460-291385-30 4602913851 SO N 10/26/2023		SB-201 0.5 - 1 SB-201_20211221-0.5-1.0 460-249597-15 4602495971 SO N 12/21/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.02	U	0.03	U	0.03	U	0.04	U	ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.02	U	0.03	U	0.03	U	0.04	U	ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.02	U	0.03	U	0.03	U	0.04	U	ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.02	U	0.03	U	0.03	U	0.04	U	ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.02	U	0.03	U	0.03	U	0.04	U	ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.02	U	0.02	U	0.17		0.03	U	0.04	U	**1.50**	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.22		0.18		0.30		0.03	U	0.04	U	**2.00**	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.02	U	0.03	U	0.03	U	0.04	U	ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.02	U	0.03	U	0.03	U	0.04	U	ND	
	Total PCBs	1	mg/kg	0.22		0.18		0.47		0.03	U	0.04	U	**3.50**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-201 3.5 - 4 SB-201_20211221-3.5-4.0 460-249597-16 4602495971 SO N 12/21/2021		SB-201 24.5 - 25 SB-201_20220203-24.5-25_D 460-251952-4 4602519521 SO FD 2/4/2022		SB-201 4 - 4.5 SB-201_20230308-4.0-4.5 460-275894-2 4602758941 SO N 3/8/2023		SB-201 4 - 4.5 SB-201_20230308-4.0-4.5-A 460-275894-3 4602758941 SO FD 3/8/2023		SB-201 4.5 - 5 SB-201_20230308-4.5-5.0 460-275894-4 4602758941 SO N 3/8/2023		SB-201 5 - 5.5 SB-201_20230308-5.0-5.5 460-275894-5 4602758941 SO N 3/8/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		0.05	J	0.26	J	0.02	UJ	0.02	U	0.13	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.06		0.02	J	0.22	J	0.40	J	0.04		0.41	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
	Total PCBs	1	mg/kg	0.06		0.06	J	0.48	J	0.40	J	0.04		0.54	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-201 5.5 - 6 SB-201_20230308-5.5-6.0 460-275894-6 4602758941 SO N 3/8/2023		SB-201 6 - 6.5 SB-201_20230308-6.0-6.5 460-275894-7 4602758941 SO N 3/8/2023		SB-201 6.5 - 7 SB-201_20230308-6.5-7.0 460-275894-8 4602758941 SO N 3/8/2023		SB-201 24.5 - 25 SB-201_20220203-24.5-25 460-251952-3 4602519521 SO N 2/4/2022		SB-189 1 - 1.5 SB-189_20220106-0.5-1.0 460-250511-3 4602505111 SO N 1/6/2022		SB-189 3.5 - 4 SB-189_20220106-3.5-4.0 460-250511-4 4602505111 SO N 1/6/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.08		0.02		0.02	U	ND		0.23		**5.80**	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.22		0.02		0.02	U	ND		0.22		**6.40**	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
	Total PCBs	1	mg/kg	0.30		0.05		0.02	U	ND		0.45		**12.00**	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-189 4 - 4.5 SB-189_20221004-4.0-4.5 460-266791-1 4602667911 SO N 10/4/2022		SB-189 4 - 4.5 SB-189_20221004-4.0-4.5-A 460-266791-2 4602667911 SO FD 10/4/2022		SB-189 4.5 - 5 SB-189_20221004-4.5-5.0 460-266791-3 4602667911 SO N 10/4/2022		SB-106 0.5 - 1 SB-106_20211206_0.5-1.0 460-248749-3 4602487491 SO N 12/6/2021		SB-106 3.5 - 4 SB-106_20211206_3.5-4.0 460-248749-4 4602487491 SO N 12/6/2021		SB-215 28.5 - 29 SB-215_20220216-28.5-29.0 460-252727-2 4602527271 SO N 2/16/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.25	U	0.12	U	0.03	U	ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.25	U	0.12	U	0.03	U	ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.25	U	0.12	U	0.03	U	ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.25	U	0.12	U	0.03	U	ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.25	U	0.12	U	0.03	U	ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	**1.80**	J	0.12	UJ	0.03	U	ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**3.70**		**2.80**		0.34		0.07		0.14		0.02	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.25	U	0.12	U	0.03	U	ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.25	U	0.12	U	0.03	U	ND		ND		ND	
	Total PCBs	1	mg/kg	**5.50**	J	**2.80**	J	0.34		0.07		0.14		0.02	J

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-116 0.5 - 1 SB-116_20211201-0.5-1.0 460-248300-11 4602483001 SO N 12/1/2021		SB-116 3.5 - 4 SB-116_20211201-3.5-4.0 460-248300-12 4602483001 SO N 12/1/2021		SB-125 0.5 - 1 SB-125_20211130-0.5-1.0 460-248139-8 4602481391 SO N 11/30/2021		SB-125 3.5 - 4 SB-125_20211130-3.5-4.0 460-248139-9 4602481391 SO N 11/30/2021		SB-135 0.5 - 1 SB-135_20211230-0.5-1.0 460-250148-3 4602501481 SO N 12/30/2021		SB-135 2 - 2.5 SB-135_20211230-2.0-2.5 460-250148-4 4602501481 SO N 12/30/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		0.20		ND		0.23		0.05	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.03	J	0.03		0.17		0.02		0.32		0.06	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.03	J	0.03		0.37		0.02		0.55		0.11	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-144 0.5 - 1 SB-144_20220113-0.5-1.0 460-250686-5 4602506861 SO N 1/13/2022		SB-144 3.5 - 4 SB-144_20220113-3.5-4.0 460-250686-6 4602506861 SO N 1/13/2022		SB-144 4 - 4.5 SB-144_20230314-4.0-4.5 460-276286-29 4602762861 SO N 3/14/2023		SB-144 4 - 4.5 SB-144_20230314-4.0-4.5-A 460-276286-30 4602762861 SO FD 3/14/2023		SB-144 4.5 - 5 SB-144_20230314-4.5-5.0 460-276286-31 4602762861 SO N 3/14/2023		SB-144 5 - 5.5 SB-144_20230314-5.0-5.5 460-276286-32 4602762861 SO N 3/14/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		0.14		0.08		0.06		0.02	U
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.04		0.03		0.25	JN	0.13		0.12		0.02	U
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		0.02	U	0.02	U	0.02	U	0.02	U
	Total PCBs	1	mg/kg	0.04		0.03		0.39		0.21		0.18		0.02	U

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary				Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-144 5.5 - 6 SB-144_20230314-5.5-6.0 460-276286-33 4602762861 SO N 3/14/2023		SB-144 6 - 6.5 SB-144_20230314-6.0-6.5 460-276286-34 4602762861 SO N 3/14/2023		SB-151 0.5 - 1 SB-151_20211217-0.5-1.0 460-249597-1 4602495971 SO N 12/17/2021		SB-151 3.5 - 4 SB-151_20211217-3.5-4.0 460-249597-2 4602495971 SO N 12/17/2021		SB-151 4 - 4.5 SB-151_20230613-4.0-4.5 460-282313-13 4602823131 SO N 6/13/2023		SB-151 4 - 4.5 SB-151_20230613-4.0-4.5-A 460-282313-14 4602823131 SO FD 6/13/2023	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS													
	Polychlorinated Biphenyls (PCBs)															
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.02	U	ND		ND		0.02	U	0.02	U
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.02	U	ND		ND		0.02	U	0.02	U
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.02	U	ND		ND		0.02	U	0.02	U
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.02	U	ND		ND		0.02	U	0.02	U
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.02	U	ND		ND		0.02	U	0.02	U
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.02	U	0.02	U	ND		ND		0.02	UJ	0.12	J
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.02	U	0.02	U	0.07		0.08		0.09		0.14	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.02	U	ND		ND		0.02	U	0.02	U
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.02	U	ND		ND		0.02	U	0.02	U
	Total PCBs	1	mg/kg	0.02	U	0.02	U	0.07		0.08		0.09	J	0.26	J

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-151 4.5 - 5 SB-151_20230613-4.5-5.0 460-282313-15 4602823131 SO N 6/13/2023		SB-151 4.5 - 5 SB-151_20230613-4.5-5.0-A 460-282313-16 4602823131 SO FD 6/13/2023		SB-151 5 - 5.5 SB-151_20230613-5.0-5.5 460-282313-17 4602823131 SO N 6/13/2023		SB-151 5.5 - 6 SB-151_20230613-5.5-6.0 460-282313-18 4602823131 SO N 6/13/2023		SB-159 0.5 - 1 SB-159_20211222_0.5-1.0 460-249756-5 4602497561 SO N 12/22/2021		SB-159 3.5 - 4 SB-159_20211222_3.5-4.0 460-249756-6 4602497561 SO N 12/22/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.09		0.09		0.19	JN	0.14		ND		0.03	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.09		0.09		0.41	JN	0.02	U	0.02		0.03	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.02	U	0.02	U	0.02	U	ND		ND	
	Total PCBs	1	mg/kg	0.17		0.18		0.60		0.14		0.02		0.06	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-159 4 - 4.5 SB-159_20231025-4.0-4.5 460-291128-35 4602911281 SO N 10/25/2023		SB-159 4 - 4.5 SB-159_20231025-4.0-4.5-A 460-291128-36 4602911281 SO FD 10/25/2023		SB-159 4.5 - 5 SB-159_20231025-4.5-5.0 460-291128-37 4602911281 SO N 10/25/2023		SB-167 0.5 - 1 SB-167_20211222_0.5-1.0 460-249756-3 4602497561 SO N 12/22/2021		SB-167 3.5 - 4 SB-167_20211222_3.5-4.0 460-249756-4 4602497561 SO N 12/22/2021		SB-177 0.5 - 1 SB-177_20211229-0.5-1.0 460-250018-10 4602500181 SO N 12/29/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.03		0.03	J	0.08	J	ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.03	JN	0.03		0.04	J	0.05		0.16		0.04	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	0.02	U	0.02	U	0.02	U	ND		ND		ND	
	Total PCBs	1	mg/kg	0.06		0.06		0.12		0.05		0.16		0.04	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-177 3.5 - 4 SB-177_20211229-3.5-4.0 460-250018-11 4602500181 SO N 12/29/2021		SB-184 0.5 - 1 SB-184_20211221-0.5-1.0 460-249597-19 4602495971 SO N 12/21/2021		SB-184 3.5 - 4 SB-184_20211221-3.5-4.0 460-249597-20 4602495971 SO N 12/21/2021		SB-184 3.5 - 4 SB-184_20211221-3.5-4.0_D 460-249597-21 4602495971 SO FD 12/21/2021		SB-202 24.5 - 25 SB-202_20220203-24.5-25 460-251952-2 4602519521 SO N 2/4/2022		SB-191 1 - 1.5 SB-191_20220110-1.0-1.5 460-250511-9 4602505111 SO N 1/10/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.13		**2.70**		ND		0.07	J	ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.23		**2.90**		0.03	J	0.08	J	ND		0.10	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.36		**5.60**		0.03	J	0.15	J	ND		0.10	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-191 3.5 - 4 SB-191_20220110-3.5-4.0 460-250511-10 4602505111 SO N 1/10/2022		SB-191 4 - 4.5 SB-191-20230315-4.0-4.5 460-276374-16 4602763741 SO N 3/15/2023		SB-191 4.5 - 5 SB-191-20230315-4.5-5.0 460-276374-17 4602763741 SO N 3/15/2023		SB-107 0.5 - 1 SB-107_20211208_0.5-1.0 460-248749-9 4602487491 SO N 12/8/2021		SB-107 3.5 - 4 SB-107_20211208_3.5-4.0 460-248749-10 4602487491 SO N 12/8/2021		SB-214 36.5 - 37 SB-214_20220217-36.5-37.0 460-252727-4 4602527271 SO N 2/17/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		0.02	U	0.03	U	ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		0.02	U	0.03	U	ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		0.02	U	0.03	U	ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		0.02	U	0.03	U	ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		0.02	U	0.03	U	ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		0.09		0.22		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.16		0.12		0.32		**12.00**		0.75		ND	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		0.02	U	0.03	U	ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		0.02	U	0.03	U	ND		ND		ND	
	Total PCBs	1	mg/kg	0.16		0.21		0.54		**12.00**		0.75		ND	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-117 0.5 - 1 SB-117_20211201-0.5-1.0 460-248300-7 4602483001 SO N 12/1/2021		SB-117 3.5 - 4 SB-117_20211201-3.5-4.0 460-248300-8 4602483001 SO N 12/1/2021		SB-126 0.5 - 1 SB-126_20211130-0.5-1.0 460-248139-10 4602481391 SO N 11/30/2021		SB-126 0.5 - 1 SB-126_20211130-0.5-1.0_D 460-248139-11 4602481391 SO FD 11/30/2021		SB-126 3.5 - 4 SB-126_20211130-3.5-4.0 460-248139-12 4602481391 SO N 11/30/2021		SB-211 0.5 - 1 SB-211_20211227-0.5-1.0 460-249908-9 4602499081 SO N 12/27/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.06	J	ND		0.10		0.12		ND		0.09	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.06	J	ND		0.08		0.10		0.02		0.15	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.12	J	ND		0.18		0.22		0.02		0.24	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-211 3.5 - 4 SB-211_20211227-3.5-4.0 460-249908-10 4602499081 SO N 12/27/2021		SB-211 23.5 - 24 SB-211_20220215-23.5-24.0 460-252727-1 4602527271 SO N 2/15/2022		SB-145 0.5 - 1 SB-145_20211227-0.5-1.0 460-249908-7 4602499081 SO N 12/27/2021		SB-145 3.5 - 4 SB-145_20211227-3.5-4.0 460-249908-8 4602499081 SO N 12/27/2021		SB-205 0.5 - 1 SB-205_20220131-0.5-1.0 460-251654-3 4602516541 SO N 1/28/2022		SB-205 3.5 - 4 SB-205_20220131-3.5-4.0 460-251654-4 4602516541 SO N 1/28/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		0.05		ND		0.14		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.03		ND		0.08		0.01	J	0.18		ND	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.03		ND		0.12		0.01	J	0.32		ND	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-205 27.5 - 28 SB-205_20220221-27.5-28.0 460-253012-4 4602530121 SO N 2/21/2022		SB-160 0.5 - 1 SB-160_20211227-0.5-1.0 460-249908-5 4602499081 SO N 12/27/2021		SB-160 3.5 - 4 SB-160_20211227-3.5-4.0 460-249908-6 4602499081 SO N 12/27/2021		SB-168 0.5 - 1 SB-168_20211230-0.5-1.0 460-250148-1 4602501481 SO N 12/30/2021		SB-168 3 - 3.5 SB-168_20211230-3.0-3.5 460-250148-2 4602501481 SO N 12/30/2021		SB-95 0.5 - 1 SB-95_20220120-0.5-1.0 460-251087-2 4602510871 SO N 1/20/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		0.03		ND		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	ND		0.04		0.11		0.03		0.01	J	0.12	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	ND		0.06		0.11		0.03		0.01	J	0.12	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-95 3.5 - 4 SB-95_20220120-3.5-4.0 460-251087-3 4602510871 SO N 1/20/2022		SB-95 24.5 - 25 SB-95_20220203-24.5-25 460-251952-1 4602519521 SO N 2/4/2022		SB-185 1 - 1.5 SB-185_20220110-1.0-1.5 460-250511-11 4602505111 SO N 1/10/2022		SB-185 3.5 - 4 SB-185_20220110-3.5-4.0 460-250511-12 4602505111 SO N 1/10/2022		SB-185 3.5 - 4 SB-185_20220110-3.5-4.0_D 460-250511-17 4602505111 SO FD 1/10/2022		SB-185 22.5 - 23 SB-185_20220207-22.5-23.0 460-252132-6 4602521321 SO N 2/7/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		0.22		0.16		0.03	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.08		ND		0.34		0.35	J	0.25		0.01	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.08		ND		0.34		0.57		0.41		0.04	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-194 0.5 - 1 SB-194_20220113-0.5-1.0 460-250686-9 4602506861 SO N 1/13/2022		SB-194 3.5 - 4 SB-194_20220113-3.5-4.0 460-250686-10 4602506861 SO N 1/13/2022		SB-212 0.5 - 1 SB-212_20211206_0.5-1.0 460-248749-1 4602487491 SO N 12/6/2021		SB-212 3.5 - 4 SB-212_20211206_3.5-4.0 460-248749-2 4602487491 SO N 12/6/2021		SB-212 32.5 - 33 SB-212_20220217-32.5-33.0 460-252727-3 4602527271 SO N 2/17/2022		SB-213 0.5 - 1 SB-213_20211201-0.5-1.0 460-248300-3 4602483001 SO N 12/1/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.73		ND		ND		ND		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	**1.30**		0.02		0.47		0.01	J	ND		0.38	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	**2.03**		0.02		0.47		0.01	J	ND		0.38	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-213 3.5 - 4 SB-213_20211201-3.5-4.0 460-248300-4 4602483001 SO N 12/1/2021		SB-213 23.5 - 24 SB-213_20220222-23.5-24.0 460-253218-1 4602532181 SO N 2/22/2022		SB-127 0.5 - 1 SB-127_20220119-0.5-1.0 460-251087-1 4602510871 SO N 1/19/2022		SB-136 0.5 - 1 SB-136_20211228-0.5-1.0 460-250018-14 4602500181 SO N 12/28/2021		SB-136 3.5 - 4 SB-136_20211228-3.5-4.0 460-250018-15 4602500181 SO N 12/28/2021		SB-207 23.5 - 24 SB-207_20220215-23.5-24.0 460-252569-3 4602525691 SO N 2/15/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		ND		0.05		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	ND		ND		0.22		0.13		0.06		ND	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	ND		ND		0.22		0.13		0.11		ND	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-207 23.5 - 24 SB-207_20220215-23.5-24.0_D 460-252569-4 4602525691 SO FD 2/15/2022		SB-146 0.5 - 1 SB-146_20211228-0.5-1.0 460-250018-12 4602500181 SO N 12/28/2021		SB-146 3.5 - 4 SB-146_20211228-3.5-4.0 460-250018-13 4602500181 SO N 12/28/2021		SB-206 0.5 - 1 SB-206_20220128-0.5-1.0 460-251654-1 4602516541 SO N 1/28/2022		SB-206 3.5 - 4 SB-206_20220128-3.5-4.0 460-251654-2 4602516541 SO N 1/28/2022		SB-161 0.5 - 1 SB-161_20211223-0.5-1.0 460-249908-1 4602499081 SO N 12/23/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		0.55		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		0.08		ND		0.19		ND		0.03	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	ND		0.17		0.06		0.10		ND		0.06	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	ND		0.25		0.06		0.84		ND		0.09	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-161 3.5 - 4 SB-161_20211223-3.5-4.0 460-249908-2 4602499081 SO N 12/23/2021		SB-169 0.5 - 1 SB-169_20211222_0.5-1.0 460-249756-7 4602497561 SO N 12/23/2021		SB-169 3.5 - 4 SB-169_20211222_3.5-4.0 460-249756-8 4602497561 SO N 12/23/2021		SB-178 0.5 - 1 SB-178_20220125-0.5-1.0 460-251246-4 4602512461 SO N 1/25/2022		SB-178 3.5 - 4 SB-178_20220125-3.5-4.0 460-251246-5 4602512461 SO N 1/25/2022		SB-178 24.5 - 25 SB-178_20220207-24.5-25.0 460-252132-2 4602521321 SO N 2/7/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.02	J	ND		ND		0.11		0.11		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.02		0.03		0.02	J	0.34		0.32		ND	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.05		0.03		0.02	J	0.45		0.43		ND	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-186 0.5 - 1 SB-186_20211229-0.5-1.0_D 460-250018-3 4602500181 SO FD 12/29/2021		SB-186 1 - 1.5 SB-186_20220106-1.0-1.5 460-250511-7 4602505111 SO N 1/6/2022		SB-186 3.5 - 4 SB-186_20220106-3.5-4.0 460-250511-8 4602505111 SO N 1/6/2022		SB-193 1 - 1.5 SB-193_20220112-1.0-1.5 460-250686-3 4602506861 SO N 1/12/2022		SB-193 3.5 - 4 SB-193_20220112-3.5-4.0 460-250686-4 4602506861 SO N 1/12/2022		SB-108 0.5 - 1 SB-108_20220120-0.5-1.0 460-251087-4 4602510871 SO N 1/20/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		0.02	JN	ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		0.02		ND		0.67		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.02	J	0.03		0.04		**1.70**		ND		0.82	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.02	J	0.07		0.04		**2.37**		ND		0.82	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-108 3.5 - 4 SB-108_20220120-3.5-4.0 460-251087-5 4602510871 SO N 1/20/2022		SB-118 0.5 - 1 SB-118_20211208_0.5-1.0 460-248749-7 4602487491 SO N 12/8/2021		SB-118 3.5 - 4 SB-118_20211208_3.5-4.0 460-248749-8 4602487491 SO N 12/8/2021		SB-118 4 - 4.5 SB-118-20221014-4.0-4.5 460-267541-2 4602675411 SO N 10/14/2022		SB-118 4.5 - 5 SB-118-20221014-4.5-5.0 460-267541-4 4602675411 SO N 10/14/2022		SB-128 0.5 - 1 SB-128_20211206_0.5-1.0 460-248749-5 4602487491 SO N 12/6/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		0.02	U	0.02	U	ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		0.02	U	0.02	U	ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		0.02	U	0.02	U	ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		0.02	U	0.02	U	ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		**2.80**		0.06		0.04		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		0.96		0.02	U	0.02	U	ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.27		0.96		0.65		0.10		0.03		0.06	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		0.02	U	0.02	U	ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		0.02	U	0.02	U	ND	
	Total PCBs	1	mg/kg	0.27		0.96		**4.40**		0.16		0.07		0.06	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-128 3.5 - 4 SB-128_20211206_3.5-4.0 460-248749-6 4602487491 SO N 12/6/2021		SB-137 0.5 - 1 SB-137_20211227-0.5-1.0 460-249908-11 4602499081 SO N 12/27/2021		SB-137 3.5 - 4 SB-137_20211227-3.5-4.0 460-249908-12 4602499081 SO N 12/27/2021		SB-147 0.5 - 1 SB-147_20211229-0.5-1.0 460-250018-8 4602500181 SO N 12/29/2021		SB-147 2.5 - 3 SB-147_20211229-2.5-3.0 460-250018-9 4602500181 SO N 12/29/2021		SB-147 3.5 - 4 SB-147_20220117-3.5-4.0 460-250876-1 4602508761 SO N 1/17/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		ND		ND		0.09		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.63		0.03		ND		0.27		0.14		0.34	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.63		0.03		ND		0.36		0.14		0.34	J

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-147 23.5 - 24 SB-147_20220209-23.5-24.0 460-252311-3 4602523111 SO N 2/9/2022		SB-152 0.5 - 1 SB-152_20211228-0.5-1.0 460-249908-13 4602499081 SO N 12/28/2021		SB-152 3.5 - 4 SB-152_20211228-3.5-4.0 460-249908-14 4602499081 SO N 12/28/2021		SB-162 0.5 - 1 SB-162_20211227-0.5-1.0 460-249908-3 4602499081 SO N 12/27/2021		SB-162 3 - 3.5 SB-162_20211227-3.0-3.5 460-249908-4 4602499081 SO N 12/27/2021		SB-170 0.5 - 1 SB-170_20211229-0.5-1.0 460-250018-6 4602500181 SO N 12/29/2021	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		0.06		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		0.17		ND		0.07		ND		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	ND		0.07		0.02	J	0.24		0.04		0.69	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	ND		0.30		0.02	J	0.31		0.04		0.69	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-170 3.5 - 4 SB-170_20211229-3.5-4.0 460-250018-7 4602500181 SO N 12/29/2021		SB-170 23.5 - 24 SB-170_20220211-23.5-24.0 460-252378-12 4602523781 SO N 2/11/2022		SB-179 0.5 - 1 SB-179_20211229-0.5-1.0 460-250018-4 4602500181 SO N 12/29/2021		SB-179 3.5 - 4 SB-179_20211229-3.5-4.0 460-250018-5 4602500181 SO N 12/29/2021		SB-187 1 - 1.5 SB-187_20220106-1.0-1.5 460-250511-5 4602505111 SO N 1/6/2022		SB-187 3.5 - 4 SB-187_20220106-3.5-4.0 460-250511-6 4602505111 SO N 1/6/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS												
	Polychlorinated Biphenyls (PCBs)														
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND		ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND		ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	0.07		ND		0.03		ND		0.17		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	0.13		ND		0.05		0.06		0.25		0.01	J
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND		ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND		ND		ND		ND	
	Total PCBs	1	mg/kg	0.20		ND		0.08		0.06		0.42		0.01	J

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD) is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 1b
Summary of 2021-2024 PCB Site Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Con Edison - Farrington MGP 2021 - 2024 PCB Site Characterization Validated Soil Analytical Data Detected Compound Summary			Location ID: Depth: Sample ID: Lab Sample ID: SDG: Matrix: Sample Type Code: Sample Date:	SB-187 24 - 24.5 SB-187_20220208-24.0-24.5 460-252132-8 4602521321 SO N 2/8/2022		SB-196 1.5 - 2 SB-196_20220113-1.5-2.0 460-250686-7 4602506861 SO N 1/13/2022		SB-196 3.5 - 4 SB-196_20220113-3.5-4.0 460-250686-8 4602506861 SO N 1/13/2022	
CAS NO.	COMPOUND	6 NYCRR Part 375 Commercial SCOs	UNITS						
	Polychlorinated Biphenyls (PCBs)								
12674-11-2	PCB-1016 (Aroclor 1016)	1	mg/kg	ND		ND		ND	
11104-28-2	PCB-1221 (Aroclor 1221)	1	mg/kg	ND		ND		ND	
11141-16-5	PCB-1232 (Aroclor 1232)	1	mg/kg	ND		ND		ND	
53469-21-9	PCB-1242 (Aroclor 1242)	1	mg/kg	ND		ND		ND	
12672-29-6	PCB-1248 (Aroclor 1248)	1	mg/kg	ND		ND		ND	
11097-69-1	PCB-1254 (Aroclor 1254)	1	mg/kg	ND		0.60		ND	
11096-82-5	PCB-1260 (Aroclor 1260)	1	mg/kg	ND		0.94		0.03	
37324-23-5	PCB-1262 (Aroclor 1262)	1	mg/kg	ND		ND		ND	
11100-14-4	PCB-1268 (Aroclor 1268)	1	mg/kg	ND		ND		ND	
	Total PCBs	1	mg/kg	ND		**1.54**		0.03	

Notes:
(1) Laboratory analytical results compared to NYSEC 6 NYCRR Part 375 Commercial Soil Cleanup Objectives.
(2) mg/kg = Milligrams per Kilogram
(3) ND = None detected
(4) U - Indicates the analyte was analyzed for but not detected
(5) J - Result is less than the reporting limit but greater than or equal to the Method Detection Limit (MDL)
and the concentration is an approximate value
(6) N - Tentatively identified at the concentration given
(7) + - Laboratory Control Samples (LCS) and/or Laboratory Control Sample Duplicates (LCSD)
is outside acceptable limits, high biased
(8) - - LCS and/or LCSD is outside acceptable limits, low biased
(9) Grey shaded values indicated exceedance of NYSDEC Part 375 Commercial Soil Criteria

Table 2
Summary of Geotechnical Laboratory Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Boring	Interval (feet)	USCS Classification ASTM D2487	Specific Gravity ASTM D854	Organic Content ASTM D2974 (%)	Moisture Content ASTM D2216 (%)	Grain Size - ASTM D422					Atterberg Limits - ASTM D4318		
						% Gravel	% Sand	% Fines	% Silt	% Clay	Liquid Limit	Plastic Limit	Plasticity Index
SB-86	11-21	SM	2.71	1.1	20.9	0.0	82.4	17.6	13.3	4.3	NP		
SB-87	5-10	SM	2.76	1.3	10.6	25.7	55.1	19.3	14.5	4.8	NP		
SB-87	5-10D	SM	2.71	1.6	11.9	31.1	54.1	14.8	10.1	4.7	NP		
SB-87	13-19	SM	2.72	1.1	18.6	8.6	78.1	13.3	10.7	2.6	NP		
SB-88	17-21	SM	2.72	1.1	17.4	3.4	81.3	15.3	11.2	4.1	NP		
SB-90	20-26	SM	2.7	1.8	20.6	0.0	83.4	16.6	14.5	2.1	NP		
SB-91	11-21	SW-SM	2.74	1.2	18.3	12.3	76.7	11	6.5	4.5	NP		
SB-92	9-17	SM	2.73	3.6	22	2.7	50.3	47	34.5	12.5	NP		
SB-93	18-22	SM	2.71	0.8	17.9	0.0	81.8	18.3	12.6	5.7	NP		
SB-94	19-23	SM	2.71	1.3	31.8	0.0	85.5	14.51	11.11	3.4	NP		
SB-95	10 - 20	SM	2.73	2.2	19.8	0.0	65.3	34.7	25.8	8.9	NP		
SB-96	11-15	SM	2.74	1.6	20.8	3.6	62.3	34.1	26.4	7.7	NP		
SB-97	13-19	SM	2.73	1.8	19.1	0.0	77.5	22.5	18.4	4.1	NP		
SB-98	21.5-25.0	SP	2.71	0.9	13.8	6.0	90.8	3.2	1.7	1.5	NP		
SB-99	9-19	SM	2.7	1.1	30.4	0.0	80	20	15	5	NP		
SB-111	19-22	SW-SM	2.7	1.2	12.2	5.5	82.9	11.6	8.3	3.3	NP		
SB-201	17-22	SP-SM	2.69	1.3	18.3	0.0	91.9	8.1	5.4	2.7	NP		
SB-202	19-23	SP	2.69	0.7	21	0.0	96.2	3.8	1.6	2.2	NP		
SB-203	15-19	SP-SM	2.7	1.3	26.1	0.0	90.1	9.9	6.9	3	NP		
SB-203	5-10	SM	2.68	2.7	16.9	20.1	52.9	27.1	18.6	8.5	NP		
SB-204	17-21	SP-SM	2.73	0.6	20.4	0.0	94	6	3.9	2.1	NP		
SB-205	11-17	SM	2.72	1.7	14.2	0.0	69.8	30.2	27	3.2	NP		
SB-207	17-21	SP-SM	2.71	0.5	24.6	0.0	91.4	8.6	6.2	2.4	NP		
SB-208	9-13	SM	2.74	1.7	11.4	0.0	68	32	25.5	6.5	NP		
SB-209	17-23	SM	2.71	0.5	20.7	0	85.4	14.6	12.3	2.3	NP		
SB-210	15-19	SM	2.69	1.7	16.7	2.0	80.9	17.1	13.5	3.6	NP		
SB-211	5-10	SM	2.75	2	11.7	7.4	56.9	35.7	29.7	6	NP		
SB-211	5-10D	SM	2.75	1.5	13.9	1.3	69.7	29	22.6	6.4	NP		
SB-211	15-21	SM	2.72	1.7	35.3	0.0	82.2	17.8	13.7	4.1	NP		
SB-212	15-19	SP-SM	2.72	0.5	28.4	0.0	89.3	10.7	7.7	3	NP		
SB-213	13-21	SM	2.72	0.7	16.2	0.0	86.7	13.3	9.7	3.6	NP		
SB-214	17-27	SP-SM	2.7	0.4	25.7	6.5	93.3	6.7	3.6	3.1	NP		
SB-215	11-21	SM	2.68	1.4	29.5	0.0	86.4	13.6	11.4	2.2	NP		

Table 3
Summary of In-Situ Waste Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Waste Characterization Analytical Data		Sample ID Matrix SDG Sample Date	SB-96_20211214_WC IDW 4602491251 12/14/2021		SB-110_20211203_WC IDW 4602483811 12/3/2021		SB-113_20211202_WC IDW 4602482991 12/2/2021		SB-116_20211201_WC IDW 4602482991 12/1/2021		SB-135_20211230_WC IDW 4602501711 12/30/2021		SB-154_20211119_WC IDW 4602476511 11/19/2021		SB-156_20211122_WC IDW 4602478541 11/22/2021	
CAS	Chemical Name	Units														
	TCLP Metals															
7440-38-2	Arsenic	mg/l	ND		ND		ND		ND		ND		ND		0.0087	J
7440-39-3	Barium	mg/l	0.348	B	2.16	B	0.18	B	0.611	B	0.576		0.838		1.1	
7440-43-9	Cadmium	mg/l	0.0053		0.005		0.0022	J	ND		ND		0.004	J	0.0161	
7440-47-3	Chromium, Total	mg/l	ND		ND		ND		ND		ND		ND		ND	
7439-92-1	Lead	mg/l	0.575	B	0.0147		0.0707		0.0183		0.0511		0.0831		0.663	
7782-49-2	Selenium	mg/l	ND		ND		ND		ND		ND		ND		ND	
7440-22-4	Silver	mg/l	ND		ND		ND		ND		ND		ND		ND	
7439-97-6	Mercury	mg/l	ND		ND		0.0094		ND		ND		ND		ND	
	TCLP Pesticides															
12789-03-6	Chlordane (Technical)	mg/l	ND		ND		ND		ND		ND		ND		ND	
72-20-8	Endrin	mg/l	ND		ND		ND		ND		ND		ND		ND	
58-89-9	Gamma Bhc (Lindane)	mg/l	ND		ND		ND		ND		ND		ND		ND	
76-44-8	Heptachlor	mg/l	ND		ND		ND		ND		ND		ND		ND	
1024-57-3	Heptachlor Epoxide	mg/l	ND		ND		ND		ND		ND		ND		ND	
72-43-5	Methoxychlor	mg/l	ND		ND		ND		ND		ND		ND		ND	
8001-35-2	Toxaphene	mg/l	ND		ND		ND		ND		ND		ND		ND	
	TCLP Herbicides															
94-75-7	2,4-D (Dichlorophenoxyacetic Acid)	mg/l	ND		ND		ND		ND		ND		ND		ND	
93-72-1	Silvex (2,4,5-TP)	mg/l	ND		ND		ND		ND		ND		ND		ND	
	TCLP VOCs															
75-35-4	1,1-Dichloroethene	mg/l	ND		ND		ND		ND		ND		ND		ND	
107-06-2	1,2-Dichloroethane	mg/l	ND		ND		ND		ND		ND		ND		ND	
71-43-2	Benzene	mg/l	0.035		ND		ND		ND		ND		ND		0.011	
56-23-5	Carbon Tetrachloride	mg/l	ND		ND		ND		ND		ND		ND		ND	
108-90-7	Chlorobenzene	mg/l	ND		ND		ND		ND		ND		ND		ND	
67-66-3	Chloroform	mg/l	0.017	B	ND		ND		ND		0.0033	BJ	0.0054	BJ	ND	
78-93-3	Methyl Ethyl Ketone (2-Butanone)	mg/l	ND		ND		ND		ND		ND		ND		ND	
127-18-4	Tetrachloroethylene (PCE)	mg/l	ND		ND		ND		ND		ND		ND		ND	
79-01-6	Trichloroethylene (TCE)	mg/l	ND		ND		ND		ND		ND		ND		ND	
75-01-4	Vinyl Chloride	mg/l	ND		ND		ND		ND		ND		ND		ND	
	TCLP SVOCs															
106-46-7	1,4-Dichlorobenzene	mg/l	0.01	UT	ND		ND		ND		0.01	UT	ND		ND	
95-95-4	2,4,5-Trichlorophenol	mg/l	ND		ND		ND		ND		ND		ND		ND	
88-06-2	2,4,6-Trichlorophenol	mg/l	ND		ND		ND		ND		ND		ND		ND	
121-14-2	2,4-Dinitrotoluene	mg/l	ND		ND		ND		ND		ND		ND		ND	
95-48-7	2-Methylphenol (O-Cresol)	mg/l	ND		ND		ND		ND		ND		ND		ND	
106-44-5	4-Methylphenol (P-Cresol)	mg/l	ND		ND		ND		ND		ND		ND		ND	
MEPH1314	Cresols, M & P	mg/l	ND		ND		ND		ND		ND		ND		ND	
118-74-1	Hexachlorobenzene	mg/l	ND		ND		ND		ND		ND		ND		ND	
87-68-3	Hexachlorobutadiene	mg/l	ND		ND		ND		ND		ND		ND		ND	
67-72-1	Hexachloroethane	mg/l	ND		ND		ND		ND		ND		ND		ND	
98-95-3	Nitrobenzene	mg/l	ND		ND		ND		ND		ND		ND		ND	
87-86-5	Pentachlorophenol	mg/l	ND		ND		ND		ND		ND		ND		ND	
108-95-2	Phenol	mg/l	ND		ND		ND		ND		ND		ND		ND	
110-86-1	Pyridine	mg/l	ND		ND		ND		ND		ND		ND		ND	

Table 3
Summary of In-Situ Waste Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Waste Characterization Analytical Data		Sample ID Matrix SDG Sample Date	SB-96_20211214_WC IDW 4602491251 12/14/2021		SB-110_20211203_WC IDW 4602483811 12/3/2021		SB-113_20211202_WC IDW 4602482991 12/2/2021		SB-116_20211201_WC IDW 4602482991 12/1/2021		SB-135_20211230_WC IDW 4602501711 12/30/2021		SB-154_20211119_WC IDW 4602476511 11/19/2021		SB-156_20211122_WC IDW 4602478541 11/22/2021	
	General Chemistry															
TEMP	Temperature for sample or purge water	deg c	21.9		20.4		20.5		20.2		19.8		22.5		20.2	
57-12-5	Cyanide	mg/kg	0.74		ND		0.2	J	0.59		0.13	J	0.26	UT	2.7	
CREAC	Reactive Cyanide	mg/kg	58.3	UT	ND		ND		ND		ND		ND		ND	
SREAC	Sulfide Reactive	mg/kg	ND		ND		ND		ND		ND		ND		ND	
BURN	Burn Rate	mm/sec	ND		ND		ND		ND		ND		ND		ND	
CORROS	Corrosivity	none	ND		ND		ND		ND		ND		ND		ND	
PH	pH	ph units	7.3		7.8		8		7.5		8.9		8		8.2	
	Total Metals															
7429-90-5	Aluminum	ug/kg	8650000		5460000		2370000		9750000		4130000		7100000	T	4880000	
7440-36-0	Antimony	ug/kg	280		530		250		140	J	ND		700		630	
7440-38-2	Arsenic	ug/kg	8800		12700		1900		4500		3500		12000		8200	
7440-39-3	Barium	ug/kg	218000		464000		14200		95300		39600		119000		248000	
7440-41-7	Beryllium	ug/kg	410	T	450		130		300		230	J	470		540	
7440-43-9	Cadmium	ug/kg	510		860		160		120		150	J	610		1800	
7440-70-2	Calcium	ug/kg	22900000		14500000	T	530000		2920000	T	49700000		72700000	B	36900000	
7440-47-3	Chromium, Total	ug/kg	19700		11400	B	7900		26300		7400		16400		17400	
7440-48-4	Cobalt	ug/kg	8000		3400		2500		6600		4100		5400		4600	
7440-50-8	Copper	ug/kg	36600		35000		6700		29500		24500		51800		35200	
7439-89-6	Iron	ug/kg	24100000		11700000	B	7410000	T	23700000	T	9430000		16300000	T	12300000	
7439-92-1	Lead	ug/kg	266000		84000		30500		47100		42100		215000	T	393000	
7439-95-4	Magnesium	ug/kg	3150000	B	1780000		763000		3280000		11800000		5480000		3310000	
7439-96-5	Manganese	ug/kg	245000	B	72700	BT	43900	T	171000	T	137000		261000	T	123000	B
7440-02-0	Nickel	ug/kg	19000		11800	B	8000		18000		10600		17100		15300	
7440-09-7	Potassium	ug/kg	1430000		1030000		562000		2340000		656000		1650000		713000	
7782-49-2	Selenium	ug/kg	1000		1300		330	J	410		160	J	1400		1700	
7440-22-4	Silver	ug/kg	46	J	120		ND		ND		ND		170		91	J
7440-23-5	Sodium	ug/kg	232000		321000		111000		163000		547000		278000		214000	
7440-28-0	Thallium	ug/kg	160		340		82	J	260		60	J	240		130	
7440-62-2	Vanadium	ug/kg	24200		20800		7900		28900		21600		36600		13700	
7440-66-6	Zinc	ug/kg	169000		51100		22000	J	55100		37300		131000		421000	
7439-97-6	Mercury	ug/kg	5400		230		31600		310		70		290		13300	

Table 3
Summary of In-Situ Waste Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Waste Characterization Analytical Data		Sample ID	SB-96_20211214_WC		SB-110_20211203_WC		SB-113_20211202_WC		SB-116_20211201_WC		SB-135_20211230_WC		SB-154_20211119_WC		SB-156_20211122_WC	
		Matrix	IDW		IDW		IDW		IDW		IDW		IDW		IDW	
		SDG	4602491251		4602483811		4602482991		4602482991		4602501711		4602476511		4602478541	
		Sample Date	12/14/2021		12/3/2021		12/2/2021		12/1/2021		12/30/2021		11/19/2021		11/22/2021	
	VOCs															
71-55-6	1,1,1-Trichloroethane (TCA)	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
79-34-5	1,1,2,2-Tetrachloroethane	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
79-00-5	1,1,2-Trichloroethane	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
75-34-3	1,1-Dichloroethane	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
75-35-4	1,1-Dichloroethene	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
87-61-6	1,2,3-Trichlorobenzene	ug/kg	1.3	UT	ND		ND		ND		1.2	UHT	ND		ND	
120-82-1	1,2,4-Trichlorobenzene	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
96-12-8	1,2-Dibromo-3-Chloropropane	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
106-93-4	1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
95-50-1	1,2-Dichlorobenzene	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
107-06-2	1,2-Dichloroethane	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
78-87-5	1,2-Dichloropropane	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
541-73-1	1,3-Dichlorobenzene	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
106-46-7	1,4-Dichlorobenzene	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
123-91-1	1,4-Dioxane (P-Dioxane)	ug/kg	ND		ND		ND		ND		120	UHT	ND		ND	
591-78-6	2-Hexanone	ug/kg	ND		ND		ND		ND		6	UHT	ND		ND	
67-64-1	Acetone	ug/kg	49		ND		13		25		22	HT	24		23	
71-43-2	Benzene	ug/kg	7.3		ND		0.37	J	ND		0.8	JHT	0.44	J	11	
74-97-5	Bromochloromethane	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
75-27-4	Bromodichloromethane	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
75-25-2	Bromoform	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
74-83-9	Bromomethane	ug/kg	2.5	UT	ND		2.3	UT	2.2	UT	2.4	UHT	ND		ND	
75-15-0	Carbon Disulfide	ug/kg	1	J	ND		ND		ND		1.2	UHT	ND		ND	
56-23-5	Carbon Tetrachloride	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
108-90-7	Chlorobenzene	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
75-00-3	Chloroethane	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
67-66-3	Chloroform	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
74-87-3	Chloromethane	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
156-59-2	Cis-1,2-Dichloroethylene	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
10061-01-5	Cis-1,3-Dichloropropene	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
110-82-7	Cyclohexane	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
124-48-1	Dibromochloromethane	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
75-71-8	Dichlorodifluoromethane	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
100-41-4	Ethylbenzene	ug/kg	2.4		ND		ND		ND		1.2	UHT	ND		0.41	J
98-82-8	Isopropylbenzene (Cumene)	ug/kg	9		ND		ND		ND		1.2	UHT	ND		ND	
79-20-9	Methyl Acetate	ug/kg	ND		ND		ND		ND		6	UHT	ND		ND	
78-93-3	Methyl Ethyl Ketone (2-Butanone)	ug/kg	5.8	J	ND		ND		ND		6	UHT	ND		ND	
108-10-1	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ug/kg	ND		ND		ND		ND		6	UHT	ND		ND	
108-87-2	Methylcyclohexane	ug/kg	0.71	J	ND		ND		ND		1.2	UHT	ND		ND	
75-09-2	Methylene Chloride	ug/kg	1.7	J	ND		ND		ND		1.8	JHT	ND		ND	
100-42-5	Styrene	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
1634-04-4	Tert-Butyl Methyl Ether	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
127-18-4	Tetrachloroethylene (PCE)	ug/kg	ND		ND		ND		0.39	J	1.2	UHT	ND		ND	
108-88-3	Toluene	ug/kg	1.5		ND		0.55	J	0.33	J	0.92	JHT	ND		0.57	J
156-60-5	Trans-1,2-Dichloroethene	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
10061-02-6	Trans-1,3-Dichloropropene	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
79-01-6	Trichloroethylene (TCE)	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
75-69-4	Trichlorofluoromethane	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
75-01-4	Vinyl Chloride	ug/kg	ND		ND		ND		ND		1.2	UHT	ND		ND	
1330-20-7	Xylenes	ug/kg	6.5		ND		ND		ND		0.84	JHT	ND		1.4	J

Table 3
Summary of In-Situ Waste Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Waste Characterization Analytical Data		Sample ID Matrix SDG Sample Date	SB-96_20211214_WC IDW 4602491251 12/14/2021	SB-110_20211203_WC IDW 4602483811 12/3/2021	SB-113_20211202_WC IDW 4602482991 12/2/2021	SB-116_20211201_WC IDW 4602482991 12/1/2021	SB-135_20211230_WC IDW 4602501711 12/30/2021	SB-154_20211119_WC IDW 4602476511 11/19/2021	SB-156_20211122_WC IDW 4602478541 11/22/2021
	SVOCs								
95-94-3	1,2,4,5-Tetrachlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
58-90-2	2,3,4,6-Tetrachlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
95-95-4	2,4,5-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
88-06-2	2,4,6-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
120-83-2	2,4-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
105-67-9	2,4-Dimethylphenol	ug/kg	ND	ND	38 J	ND	ND	ND	75 J
51-28-5	2,4-Dinitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
121-14-2	2,4-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND	ND	ND
606-20-2	2,6-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND	ND	ND
91-58-7	2-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND	ND	ND
95-57-8	2-Chlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
91-57-6	2-Methylnaphthalene	ug/kg	1700	ND	990	93 J	6400	340 J	2400
95-48-7	2-Methylphenol (O-Cresol)	ug/kg	ND	ND	23 J	ND	ND	ND	ND
88-74-4	2-Nitroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND
88-75-5	2-Nitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
91-94-1	3,3'-Dichlorobenzidine	ug/kg	ND	ND	ND	ND	ND	140 UT	ND
99-09-2	3-Nitroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND
534-52-1	4,6-Dinitro-2-Methylphenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
101-55-3	4-Bromophenyl Phenyl Ether	ug/kg	ND	ND	ND	ND	ND	ND	ND
59-50-7	4-Chloro-3-Methylphenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
106-47-8	4-Chloroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND
7005-72-3	4-Chlorophenyl Phenyl Ether	ug/kg	ND	ND	ND	ND	ND	ND	ND
106-44-5	4-Methylphenol (P-Cresol)	ug/kg	78 J	ND	59 J	ND	ND	ND	610
100-01-6	4-Nitroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND
100-02-7	4-Nitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
83-32-9	Acenaphthene	ug/kg	2400	ND	170 J	89 J	480	68 J	250 J
208-96-8	Acenaphthylene	ug/kg	5300	6.6 J	3800	150 J	1800	250 J	1700
98-86-2	Acetophenone	ug/kg	ND	ND	46 J	31 J	20 J	ND	ND
120-12-7	Anthracene	ug/kg	4800	ND	2000	190 J	1200	270 J	1400
1912-24-9	Atrazine	ug/kg	ND	ND	ND	ND	140 UT	ND	ND
100-52-7	Benzaldehyde	ug/kg	ND	ND	59 J	ND	ND	ND	ND
56-55-3	Benzo(A)Anthracene	ug/kg	6400	57	13000 D	580	2400	840	4600
50-32-8	Benzo(A)Pyrene	ug/kg	6800	47	9200 D	580	1300	800	4500
205-99-2	Benzo(B)Fluoranthene	ug/kg	6100	62	14000 D	740	1900	1000	5700
191-24-2	Benzo(G,H,I)Perylene	ug/kg	3000	33 J	4900	340 J	540	550	2800
207-08-9	Benzo(K)Fluoranthene	ug/kg	2500	22 J	5000	340	690	380	2300
85-68-7	Benzyl Butyl Phthalate	ug/kg	ND	63 J	ND	ND	ND	ND	ND
92-52-4	Biphenyl (Diphenyl)	ug/kg	740	ND	130 J	20 J	1000	56 J	320 J
111-91-1	Bis(2-Chloroethoxy) Methane	ug/kg	ND	ND	ND	ND	ND	ND	ND
111-44-4	Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	ug/kg	ND	ND	ND	ND	ND	ND	ND
108-60-1	Bis(2-Chloroisopropyl) Ether	ug/kg	ND	ND	ND	ND	ND	ND	ND
117-81-7	Bis(2-Ethylhexyl) Phthalate	ug/kg	ND	ND	ND	24 J	390	93 J	150 J
105-60-2	Caprolactam	ug/kg	ND	ND	360 UT	360 UT	ND	ND	ND
86-74-8	Carbazole	ug/kg	180 J	ND	420	100 J	61 J	34 J	580
218-01-9	Chrysene	ug/kg	6400	59 J	13000 D	580	2500	960	4300
53-70-3	Dibenz(A,H)Anthracene	ug/kg	820	ND	1400	110	190	130	960
132-64-9	Dibenzofuran	ug/kg	ND	ND	240 J	53 J	400	44 J	340 J
84-66-2	Diethyl Phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
131-11-3	Dimethyl Phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
84-74-2	Di-N-Butyl Phthalate	ug/kg	ND	ND	ND	24 J	ND	ND	ND
117-84-0	Di-N-Octylphthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
206-44-0	Fluoranthene	ug/kg	8700	83 J	24000 D	880	4300	1400	6800
	SVOCs								
86-73-7	Fluorene	ug/kg	4500	ND	940	81 J	2600	230 J	790
118-74-1	Hexachlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
87-68-3	Hexachlorobutadiene	ug/kg	ND	ND	ND	ND	ND	ND	ND

Table 3
Summary of In-Situ Waste Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison		Sample ID	SB-96_20211214_WC		SB-110_20211203_WC		SB-113_20211202_WC		SB-116_20211201_WC		SB-135_20211230_WC		SB-154_20211119_WC		SB-156_20211122_WC	
Farrington Street Remedial Design		Matrix	IDW		IDW		IDW		IDW		IDW		IDW		IDW	
Waste Characterization Analytical Data		SDG	4602491251		4602483811		4602482991		4602482991		4602501711		4602476511		4602478541	
		Sample Date	12/14/2021		12/3/2021		12/2/2021		12/1/2021		12/30/2021		11/19/2021		11/22/2021	
77-47-4	Hexachlorocyclopentadiene	ug/kg	ND		ND		ND		ND		ND		ND		ND	
67-72-1	Hexachloroethane	ug/kg	ND		ND		ND		ND		ND		ND		ND	
193-39-5	Indeno(1,2,3-C,D)Pyrene	ug/kg	3500		36		5900		380		690		600		3200	
78-59-1	Isophorone	ug/kg	ND		ND		ND		ND		ND		ND		ND	
91-20-3	Naphthalene	ug/kg	4000		ND		930		130	J	2600		300	J	3500	
98-95-3	Nitrobenzene	ug/kg	ND		ND		ND		ND		ND		ND		ND	
621-64-7	N-Nitrosodi-N-Propylamine	ug/kg	ND		ND		ND		ND		ND		ND		ND	
86-30-6	N-Nitrosodiphenylamine	ug/kg	ND		ND		ND		ND		ND		ND		ND	
87-86-5	Pentachlorophenol	ug/kg	ND		ND		ND		ND		ND		ND		ND	
85-01-8	Phenanthrene	ug/kg	10000	D	44	J	7200		560		11000	D	1400		5500	
108-95-2	Phenol	ug/kg	ND		ND		43	J	ND		ND		ND		ND	
129-00-0	Pyrene	ug/kg	17000	D	91	J	32000	D	780		7300		1800		6700	

(J) indicates estimated value.
(B) indicated analyte detected in associated laboratory blank.
(ND) indicates compound not detected above laboratory detection limits.
(H) indicates analysis completed beyond applicable hold time.
(T) indicates LCS and/or LCSD is outside acceptance limits.

Table 3
Summary of In-Situ Waste Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison		Sample ID	SB-159_20211222_WC		SB-161_20211223_WC		SB-172_20211118_WC		SB-174_20211117_WC		SB-186_20220106_WC		SB-202_20211221_WC		SB-207_20220124_WC		SB-210_20211215_WC	
Farrington Street Remedial Design		Matrix	IDW		IDW		IDW		IDW		IDW		IDW		IDW		IDW	
Waste Characterization Analytical Data		SDG	4602497571		4602499091		4602475582		4602475582		4602505151		4602495841		4602512451		4602492911	
		Sample Date	12/22/2021		12/23/2021		11/18/2021		11/17/2021		1/6/2022		12/21/2021		1/24/2022		12/15/2021	
CAS	Chemical Name	Units																
	TCLP Metals																	
7440-38-2	Arsenic	mg/l	ND		ND		0.0075	J	0.0088	J	ND		ND		ND		ND	
7440-39-3	Barium	mg/l	0.618		0.0599		0.665	B	0.583	B	0.542		0.744		0.533		0.387	
7440-43-9	Cadmium	mg/l	0.0066	J	ND		0.0442		0.0061		0.206		0.019	J	ND		ND	
7440-47-3	Chromium, Total	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
7439-92-1	Lead	mg/l	1.87		0.0418		11.7	B	0.106	B	28.9		2.96		0.0165		0.126	
7782-49-2	Selenium	mg/l	0.0081	BJ	ND		ND		ND		ND		ND		ND		ND	
7440-22-4	Silver	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
7439-97-6	Mercury	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
	TCLP Pesticides																	
12789-03-6	Chlordane (Technical)	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
72-20-8	Endrin	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
58-89-9	Gamma Bhc (Lindane)	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
76-44-8	Heptachlor	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
1024-57-3	Heptachlor Epoxide	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
72-43-5	Methoxychlor	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
8001-35-2	Toxaphene	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
	TCLP Herbicides																	
94-75-7	2,4-D (Dichlorophenoxyacetic Acid)	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
93-72-1	Silvex (2,4,5-TP)	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
	TCLP VOCs																	
75-35-4	1,1-Dichloroethene	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
107-06-2	1,2-Dichloroethane	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
71-43-2	Benzene	mg/l	ND		ND		ND		ND		ND		ND		0.0048	J	ND	
56-23-5	Carbon Tetrachloride	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
108-90-7	Chlorobenzene	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
67-66-3	Chloroform	mg/l	0.0048	BJ	0.0049	BJ	ND		ND		ND		0.0044	BJ	ND		0.014	B
78-93-3	Methyl Ethyl Ketone (2-Butanone)	mg/l	0.05	UT	ND		ND		ND		ND		ND		ND		0.065	
127-18-4	Tetrachloroethylene (PCE)	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
79-01-6	Trichloroethylene (TCE)	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
75-01-4	Vinyl Chloride	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
	TCLP SVOCs																	
106-46-7	1,4-Dichlorobenzene	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
95-95-4	2,4,5-Trichlorophenol	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
88-06-2	2,4,6-Trichlorophenol	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
121-14-2	2,4-Dinitrotoluene	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
95-48-7	2-Methylphenol (O-Cresol)	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
106-44-5	4-Methylphenol (P-Cresol)	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
MEPH1314	Cresols, M & P	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
118-74-1	Hexachlorobenzene	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
87-68-3	Hexachlorobutadiene	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
67-72-1	Hexachloroethane	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
98-95-3	Nitrobenzene	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
87-86-5	Pentachlorophenol	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	
108-95-2	Phenol	mg/l	0.0062	J	ND		ND		ND		ND		ND		ND		ND	
110-86-1	Pyridine	mg/l	ND		ND		ND		ND		ND		ND		ND		ND	

Table 3
Summary of In-Situ Waste Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Waste Characterization Analytical Data		Sample ID Matrix SDG Sample Date	SB-159_20211222_WC IDW 4602497571 12/22/2021		SB-161_20211223_WC IDW 4602499091 12/23/2021		SB-172_20211118_WC IDW 4602475582 11/18/2021		SB-174_20211117_WC IDW 4602475582 11/17/2021		SB-186_20220106_WC IDW 4602505151 1/6/2022		SB-202_20211221_WC IDW 4602495841 12/21/2021		SB-207_20220124_WC IDW 4602512451 1/24/2022		SB-210_20211215_WC IDW 4602492911 12/15/2021	
	General Chemistry																	
TEMP	Temperature for sample or purge water	deg c	20.3		20.9		20.7		20.7		21.1		22.2		20		21	
57-12-5	Cyanide	mg/kg	ND		0.27	J	ND		0.14	J	5.4		0.16	JT	0.53		0.34	
CREAC	Reactive Cyanide	mg/kg	ND		ND		ND		ND								59.1	UT
SREAC	Sulfide Reactive	mg/kg	ND		ND		ND		ND		ND		ND		ND		ND	
BURN	Burn Rate	mm/sec	ND		ND		ND		ND		ND		ND		ND		ND	
CORROS	Corrosivity	none	ND		ND		ND		ND		ND		ND			ND	ND	
PH	pH	ph units	8.5		6.2		7.9		8.1		7.1		7.9		8.6		7.6	
	Total Metals																	
7429-90-5	Aluminum	ug/kg	6240000		13000000		5270000	T	10300000	T	3990000		7240000		5910000		10400000	
7440-36-0	Antimony	ug/kg	490	J	170	J	3100		630		640	J	260	J	ND		ND	
7440-38-2	Arsenic	ug/kg	3400		8400		8100		10700		3600		3700		3100		2600	
7440-39-3	Barium	ug/kg	56500		219000		158000		111000		126000		48500		140000		64200	
7440-41-7	Beryllium	ug/kg	360	J	1300		280		390		230	J	370	J	320	J	600	
7440-43-9	Cadmium	ug/kg	170	J	460	J	2500		770		9400		710	J	340	J	250	
7440-70-2	Calcium	ug/kg	9300000		2360000		24800000	B	13200000	B	13100000		11200000		37900000		1850000	B
7440-47-3	Chromium, Total	ug/kg	11700		28400		27400		23700		18500		16400		11400		15100	
7440-48-4	Cobalt	ug/kg	5000		4800		4700		5400		5100		5300		4600		6900	
7440-50-8	Copper	ug/kg	35100		41400		709000		53700		20500		45300		21500		31300	
7439-89-6	Iron	ug/kg	11600000		17300000		18900000	T	14300000	T	14800000		14200000		10900000		15100000	
7439-92-1	Lead	ug/kg	176000		82000		2060000	T	187000	T	1790000		299000		100000		88500	
7439-95-4	Magnesium	ug/kg	3740000		677000		8260000		3430000		2140000		7170000		8010000		2040000	
7439-96-5	Manganese	ug/kg	207000		84100		211000	T	256000	T	256000		227000		189000		102000	
7440-02-0	Nickel	ug/kg	16400		18400		24900		14900		10100		11000		11200		15900	
7440-09-7	Potassium	ug/kg	762000		1630000		840000		1120000		421000		660000		881000		682000	
7782-49-2	Selenium	ug/kg	500	J	4800		570		410		240	J	430	J	150	J	640	
7440-22-4	Silver	ug/kg	ND		140	J	770		150		3000		160	J	ND		40	J
7440-23-5	Sodium	ug/kg	321000		1380000		486000		334000		122000		112000		484000		160000	
7440-28-0	Thallium	ug/kg	59	J	180	J	73	J	110		ND		100	J	79	J	120	
7440-62-2	Vanadium	ug/kg	25900		42500		64600		29600		15500		28200		20100		23900	
7440-66-6	Zinc	ug/kg	75800		51600		483000		136000		2120000		200000		156000		84200	
7439-97-6	Mercury	ug/kg	130		170		710		520		25		96		1400		270	

Table 3
Summary of In-Situ Waste Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Waste Characterization Analytical Data		Sample ID	SB-159_20211222_WC		SB-161_20211223_WC		SB-172_20211118_WC		SB-174_20211117_WC		SB-186_20220106_WC		SB-202_20211221_WC		SB-207_20220124_WC		SB-210_20211215_WC	
		Matrix	IDW		IDW		IDW		IDW		IDW		IDW		IDW		IDW	
		SDG	4602497571		4602499091		4602475582		4602475582		4602505151		4602495841		4602512451		4602492911	
		Sample Date	12/22/2021		12/23/2021		11/18/2021		11/17/2021		1/6/2022		12/21/2021		1/24/2022		12/15/2021	
	VOCs																	
71-55-6	1,1,1-Trichloroethane (TCA)	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
79-34-5	1,1,2,2-Tetrachloroethane	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
79-00-5	1,1,2-Trichloroethane	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
75-34-3	1,1-Dichloroethane	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
75-35-4	1,1-Dichloroethene	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
87-61-6	1,2,3-Trichlorobenzene	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
120-82-1	1,2,4-Trichlorobenzene	ug/kg	1.1	UT	1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
96-12-8	1,2-Dibromo-3-Chloropropane	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
106-93-4	1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
95-50-1	1,2-Dichlorobenzene	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
107-06-2	1,2-Dichloroethane	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
78-87-5	1,2-Dichloropropane	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
541-73-1	1,3-Dichlorobenzene	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
106-46-7	1,4-Dichlorobenzene	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
123-91-1	1,4-Dioxane (P-Dioxane)	ug/kg	ND		140	UHT	ND		ND		120	UHT	ND		ND		ND	
591-78-6	2-Hexanone	ug/kg	ND		6.9	UHT	ND		ND		6.1	UHT	ND		ND		ND	
67-64-1	Acetone	ug/kg	20		100	HT	39		18		8.9	HT	61		17		72	
71-43-2	Benzene	ug/kg	ND		8.8	HT	ND		0.44	J	1.2	UHT	0.85	J	9.1		2.2	
74-97-5	Bromochloromethane	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
75-27-4	Bromodichloromethane	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
75-25-2	Bromoform	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
74-83-9	Bromomethane	ug/kg	ND		2.8	UHT	ND		ND		2.5	UHT	ND		ND		ND	
75-15-0	Carbon Disulfide	ug/kg	0.3	J	1.9	HT	0.67	J	ND		1.2	UHT	0.32	J	0.38	J	ND	
56-23-5	Carbon Tetrachloride	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
108-90-7	Chlorobenzene	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
75-00-3	Chloroethane	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
67-66-3	Chloroform	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
74-87-3	Chloromethane	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
156-59-2	Cis-1,2-Dichloroethylene	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
10061-01-5	Cis-1,3-Dichloropropene	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
110-82-7	Cyclohexane	ug/kg	1.6		1.4	UHT	1.2	UT	1.1	UT	1.2	UHT	0.4	J	ND		ND	
124-48-1	Dibromochloromethane	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
75-71-8	Dichlorodifluoromethane	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
100-41-4	Ethylbenzene	ug/kg	ND		1.1	JHT	ND		ND		1.2	UHT	ND		ND		11	
98-82-8	Isopropylbenzene (Cumene)	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		4.3	
79-20-9	Methyl Acetate	ug/kg	ND		6.9	UHT	ND		ND		6.1	UHT	4.8	UT	ND		ND	
78-93-3	Methyl Ethyl Ketone (2-Butanone)	ug/kg	ND		10	HT	4.5	J	ND		6.1	UHT	14		ND		8.1	
108-10-1	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ug/kg	ND		6.9	UHT	ND		ND		6.1	UHT	ND		ND		ND	
108-87-2	Methylcyclohexane	ug/kg	2		1.4	UHT	ND		ND		1.2	UHT	1		ND		0.75	J
75-09-2	Methylene Chloride	ug/kg	ND		1.6	JHT	ND		ND		2.5	UHT	1.9	UT	ND		ND	
100-42-5	Styrene	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		0.38	J	ND	
1634-04-4	Tert-Butyl Methyl Ether	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
127-18-4	Tetrachloroethylene (PCE)	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
108-88-3	Toluene	ug/kg	ND		5.6	HT	ND		ND		1.2	UHT	ND		2.8		0.46	J
156-60-5	Trans-1,2-Dichloroethene	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
10061-02-6	Trans-1,3-Dichloropropene	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
79-01-6	Trichloroethylene (TCE)	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
75-69-4	Trichlorofluoromethane	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
75-01-4	Vinyl Chloride	ug/kg	ND		1.4	UHT	ND		ND		1.2	UHT	ND		ND		ND	
1330-20-7	Xylenes	ug/kg	ND		3.9	HT	1.1	J	ND		2.5	UHT	0.79	J	ND		13	

Table 3
Summary of In-Situ Waste Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

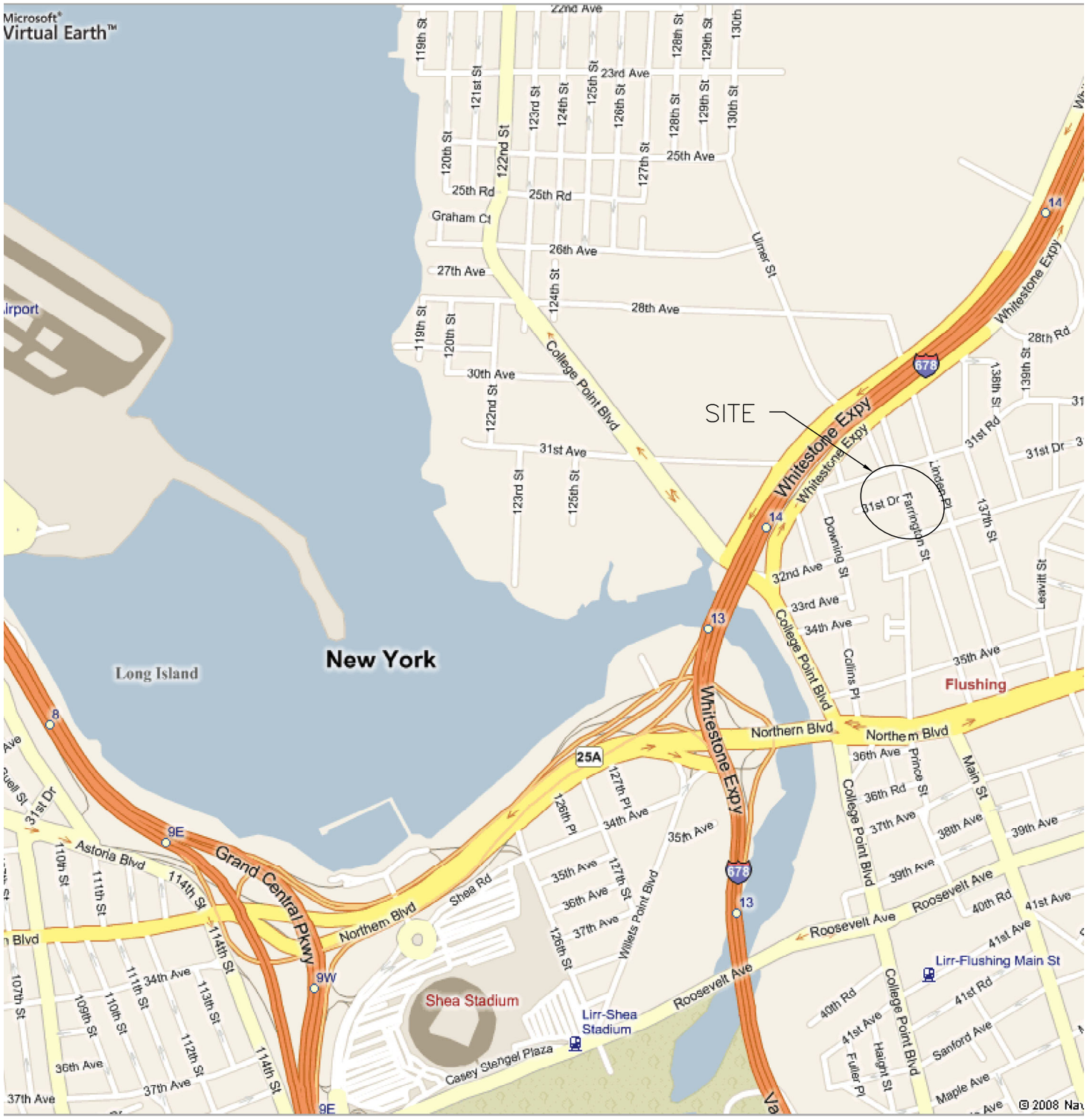
Consolidated Edison Farrington Street Remedial Design Waste Characterization Analytical Data		Sample ID Matrix SDG Sample Date	SB-159_20211222_WC IDW 4602497571 12/22/2021		SB-161_20211223_WC IDW 4602499091 12/23/2021		SB-172_20211118_WC IDW 4602475582 11/18/2021		SB-174_20211117_WC IDW 4602475582 11/17/2021		SB-186_20220106_WC IDW 4602505151 1/6/2022		SB-202_20211221_WC IDW 4602495841 12/21/2021		SB-207_20220124_WC IDW 4602512451 1/24/2022		SB-210_20211215_WC IDW 4602492911 12/15/2021	
	SVOCs																	
95-94-3	1,2,4,5-Tetrachlorobenzene	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
58-90-2	2,3,4,6-Tetrachlorophenol	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
95-95-4	2,4,5-Trichlorophenol	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
88-06-2	2,4,6-Trichlorophenol	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
120-83-2	2,4-Dichlorophenol	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
105-67-9	2,4-Dimethylphenol	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
51-28-5	2,4-Dinitrophenol	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
121-14-2	2,4-Dinitrotoluene	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
606-20-2	2,6-Dinitrotoluene	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
91-58-7	2-Chloronaphthalene	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
95-57-8	2-Chlorophenol	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
91-57-6	2-Methylnaphthalene	ug/kg	ND		ND		38	J	43	J	ND		96	J	190	J	980	
95-48-7	2-Methylphenol (O-Cresol)	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
88-74-4	2-Nitroaniline	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
88-75-5	2-Nitrophenol	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
91-94-1	3,3'-Dichlorobenzidine	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
99-09-2	3-Nitroaniline	ug/kg	370	UT	ND		ND		ND		ND		ND		ND		ND	
534-52-1	4,6-Dinitro-2-Methylphenol	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
101-55-3	4-Bromophenyl Phenyl Ether	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
59-50-7	4-Chloro-3-Methylphenol	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
106-47-8	4-Chloroaniline	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
7005-72-3	4-Chlorophenyl Phenyl Ether	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
106-44-5	4-Methylphenol (P-Cresol)	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
100-01-6	4-Nitroaniline	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
100-02-7	4-Nitrophenol	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
83-32-9	Acenaphthene	ug/kg	24	J	ND		39	J	84	J	ND		48	J	35	J	100	J
208-96-8	Acenaphthylene	ug/kg	67	J	ND		48	J	41	J	8.2	J	48	J	65	J	1900	
98-86-2	Acetophenone	ug/kg	ND		ND		ND		ND		ND		ND		ND		77	J
120-12-7	Anthracene	ug/kg	82	J	ND		79	J	120	J	14	J	110	J	120	J	660	
1912-24-9	Atrazine	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
100-52-7	Benzaldehyde	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
56-55-3	Benzo(A)Anthracene	ug/kg	670		19	J	360		340		52		340		450		2600	
50-32-8	Benzo(A)Pyrene	ug/kg	610		ND		400		320		39	J	350		400		4500	
205-99-2	Benzo(B)Fluoranthene	ug/kg	780		13	J	570		450		50		500		580		5300	
191-24-2	Benzo(G,H,I)Perylene	ug/kg	270	J	ND		280	J	180	J	32	J	170	J	280	J	2000	
207-08-9	Benzo(K)Fluoranthene	ug/kg	330		ND		180		160		22	J	190		200		1800	
85-68-7	Benzyl Butyl Phthalate	ug/kg	ND		ND		83	J	ND		ND		ND		74	JT	ND	
92-52-4	Biphenyl (Diphenyl)	ug/kg	ND		ND		11	J	10	J	ND		21	J	24	J	120	J
111-91-1	Bis(2-Chloroethoxy) Methane	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
111-44-4	Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
108-60-1	Bis(2-Chloroisopropyl) Ether	ug/kg	ND		ND		ND		ND		ND		ND		370	UT	ND	
117-81-7	Bis(2-Ethylhexyl) Phthalate	ug/kg	ND		ND		650		55	J	ND		76	J	95	JT	ND	
105-60-2	Caprolactam	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
86-74-8	Carbazole	ug/kg	ND		ND		38	J	34	J	ND		20	J	44	J	74	J
218-01-9	Chrysene	ug/kg	670		11	J	410		400		44	J	420		470		2800	
53-70-3	Dibenz(A,H)Anthracene	ug/kg	63		ND		82		63		ND		56		77		500	
132-64-9	Dibenzofuran	ug/kg	6.4	J	ND		16	J	51	J	ND		48	J	23	J	88	J
84-66-2	Diethyl Phthalate	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
131-11-3	Dimethyl Phthalate	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
84-74-2	Di-N-Butyl Phthalate	ug/kg	ND		ND		310	J	ND		ND		ND		ND		ND	
117-84-0	Di-N-Octylphthalate	ug/kg	ND		ND		ND		ND		ND		ND		370	UT	ND	
206-44-0	Fluoranthene	ug/kg	880		21	J	670		700		61	J	610		690		2400	
	SVOCs																	
86-73-7	Fluorene	ug/kg	30	J	ND		48	J	110	J	ND		57	J	48	J	370	J
118-74-1	Hexachlorobenzene	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	
87-68-3	Hexachlorobutadiene	ug/kg	ND		ND		ND		ND		ND		ND		ND		ND	

Table 3
Summary of In-Situ Waste Characterization Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design Waste Characterization Analytical Data		Sample ID	SB-159_20211222_WC	SB-161_20211223_WC	SB-172_20211118_WC	SB-174_20211117_WC	SB-186_20220106_WC	SB-202_20211221_WC	SB-207_20220124_WC	SB-210_20211215_WC
		Matrix	IDW	IDW	IDW	IDW	IDW	IDW	IDW	IDW
		SDG	4602497571	4602499091	4602475582	4602475582	4602505151	4602495841	4602512451	4602492911
		Sample Date	12/22/2021	12/23/2021	11/18/2021	11/17/2021	1/6/2022	12/21/2021	1/24/2022	12/15/2021
77-47-4	Hexachlorocyclopentadiene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
67-72-1	Hexachloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
193-39-5	Indeno(1,2,3-C,D)Pyrene	ug/kg	490	ND	290	210	32 J	200	330	2600
78-59-1	Isophorone	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
91-20-3	Naphthalene	ug/kg	13 J	23 J	26 J	51 J	ND	120 J	220 J	2100
98-95-3	Nitrobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
621-64-7	N-Nitrosodi-N-Propylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
86-30-6	N-Nitrosodiphenylamine	ug/kg	ND	ND	ND	37 J	ND	ND	ND	ND
87-86-5	Pentachlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
85-01-8	Phenanthrene	ug/kg	270 J	ND	360	490	36 J	320 J	400	1400
108-95-2	Phenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
129-00-0	Pyrene	ug/kg	1000	18 J	630	650	77 J	750	790 T	4300

(J) indicates estimated value.
(B) indicated analyte detected in associated laboratory blank.
(ND) indicates compound not detected above laboratory detection limits.
(H) indicates analysis completed beyond applicable hold time.
(T) indicates LCS and/or LCSD is outside acceptance limits.

FIGURES



BASE MAP FROM MSN LIVE SEARCH MAPS 2008.

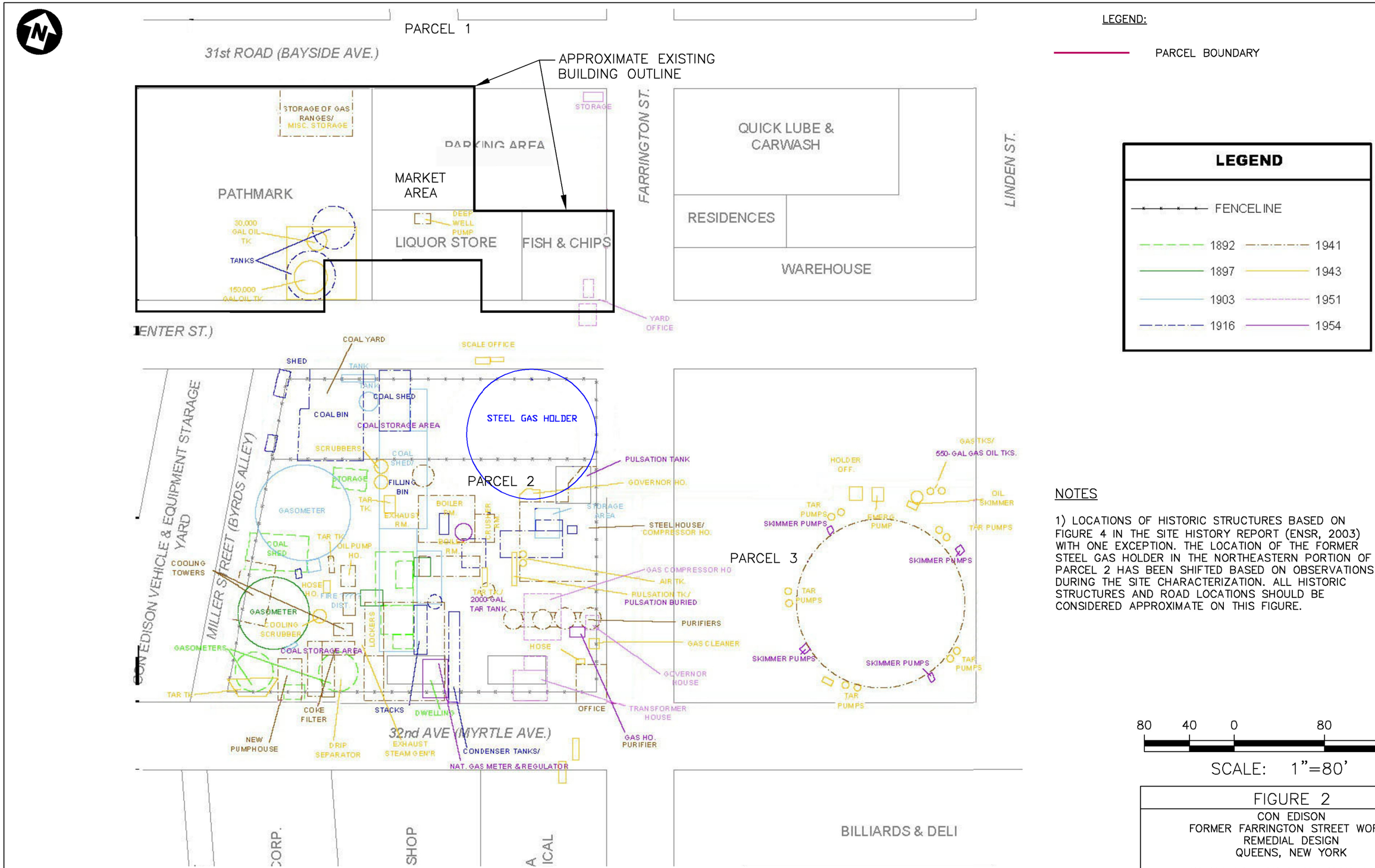
FIGURE 1

CON EDISON
FORMER FARRINGTON STREET WORKS
REMEDIAL DESIGN
QUEENS, NEW YORK

SITE LOCATION MAP

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560

FILE NAME: P:\CONED\446109 - FARRINGTON ST MGP\CAD\REMEDIAL DESIGN\SITEMAP.DWG
PLOT DATE: 7/29/2022 5:19 PM PLOTTED BY: RUSSO, JILL [US-US]



LEGEND:

PARCEL BOUNDARY

LEGEND

- FENCELINE
- 1892
- 1897
- 1903
- 1916
- 1941
- 1943
- 1951
- 1954

NOTES

1) LOCATIONS OF HISTORIC STRUCTURES BASED ON FIGURE 4 IN THE SITE HISTORY REPORT (ENSR, 2003) WITH ONE EXCEPTION. THE LOCATION OF THE FORMER STEEL GAS HOLDER IN THE NORTHEASTERN PORTION OF PARCEL 2 HAS BEEN SHIFTED BASED ON OBSERVATIONS DURING THE SITE CHARACTERIZATION. ALL HISTORIC STRUCTURES AND ROAD LOCATIONS SHOULD BE CONSIDERED APPROXIMATE ON THIS FIGURE.

80 40 0 80 160

SCALE: 1"=80'

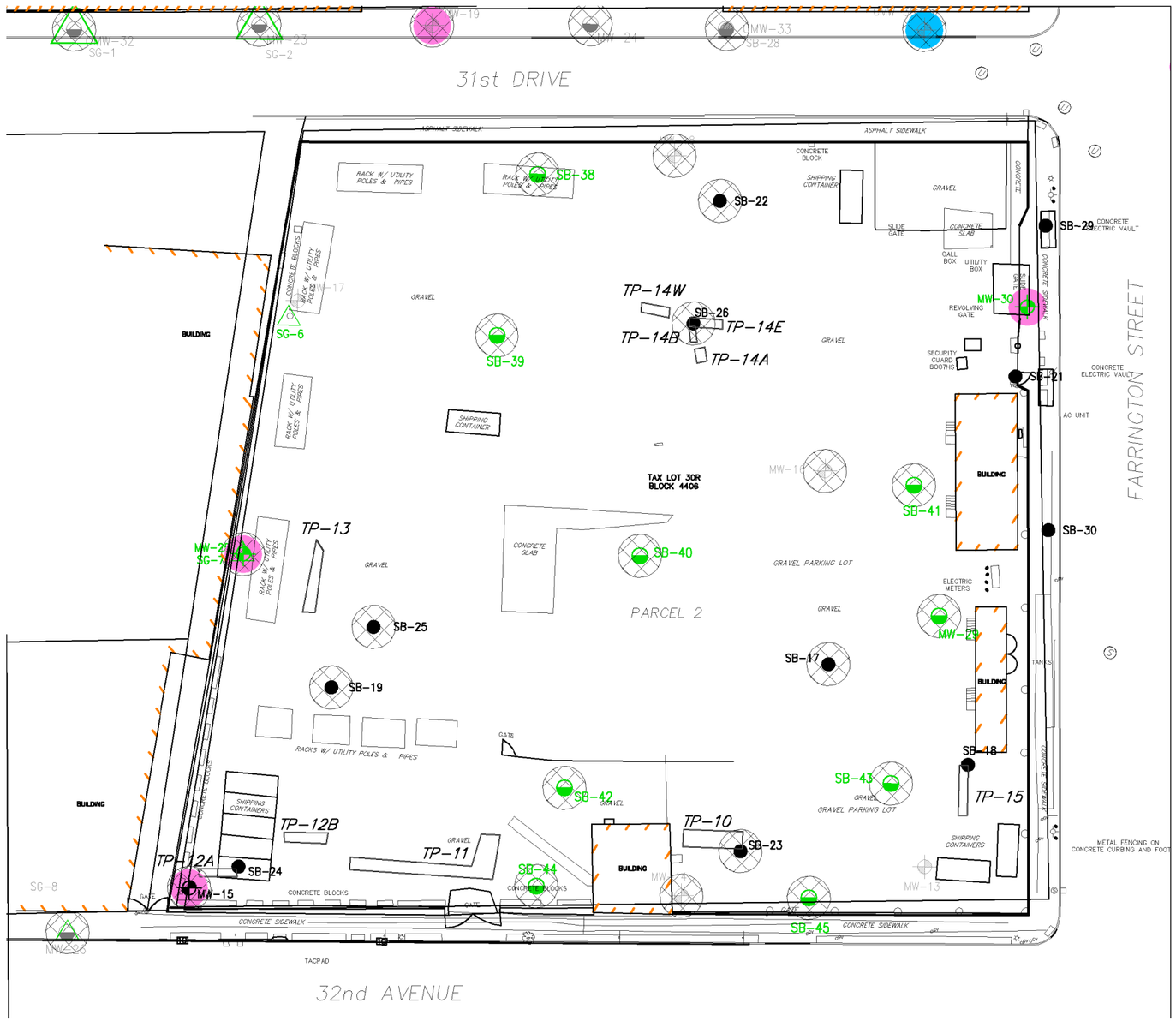
FIGURE 2

CON EDISON
FORMER FARRINGTON STREET WORKS
REMEDIAL DESIGN
QUEENS, NEW YORK

FORMER MGP STRUCTURES

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560

FILE NAME: P:\CONED\446109 - FARRINGTON ST MGP\CAD\REMEDIAL DESIGN\446109-RD-SK001.DWG
PLOT DATE: 8/3/2022 9:29 AM PLOTTED BY: RUSSO, JILL [US-US]



LEGEND:

- SITE CHARACTERIZATION MONITORING WELL LOCATIONS
- SITE CHARACTERIZATION SOIL BORING LOCATIONS
- TEST PIT LOCATIONS
- REMEDIAL INVESTIGATION MONITORING WELL LOCATIONS
- REMEDIAL INVESTIGATION SOIL BORING LOCATIONS
- REMEDIAL INVESTIGATION SOIL GAS LOCATIONS
- MONITORING WELL DESTROYED/MISSING
- REMEDIAL INVESTIGATION LOCATIONS OUTSIDE PARCEL 2
- GROUNDWATER SAMPLING AND CONDUCTIVITY TESTING LOCATION
- GROUNDWATER SAMPLING, CONDUCTIVITY TESTING, AND TIDAL STUDY LOCATION

NOTES

1. BASE MAP PROVIDED BY CHAZEN ENGINEERING, CO., P.C. DATED 2/02/15.
2. HORIZONTAL POSITIONS ARE REFERENCED TO THE NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE. THE REFERENCE DATUM IS NORTH AMERICAN DATUM OF 1983(NAD83)(CORS96)(EPOCH2002.00)
3. VERTICAL DATUM IS BASED UPON NAVD88.
4. MONITORING WELL LOCATIONS LOCATED IN PARCEL 3 WERE BASED ON A FIELD SURVEY CONDUCTED ON MAY 1, 2014 AND ARE PART OF A POST-IRM GROUNDWATER MONITORING PROGRAM.

50 25 0 50 100

SCALE: 1"=50'

FILE NAME: P:\CONED\446109 - FARRINGTON ST MGP\CAD\REMEDIAL DESIGN\446109-RD-SK002.DWG
PLOT DATE: 8/18/2022 2:40 PM PLOTTED BY: RUSSO, JILL [US-US]

FIGURE 3A

CON EDISON
FORMER FARRINGTON STREET WORKS
REMEDIAL DESIGN
QUEENS, NEW YORK

SAMPLE LOCATION MAP
SITE CHARACTERIZATION AND
REMEDIAL INVESTIGATION

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560

LEGEND:

- MONITORING WELLS INSTALLED DURING SUPPLEMENTAL REMEDIAL INVESTIGATION
- GEOTECHNICAL BORING LOCATIONS
- NAPL DELINEATION BORING LOCATIONS
- COMBINED GEOTECHNICAL AND NAPL BORING LOCATIONS

NOTES

1. BASE MAP PROVIDED BY CHAZEN ENGINEERING, CO., P.C. DATED 2/02/15.
2. HORIZONTAL POSITIONS ARE REFERENCED TO THE NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE. THE REFERENCE DATUM IS NORTH AMERICAN DATUM OF 1983(NAD83)(CORS96)(EPOCH2002.00)
3. VERTICAL DATUM IS BASED UPON NAVD88.
4. MONITORING WELL AND INVESTIGATION LOCATIONS SURVEYED DURING FIELD IMPLEMENTATION OF THE SUPPLEMENTAL REMEDIAL INVESTIGATION.

50 25 0 50 100

SCALE: 1"=50'

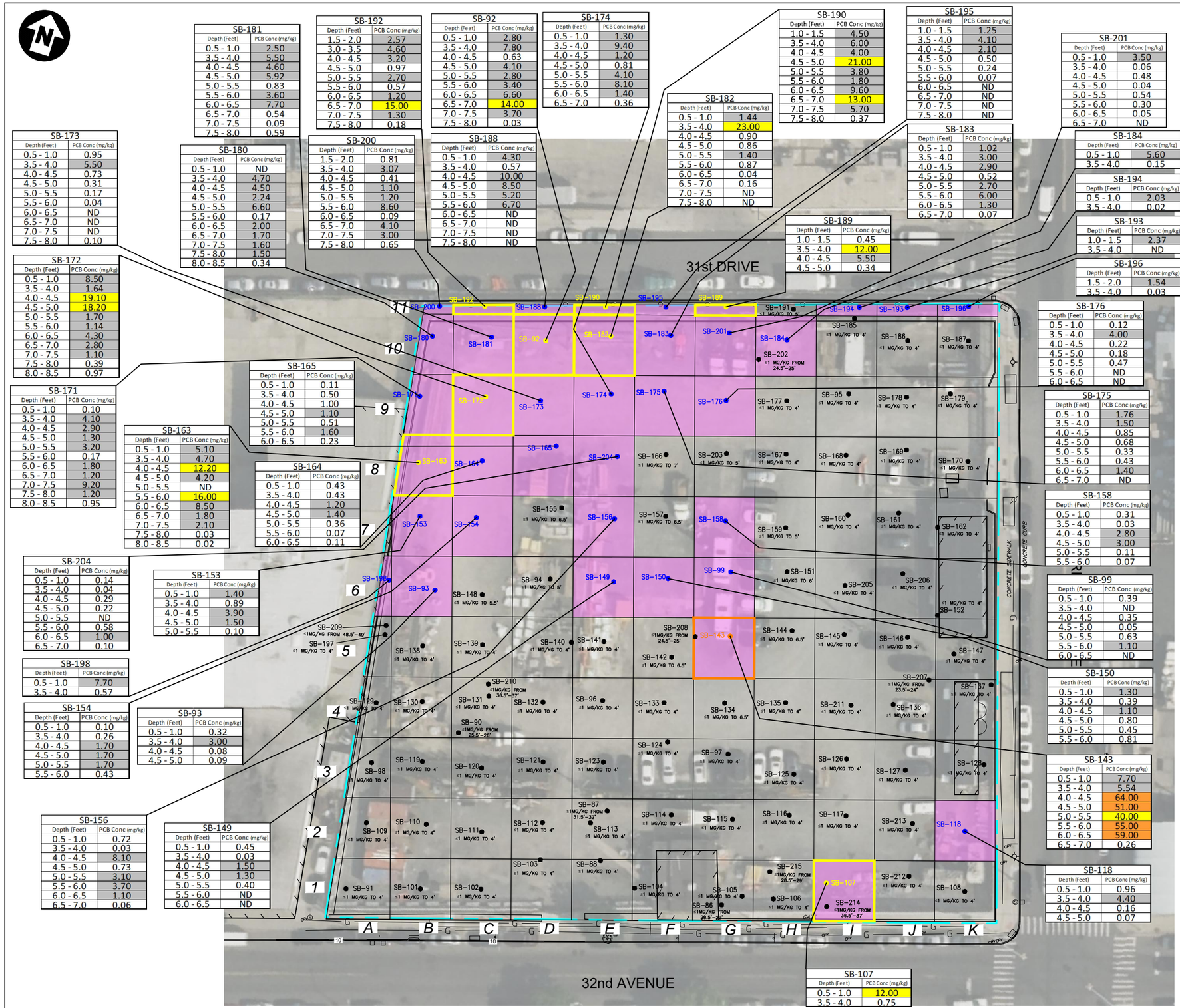
FIGURE 3B

CON EDISON
FORMER FARRINGTON STREET WORKS
REMEDIAL DESIGN
QUEENS, NEW YORK

SAMPLE LOCATION MAP
SUPPLEMENTAL REMEDIAL INVESTIGATION

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560

FILE NAME: P:\CONED\446109 - FARRINGTON ST MGP\CAD\REMEDIAL DESIGN\446109-RD-SK003.DWG
PLOT DATE: 8/18/2022 2:46 PM PLOTTED BY: RUSSO, JILL [US-US]



SB-181	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	2.50
3.5 - 4.0	5.50
4.0 - 4.5	4.60
4.5 - 5.0	5.92
5.0 - 5.5	0.83
5.5 - 6.0	3.60
6.0 - 6.5	7.70
6.5 - 7.0	0.54
7.0 - 7.5	0.09
7.5 - 8.0	0.59

SB-192	
Depth (Feet)	PCB Conc (mg/kg)
1.5 - 2.0	2.57
3.0 - 3.5	4.60
4.0 - 4.5	3.20
4.5 - 5.0	0.97
5.0 - 5.5	2.70
5.5 - 6.0	0.57
6.0 - 6.5	1.20
6.5 - 7.0	15.00
7.0 - 7.5	1.30
7.5 - 8.0	0.18

SB-92	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	2.80
3.5 - 4.0	7.80
4.0 - 4.5	0.63
4.5 - 5.0	4.10
5.0 - 5.5	2.80
5.5 - 6.0	3.40
6.0 - 6.5	6.60
6.5 - 7.0	14.00
7.0 - 7.5	3.70
7.5 - 8.0	0.03

SB-174	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	1.30
3.5 - 4.0	9.40
4.0 - 4.5	1.20
4.5 - 5.0	0.81
5.0 - 5.5	4.10
5.5 - 6.0	8.10
6.0 - 6.5	1.40
6.5 - 7.0	0.36

SB-190	
Depth (Feet)	PCB Conc (mg/kg)
1.0 - 1.5	4.50
3.5 - 4.0	6.00
4.0 - 4.5	4.00
4.5 - 5.0	21.00
5.0 - 5.5	3.80
5.5 - 6.0	1.80
6.0 - 6.5	9.60
6.5 - 7.0	13.00
7.0 - 7.5	5.70
7.5 - 8.0	0.37

SB-195	
Depth (Feet)	PCB Conc (mg/kg)
1.0 - 1.5	1.25
3.5 - 4.0	4.10
4.0 - 4.5	2.10
4.5 - 5.0	0.50
5.0 - 5.5	0.24
5.5 - 6.0	0.07
6.0 - 6.5	ND
6.5 - 7.0	ND
7.0 - 7.5	ND
7.5 - 8.0	ND

SB-201	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	3.50
3.5 - 4.0	0.06
4.0 - 4.5	0.48
4.5 - 5.0	0.04
5.0 - 5.5	0.54
5.5 - 6.0	0.30
6.0 - 6.5	0.05
6.5 - 7.0	ND

SB-173	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	0.95
3.5 - 4.0	5.50
4.0 - 4.5	0.73
4.5 - 5.0	0.31
5.0 - 5.5	0.17
5.5 - 6.0	0.04
6.0 - 6.5	ND
6.5 - 7.0	ND
7.0 - 7.5	ND
7.5 - 8.0	0.10

SB-180	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	ND
3.5 - 4.0	4.70
4.0 - 4.5	4.50
4.5 - 5.0	2.24
5.0 - 5.5	6.60
5.5 - 6.0	0.17
6.0 - 6.5	2.00
6.5 - 7.0	1.70
7.0 - 7.5	1.60
7.5 - 8.0	1.50
8.0 - 8.5	0.34

SB-200	
Depth (Feet)	PCB Conc (mg/kg)
1.5 - 2.0	0.81
3.5 - 4.0	3.07
4.0 - 4.5	0.41
4.5 - 5.0	1.10
5.0 - 5.5	1.20
5.5 - 6.0	8.60
6.0 - 6.5	0.09
6.5 - 7.0	4.10
7.0 - 7.5	3.00
7.5 - 8.0	0.65

SB-188	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	4.30
3.5 - 4.0	0.57
4.0 - 4.5	10.00
4.5 - 5.0	8.50
5.0 - 5.5	5.20
5.5 - 6.0	6.70
6.0 - 6.5	ND
6.5 - 7.0	ND
7.0 - 7.5	ND
7.5 - 8.0	ND

SB-182	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	1.44
3.5 - 4.0	23.00
4.0 - 4.5	0.90
4.5 - 5.0	0.86
5.0 - 5.5	1.40
5.5 - 6.0	0.87
6.0 - 6.5	0.04
6.5 - 7.0	0.16
7.0 - 7.5	ND
7.5 - 8.0	ND

SB-183	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	1.02
3.5 - 4.0	3.00
4.0 - 4.5	2.90
4.5 - 5.0	0.52
5.0 - 5.5	2.70
5.5 - 6.0	6.00
6.0 - 6.5	1.30
6.5 - 7.0	0.07

SB-184	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	5.60
3.5 - 4.0	0.15

SB-189	
Depth (Feet)	PCB Conc (mg/kg)
1.0 - 1.5	0.45
3.5 - 4.0	12.00
4.0 - 4.5	5.50
4.5 - 5.0	0.34

SB-194	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	2.03
3.5 - 4.0	0.02

SB-193	
Depth (Feet)	PCB Conc (mg/kg)
1.0 - 1.5	2.37
3.5 - 4.0	ND

SB-196	
Depth (Feet)	PCB Conc (mg/kg)
1.5 - 2.0	1.54
3.5 - 4.0	0.03

SB-172	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	8.50
3.5 - 4.0	1.64
4.0 - 4.5	19.10
4.5 - 5.0	18.20
5.0 - 5.5	1.70
5.5 - 6.0	1.14
6.0 - 6.5	4.30
6.5 - 7.0	2.80
7.0 - 7.5	1.10
7.5 - 8.0	0.39
8.0 - 8.5	0.97

SB-176	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	0.12
3.5 - 4.0	4.00
4.0 - 4.5	0.22
4.5 - 5.0	0.18
5.0 - 5.5	0.47
5.5 - 6.0	ND
6.0 - 6.5	ND

SB-171	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	0.10
3.5 - 4.0	4.10
4.0 - 4.5	2.90
4.5 - 5.0	1.30
5.0 - 5.5	3.20
5.5 - 6.0	0.17
6.0 - 6.5	1.80
6.5 - 7.0	1.20
7.0 - 7.5	9.20
7.5 - 8.0	1.20
8.0 - 8.5	0.95

SB-165	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	0.11
3.5 - 4.0	0.50
4.0 - 4.5	1.00
4.5 - 5.0	1.10
5.0 - 5.5	0.51
5.5 - 6.0	1.60
6.0 - 6.5	0.23

SB-175	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	1.76
3.5 - 4.0	1.50
4.0 - 4.5	0.85
4.5 - 5.0	0.68
5.0 - 5.5	0.33
5.5 - 6.0	0.43
6.0 - 6.5	1.40
6.5 - 7.0	ND

SB-163	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	5.10
3.5 - 4.0	4.70
4.0 - 4.5	12.20
4.5 - 5.0	4.20
5.0 - 5.5	ND
5.5 - 6.0	16.00
6.0 - 6.5	8.50
6.5 - 7.0	1.80
7.0 - 7.5	2.10
7.5 - 8.0	0.03
8.0 - 8.5	0.02

SB-164	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	0.43
3.5 - 4.0	0.43
4.0 - 4.5	1.20
4.5 - 5.0	1.40
5.0 - 5.5	0.36
5.5 - 6.0	0.07
6.0 - 6.5	0.11

SB-158	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	0.31
3.5 - 4.0	0.03
4.0 - 4.5	2.80
4.5 - 5.0	3.00
5.0 - 5.5	0.11
5.5 - 6.0	0.07

SB-204	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	0.14
3.5 - 4.0	0.04
4.0 - 4.5	0.29
4.5 - 5.0	0.22
5.0 - 5.5	ND
5.5 - 6.0	0.58
6.0 - 6.5	1.00
6.5 - 7.0	0.10

SB-153	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	1.40
3.5 - 4.0	0.89
4.0 - 4.5	3.90
4.5 - 5.0	1.50
5.0 - 5.5	0.10

SB-99	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	0.39
3.5 - 4.0	ND
4.0 - 4.5	0.35
4.5 - 5.0	0.05
5.0 - 5.5	0.63
5.5 - 6.0	1.10
6.0 - 6.5	ND

SB-198	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	7.70
3.5 - 4.0	0.57

SB-150	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	1.30
3.5 - 4.0	0.39
4.0 - 4.5	1.10
4.5 - 5.0	0.80
5.0 - 5.5	0.45
5.5 - 6.0	0.81

SB-154	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	0.10
3.5 - 4.0	0.26
4.0 - 4.5	1.70
4.5 - 5.0	1.70
5.0 - 5.5	1.70
5.5 - 6.0	0.43

SB-93	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	0.32
3.5 - 4.0	3.00
4.0 - 4.5	0.08
4.5 - 5.0	0.09

SB-143	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	7.70
3.5 - 4.0	5.54
4.0 - 4.5	64.00
4.5 - 5.0	51.00
5.0 - 5.5	40.00
5.5 - 6.0	55.00
6.0 - 6.5	59.00
6.5 - 7.0	0.26

SB-156	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	0.72
3.5 - 4.0	0.03
4.0 - 4.5	8.10
4.5 - 5.0	0.73
5.0 - 5.5	3.10
5.5 - 6.0	3.70
6.0 - 6.5	1.10
6.5 - 7.0	0.06

SB-149	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	0.45
3.5 - 4.0	0.03
4.0 - 4.5	1.50
4.5 - 5.0	1.30
5.0 - 5.5	0.40
5.5 - 6.0	ND
6.0 - 6.5	ND

SB-118	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	0.96
3.5 - 4.0	4.40
4.0 - 4.5	0.16
4.5 - 5.0	0.07

SB-107	
Depth (Feet)	PCB Conc (mg/kg)
0.5 - 1.0	12.00
3.5 - 4.0	0.75

LEGEND:

- PARCEL 2 BOUNDARY
- PCB SITE CHARACTERIZATION GRID

PCB SITE CHARACTERIZATION

- PCB ≤1 MG/KG
- PCB >1 MG/KG AND ≤10 MG/KG
- PCB >10 MG/KG AND <50 MG/KG
- PCB ≥50 MG/KG

- GRIDS WITH >1 MG/KG AND ≤10 MG/KG PCBs
- GRIDS WITH >10 MG/KG AND <50 MG/KG PCBs
- GRID WITH ≥50 MG/KG PCBs

NOTES

1. MG/KG – MILLIGRAM PER KILOGRAM
2. ND – NON-DETECT
3. ANALYTICAL RESULTS WITH GREY SHADED VALUES INDICATE PCBs AT CONCENTRATIONS GREATER THAN 1 MG/KG AND LESS THAN OR EQUAL TO 10 MG/KG.
4. ANALYTICAL RESULTS WITH YELLOW SHADED VALUES INDICATE PCBs AT CONCENTRATIONS GREATER THAN 10 MG/KG AND LESS THAN 50 MG/KG.
5. ANALYTICAL RESULTS WITH ORANGE SHADED VALUES INDICATE PCBs AT CONCENTRATIONS GREATER THAN OR EQUAL TO 50 MG/KG.

50 25 0 50 100

SCALE: 1"=50'

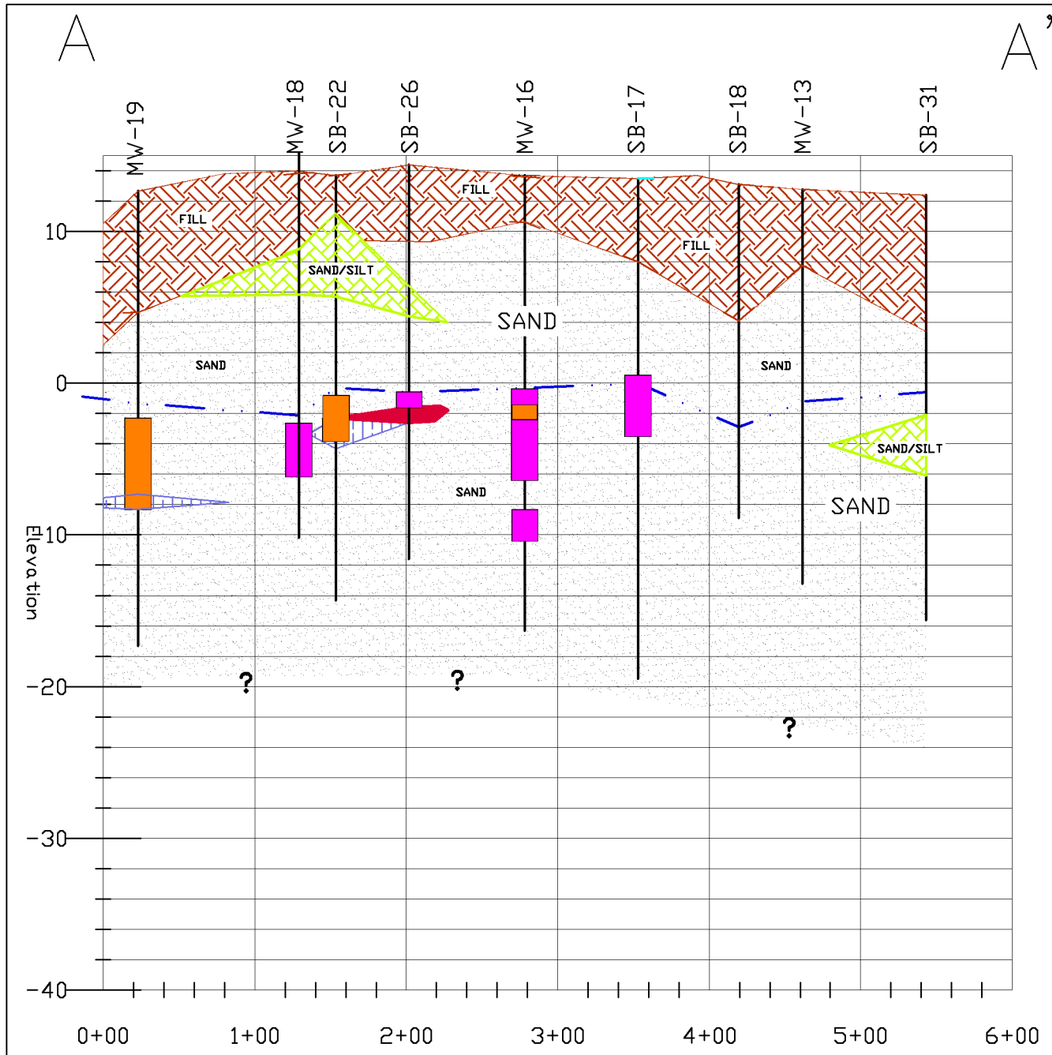
FIGURE 3C

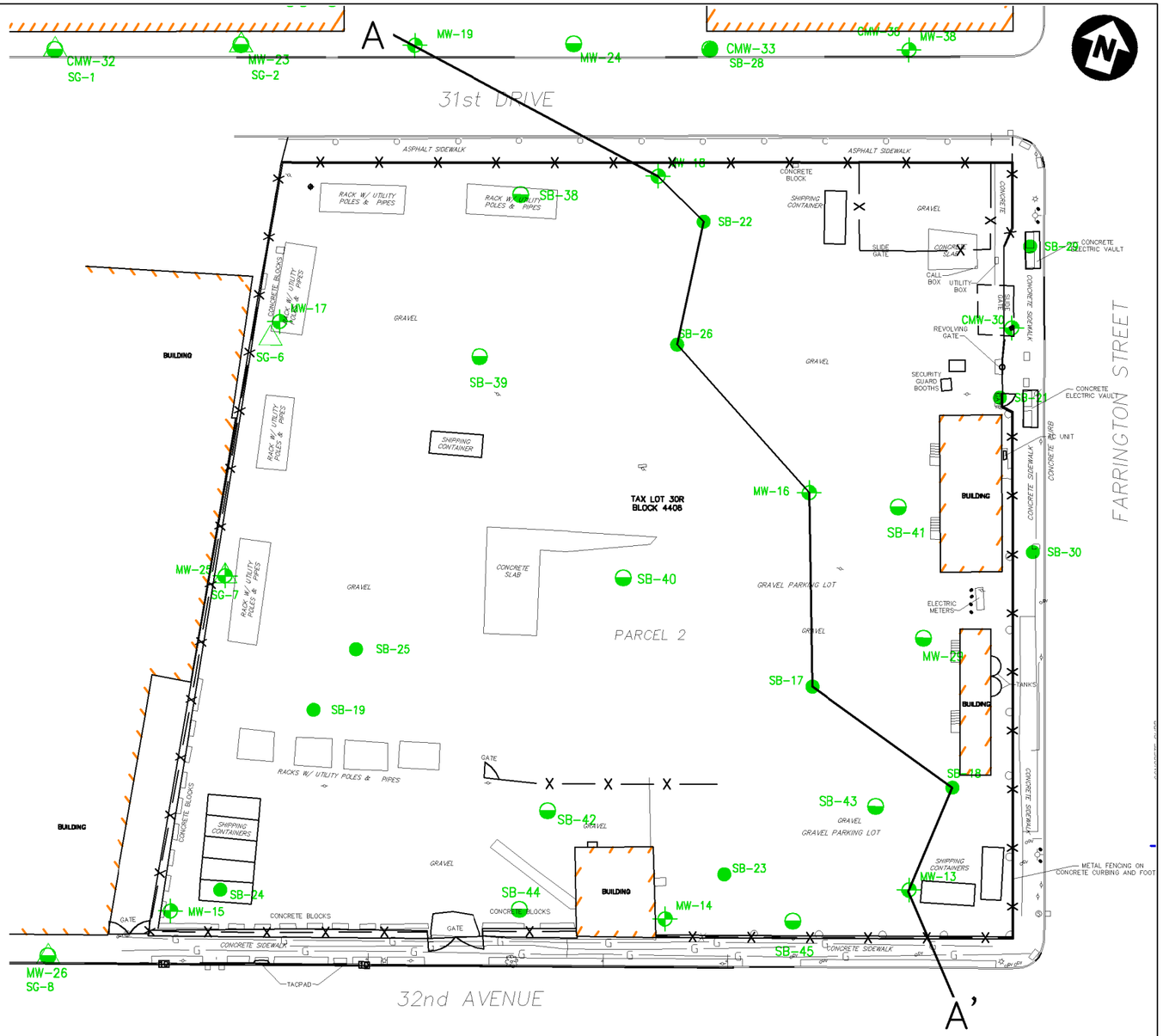
CONSOLIDATED EDISON
FORMER FARRINGTON STREET GAS WORKS
REMEDIAL DESIGN
QUEENS, NEW YORK

PCB SITE CHARACTERIZATION

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560

FILE NAME: P:\CONED\453055 – FARRINGTON MGP SICP RDR\11.0 TECHNICAL\11.1 CAD\SIP\453055-SIP-SK002.DWG
PLOT DATE: 10/18/2024 11:42 AM PLOTTED BY: RUSSO, JILL [US-US]





LEGEND:

- SOIL BORING
- NAPL BLEBS OR GLOBULES ENCOUNTERED
- NAPL SATURATION ENCOUNTERED
- WATER TABLE
- FILL
- SAND
- SILT
- SAND/SILT
- PEAT/CLAY
- CLAY
- SAND/GRAVEL

NOTE:

1. ALL ELEVATIONS IN FEET ABOVE MEAN SEA LEVEL.

NOTES

1. BASE MAP PROVIDED BY CHAZEN ENGINEERING, CO., P.C. DATED 2/02/15.
2. HORIZONTAL POSITIONS ARE REFERENCED TO THE NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE. THE REFERENCE DATUM IS NORTH AMERICAN DATUM OF 1983(NAD83)(CORS96)(EPOCH2002.00)
3. VERTICAL DATUM IS BASED UPON NAVD88.
4. MONITORING WELL LOCATIONS LOCATED IN PARCEL 3 WERE BASED ON A FIELD SURVEY CONDUCTED ON MAY 1, 2014 AND ARE PART OF A POST-IRM GROUNDWATER MONITORING PROGRAM.

LEGEND:

- SITE CHARACTERIZATION MONITORING WELL LOCATIONS
- SITE CHARACTERIZATION SOIL BORING LOCATIONS
- REMEDIAL INVESTIGATION MONITORING WELL LOCATIONS
- REMEDIAL INVESTIGATION SOIL BORING LOCATIONS
- REMEDIAL INVESTIGATION SOIL GAS LOCATIONS
- HOLDER STATION (PARCEL 3) MONITORING WELL LOCATION

50 25 0 50 100

SCALE: 1"=50'

FIGURE 4

CON EDISON
FORMER FARRINGTON STREET WORKS
REMEDIAL DESIGN
QUEENS, NEW YORK

CROSS-SECTION A-A'

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560

FILE NAME: P:\CONED\446109 - FARRINGTON ST MGP\CAD\REMEDIAL DESIGN\446109-RD-CROSS SECTIONS.DWG
PLOT DATE: 8/18/2022 2:31 PM PLOTTED BY: RUSSO, JILL [US-US]

LEGEND:

- MONITORING WELL LOCATIONS
- SOIL BORING LOCATIONS
- BLEB/GLOBULES DETECTED IN BORING
- NAPL SATURATED SOILS DETECTED IN BORING

50 25 0 50 100

SCALE: 1"=50'

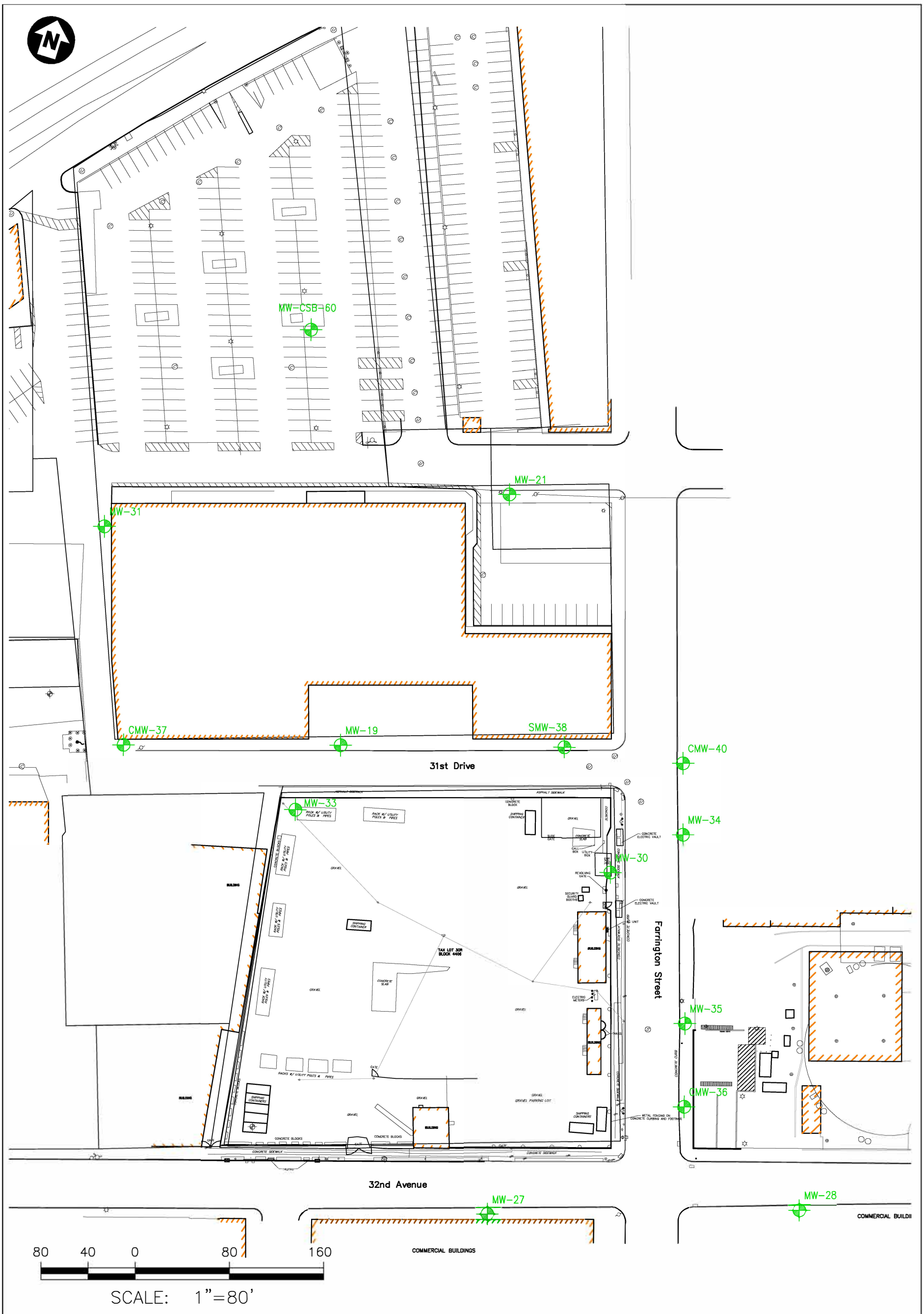
FIGURE 5

CON EDISON
FORMER FARRINGTON STREET WORKS
REMEDIAL DESIGN
QUEENS, NEW YORK

SUMMARY OF NAPL DETECTED IN SUBSURFACE SOIL

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560

FILE NAME: P:\CONED\446109 - FARRINGTON ST MGP\CAD\REMEDIAL DESIGN\446109-RD-NAPL.DWG
PLOT DATE: 8/18/2022 2:26 PM PLOTTED BY: RUSSO, JILL [US-US]



LEGEND:

- GROUNDWATER MONITORING WELL LOCATIONS

FIGURE 6

CON EDISON
FORMER FARRINGTON STREET WORKS
REMEDIAL DESIGN
QUEENS, NEW YORK

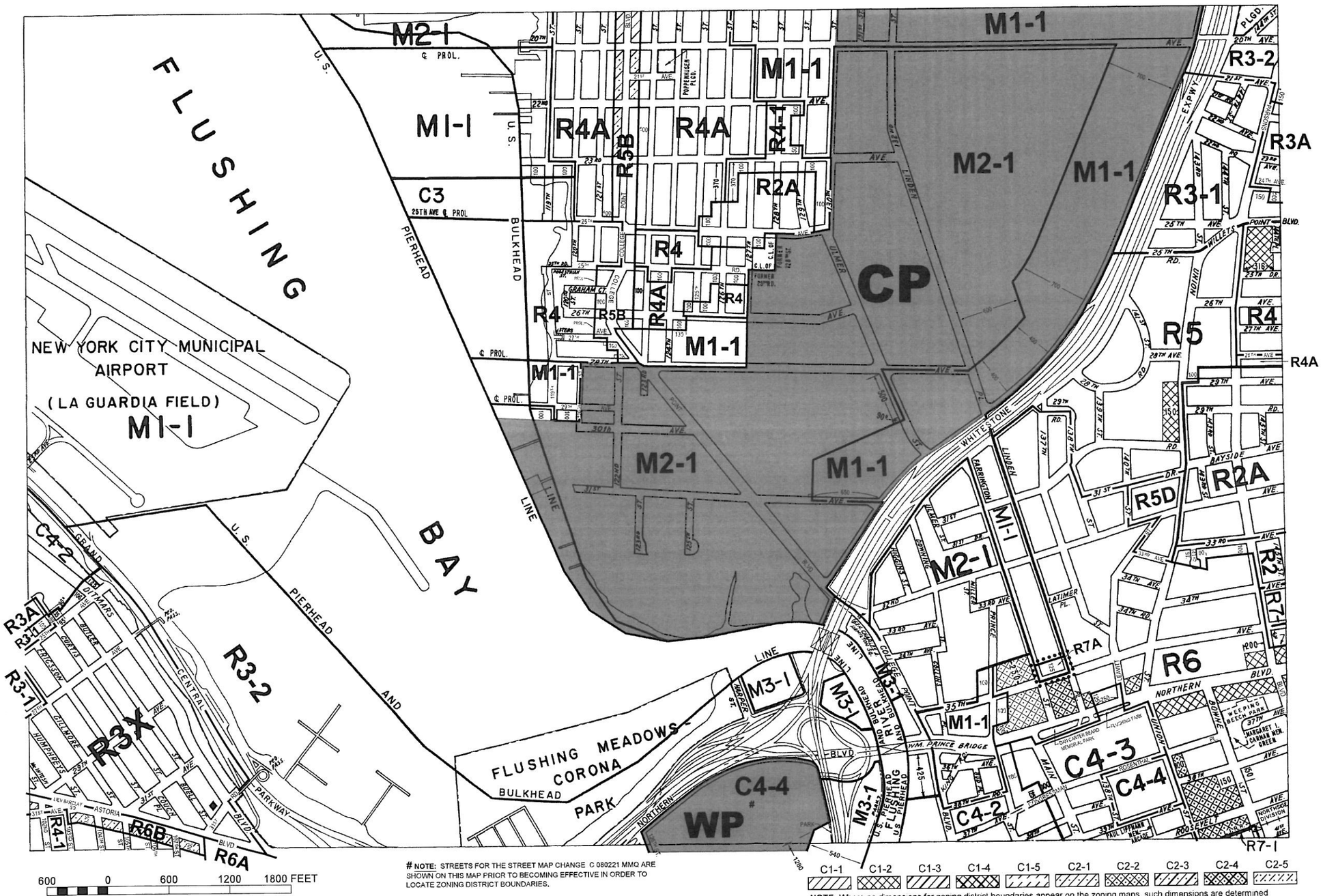
GROUNDWATER MONITORING PROGRAM WELLS

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560

FILE NAME: P:\CONED\446109 - FARRINGTON ST MGP\CAD\REMEDIAL DESIGN\446109-RD-SK005.DWG
PLOT DATE: 8/19/2022 4:49 PM PLOTTED BY: RUSSO, JILL [US-US]

APPENDIX A

ZONING MAP



ZONING MAP

THE NEW YORK CITY PLANNING COMMISSION

Major Zoning Classifications:

The number(s) and/or letter(s) that follows an **R**, **C** or **M** District designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.

R – RESIDENTIAL DISTRICT

C – COMMERCIAL DISTRICT

M – MANUFACTURING DISTRICT

SPECIAL PURPOSE DISTRICT
The letter(s) within the shaded area designates the special purpose district as described in the text of the Zoning Resolution.

AREA(S) REZONED

Effective Date(s) of Rezoning:

10-17-2017 C 170180(A) ZMQ

Special Requirements:

For a list of lots subject to CEQR environmental requirements, see APPENDIX C.

For a list of lots subject to "D" restrictive declarations, see APPENDIX D.

For Inclusionary Housing designated areas and Mandatory Inclusionary Housing areas on this map, see APPENDIX F.

CITY MAP CHANGE(S):

◆ AS CORRECTED 11-20-2017

N

MAP KEY

6d	7b	7d
9c	**10a**	10c
9d	10b	10d

© Copyrighted by the City of New York

ZONING MAP **10a**

NOTE: Zoning information as shown on this map is subject to change. For the most up-to-date zoning information for this map, visit the Zoning section of the Department of City Planning website **www.nyc.gov/planning** or contact the Zoning Information Desk at (212) 720-3291.

APPENDIX B

SOIL BORING AND TEST PIT LOGS

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	40's, Cloudy and rain; Wind: 5-10 mph E
DATE/TIME START:	April 15, 2009/ 0915
DATE/TIME FINISH:	April 15, 2009/ 1430
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Rene Robles

TEST PIT ID: TP-10

LOCATION:

Approximate L X W X D
= 9' X 3.5' X 13.5'
Located in Hawkeye Yard
32nd Avenue

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0'-1' TRAP ROCK, brown fine to medium SAND and SILT and angular Gravel	
1	1'-2' COBBLESTONE	
2	2'-5' Brown fine to coarse SAND, some Silt and sub-rounded Gravel, trace Coal Ash	
3		
4		
5	5'-7' Orange/brown fine to coarse SAND, little Silt, trace coarse sub-rounded Gravel, slight hydrocarbon odor	
6		
7	7'-13.5' Grey fine to medium SAND, little fine to coarse sub-rounded Gravel, moist, hydrocarbon odor, staining	Clay pipe encountered at 7 ft bgs
8		
9		
10		
11		
12		
13		
14	Bottom of test pit @ 13.5' bgs (Limit of equipment).	No Groundwater encountered

Test pit was advanced utilizing a back-hoe

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	40's, Cloudy and rain; Wind: 5-10 mph E
DATE/TIME START:	April 15, 2009/ 0915
DATE/TIME FINISH:	April 15, 2009/ 1430
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Rene Robles

TEST PIT ID: TP-10

LOCATION:

Approximate L X W X D
= 9' X 3.5' X 13.5'
Located in Hawkeye Yard
32nd Avenue

PHOTOGRAPH

Excavation closeup Picture taken from the north-west, looking down

Excavation closeup Picture taken from the north-east looking down

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	50's, Clear; Wind: 0-5 mph NE
DATE/TIME START:	April 16, 2009/ 0745
DATE/TIME FINISH:	April 17, 2009
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Rene Robles

TEST PIT ID: TP-11

LOCATION:

Approximate L X W X D
= 60' X 3' X 6.5'
ECI Yard - 32nd Avenue

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0 1	0-4' = Dark brown fine to course SAND, some Brick fragments, trace Silt, fill material.	Headspace: 0.0 ppm
2 3	2'-3.5' (western/central portion) = Top of brick wall, concrete wall, metal structure with metal cross-members, filled with brick and metal debris. Groundwater at 3.5'.	Water encountered at ~3.5ft (western/central portion)
4 5	4'-6.5' (eastern end) = Dark brown fine to course SAND, some Silt, trace subrounded medium to course gravel, brick, wood, metal debris and vitrified Clay pipe at 6.5' bgs.	Headspace: 0.0 ppm No water encountered (Eastern end)
6 7		
8 9		
10 11 12	Bottom of the excavation @ 6.5' bgs	

Headspace below clay pipe = 112 ppm.

Test pit was advanced utilizing a back-hoe

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	50's, Clear; Wind: 0-5 mph NE
DATE/TIME START:	April 16, 2009/ 0745
DATE/TIME FINISH:	April 17, 2009
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Rene Robles

TEST PIT ID: TP-11

LOCATION:

Approximate L X W X D
= 60' X 3' X 6.5'
ECI Yard - 32nd Avenue

PHOTOGRAPH

Excavation close-up Picture taken from the west showing top of brick wall, concrete wall, and metal structure (possible coal bins).

Excavation close-up of metal structure (possible coal bins)

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	50's, Clear; Wind: 0-5 mph NE
DATE/TIME START:	April 16, 2009/ 0745
DATE/TIME FINISH:	April 17, 2009
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Rene Robles

TEST PIT ID: TP-11

LOCATION:

Approximate L X W X D
= 60' X 3' X 6.5'
ECI Yard - 32nd Avenue

PHOTOGRAPH

Eastern end of test pit. Looking northeast at elbow connection of sewer pipe below ECI concrete driveway.

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	50s, cloudy; Wind: 0-5 mph S
DATE/TIME START:	April 22, 2009/0755
DATE/TIME FINISH:	April 22, 2009/1400
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Rene Robles

TEST PIT ID: TP-12A

LOCATION:

Approximate L X W X D
= 15' X 11' X 5.5'
ECI Yard/ 32nd Ave.

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0"-0.5' Dark brown fine SAND, sub-angular Gravel, little Silt	Headspace: 0.0 ppm
1	0.5'-1.5' Red/brown fine SAND, trace Silt, metal wall encountered at 1', broken brick, and debris.	Headspace: 0.0 ppm
2	1.5'-2.5 Broken brick and metal debris. Groundwater at 2.5'	
3	Bottom of test pit @ 2.5' bgs	
4		
5		
6		
7		
8		
9		
10		
11		
12		

Test pit installed with backhoe

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	50s, cloudy; Wind: 0-5 mph S
DATE/TIME START:	April 22, 2009/0755
DATE/TIME FINISH:	April 22, 2009/1400
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Rene Robles

TEST PIT ID: TP-12A

LOCATION:

Approximate L X W X D
= 15' X 11' X 5.5'

ECI Yard/ 32nd Ave.

	PHOTOGRAPH
Excavation close-up Picture taken from the north. Metal wall on right side (possible tar tank).	
Excavation close-up Picture taken from the west Close-up of metal wall.	

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	50s, cloudy; Wind: 0-5 mph S
DATE/TIME START:	April 22, 2009/0755
DATE/TIME FINISH:	April 22, 2009/1400
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Rene Robles

TEST PIT ID: TP-12B

LOCATION:

Approximate L X W X D
= 15' X 11' X 5.5'
ECI Yard/ 32nd Ave.

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0"-1.5' Dark brown fine SAND, sub-angular Gravel, little Silt	Headspace: 0.0 ppm
1	1.5'-2.5' Yellow/brown fine SAND, trace Silt	Headspace: 0.0 ppm
2	2.5'-4.5' Dark brown fine SAND, some Silt, little sub-rounded fine to medium Gravel	Headspace: 0.0 ppm
3		
4	4.5'-5' Yellow/brown fine SAND, trace Silt	Headspace: 0.0 ppm Water encountered at 5.5 ft bgs
5		
6	Bottom of test pit @ 5.5' bgs	Groundwater not encountered
7		
8		
9		
10		
11		
12		

Test pit was advanced utilizing a back-hoe

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	50s, cloudy; Wind: 0-5 mph S
DATE/TIME START:	April 22, 2009/0755
DATE/TIME FINISH:	April 22, 2009/1400
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Rene Robles

TEST PIT ID: TP-12B

LOCATION:

Approximate L X W X D
= 15' X 11' X 5.5'

ECI Yard/ 32nd Ave.

	PHOTOGRAPH
Excavation closeup From the East	
Excavation closeup From the West	

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	Clear, 50's, Wind: 5-10 mph SE
DATE/TIME START:	April 24, 2009/0815
DATE/TIME FINISH:	April 24, 2009/1400
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Rene Robles

TEST PIT ID: TP-13N

LOCATION:

Approximate L X W X D
= 3.75' X 2.25' X 5.5'
Farrington St./Con Edison Yard

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0-3" = Dark brown fine to medium SAND, some course angular Gravel, little Silt, dry, medium dense.	
1	3"-4.5' = Dark brown fine to medium SAND, some wood debris.	Headspace = 0.0 ppm
2		Headspace = 0.0 ppm
3		
4	4.5'- 5.5' = Light brown-orange Crushed Slag, little Sand, trace Silt, dry, medium dense.	Headspace = 3.9 ppm
5		
6		
7		
8		
9		
10	End of test pit @ 5.5' bgs.	No Groundwater encountered
11		
12		

Test pit was advanced utilizing hand tools and vactron.

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	Clear, 50's, Wind: 5-10 mph SE
DATE/TIME START:	April 24, 2009/0815
DATE/TIME FINISH:	April 24, 2009/1400
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Rene Robles

TEST PIT ID: TP-13N

LOCATION:

Approximate L X W X D
= 3.75' X 2.25' X 5.5'
Farrington St./Con Edison Yard

PHOTOGRAPH

Excavation close-up Picture taken from the south-east. Wood debris shown in the upper right, unattached metal pipe shown in the center of picture

Excavation close-up Picture taken from the north. Wood debris shown in the bottom left, unattached metal pipe shown in the center of picture

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street	**TEST PIT ID:** TP-13S
PROJECT NUMBER:	444575-03000	**LOCATION:**
WEATHER	Clear, 50's, Wind: 5-10 mph SE	Approximate L X W X D
DATE/TIME START:	April 24, 2009/1320	= 3.75' X 2.25' X 4'
DATE/TIME FINISH:	April 24, 2009/1430	Farrington St./Con Edison Yard
CONTRACTOR:	Environmental Closures, Inc.	
INSPECTOR:	Zohar Lavy	

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0-12" = Dark brown medium to course SAND, subangular Gravel, little Silt.	
1	12"-2' = Brown/grey medium Sand and 2" Gravel, little brick fragments, little Silt.	
2	2'-3.5' = Dark brown/black medium to course SAND, trace Cobble, trace Silt.	
3	3.5'-4' = Dark brown/black course SAND, some Coal fragments,	Headspace = 111 ppm
4	little Silt, trace gravel.	
5		
6		
7		
8		
9		
10	End of test pit @ 4' bgs.	No Groundwater encountered
11		
12		

Test pit was advanced utilizing hand tools and vactron.

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	Clear, 50's, Wind: 5-10 mph SE
DATE/TIME START:	April 24, 2009/1320
DATE/TIME FINISH:	April 24, 2009/1430
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Zohar Lavy

TEST PIT ID: TP-13S

LOCATION:

Approximate L X W X D
= 3.75' X 2.25' X 4'
Farrington St./Con Edison Yard

	PHOTOGRAPH
Excavation closeup	

Above: Photo of refusal interval at approximately 2 ft bgs on cobble.

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	Clear, 80's, Wind: 0-5MPH NE
DATE/TIME START:	April 27, 2009/0815
DATE/TIME FINISH:	April 27, 2009/1430
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Rene Robles

TEST PIT ID: TP-14W

LOCATION:

Approximate L X W X D
= 11' X 2.5' X 5.5'
Farrington St./Con Edison Yard

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0-1.5' = Dark brown SAND, some medium to course angular Gravel little Silt dry medium dense.	Headspace = 0.0 ppm
1	1.5'-2' = Concrete. brick and wood. Conduit pieced @ 4' (moist).	
2	2'-3' = Coal, slag.	Headspace = 30.4 ppm
3	3'-5.5' = Light brown/yellow fine SAND, Silt.	Headspace = 4.6 ppm
4		
5		
6		
7		
8		
9		
10	End of test pit @ 5.5' bgs.	No Groundwater encountered
11		
12		

Test pit was advanced utilizing hand tools and vactron.

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	Clear, 80's, Wind: 0-5MPH NE
DATE/TIME START:	April 27, 2009/0815
DATE/TIME FINISH:	April 27, 2009/1430
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Rene Robles

TEST PIT ID: TP-14W

LOCATION:

Approximate L X W X D
= 11' X 2.5' X 5.5'
Farrington St./Con Edison Yard

PHOTOGRAPH

Excavation closeup

Excavation closeup

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street	**TEST PIT ID:**	TP-14E/TP-14A
PROJECT NUMBER:	444575-03000	**LOCATION:**	
WEATHER	Overcast, 52's, Wind: 5-10MPH	Approximate L X W X D	
DATE/TIME START:	April 29, 2009/0840	= 10' X 2' X 5'	
DATE/TIME FINISH:	April 30, 2009/1415	Farrington St./Con Edison Yard	
CONTRACTOR:	Environmental Closures, Inc.		
INSPECTOR:	Zohar Lavy		

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0-1.5' = Brown/grey medium to coarse SAND and sub-angular GRAVEL, little Silt.	0.0 ppm
1	1.5'-3' = Dark brown medium to course SAND, little sub angular	0.8 ppm
2	Gravel, trace Silt and Brick fragments	
3	3'-5' = Dark brown/black medium SAND, some fine brown/green Sand, slight MGP odor	21.3 ppm
4		
5		
6		
7		
8		
9		
10	End of test pit @ 5' bgs.	No Groundwater encountered
11		
12		

Test pit advanced utilizing hand tools and vactron.

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	Overcast, 52's, Wind: 5-10MPH
DATE/TIME START:	April 29, 2009/0840
DATE/TIME FINISH:	April 30, 2009/1415
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Zohar Lavy

TEST PIT ID: TP-14E/TP-14A

LOCATION:

Approximate L X W X D
= 10' X 2' X 5'
Farrington St./Con Edison Yard

PHOTOGRAPH

Excavation closeup

Above: Metal rail/rod encountered at approximately 3 ft bgs

Excavation closeup

Above: Hollow concrete encountered at 4 ft bgs.

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	Overcast, 52's, Wind: 5-10MPH
DATE/TIME START:	April 29, 2009/0840
DATE/TIME FINISH:	April 30, 2009/1415
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Zohar Lavy

TEST PIT ID: TP-14B

LOCATION:

Approximate L X W X D
= 4' X 2' X 8'
Farrington St./Con Edison Yard

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0-1.5' = Light brown/grey fine SAND and subangular Gravel, trace Silt.	
1	1.5'-2.5' = Dark brown medium to course SAND, some sub angular Gravel.	
2	2.5'-3' = Concrete fragments and black weathered Cobble(asphalt).	
3	3'-3.5' = Wood on the west side of hole, concrete fragments on the east side of hole.	
4	3.5'-4' = Dark brown medium to course SAND, come fine Gravel, trace silt.	Headspace = 0.5 ppm
5	4'-5' = Dark brown/grey medium to course SAND, some fine Gravel, little Slag, trace silt.	Headspace = 0.8 ppm
6	5'-7' = Dark brown/green medium to course SAND, little fine Gravel, slight moisture.	Headspace = 10.7 ppm
7	7'-8' = Dark brown.drak grey medium SAND, some fine Gravel.	Headspace = 0.5 ppm
8		
9		
10	End of test pit @ 8' bgs.	No Groundwater encountered
11		
12		

Test pit advanced utilizing hand tools and vactron.
Edge of concrete holder foundation encountered at 4 ft bgs

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	Overcast, 52's, Wind: 5-10MPH
DATE/TIME START:	April 29, 2009/0840
DATE/TIME FINISH:	April 30, 2009/1415
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Zohar Lavy

TEST PIT ID: TP-14B

LOCATION:

Approximate L X W X D

= 4' X 2' X 8'

Farrington St./Con Edison Yard

PHOTOGRAPH

Excavation closeup

Above: Edge of holder encountered at 4 ft bgs on east side of hand clearance hole.

Above: Hollow concrete encountered at 4 ft bgs.

Test pit 14E was advanced in attempt to locate the edge of the Steel Gas Holder.

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	50's, Clear; Wind: 0-5 mph NE
DATE/TIME START:	April 23, 2009/0840
DATE/TIME FINISH:	April 23, 2009/1120
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Rene Robles

TEST PIT ID: TP-15

LOCATION:

Approximate L X W X D
= 15' X 4.8' X 5'
Located in Hawkeye Yard
32nd Avenue

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0"-3.5' Brown/dark brown fine to coarse SAND, some Silt, little fine to medium angular Gravel, hydrocarbon odor, staining	
1		Headspace = 4.5 ppm HCN = 1.0
2		
3	3.5'-5' Yellow/brown fine to coarse SAND, trace Silt	Headspace = 0.2 ppm
4		
5	End of test pit @ 9.5' bgs.	Groundwater not encountered
6		
7		
8		
9		
10		
11		
12		

Test pit was advanced utilizing back-hoe

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Farrington Street
PROJECT NUMBER:	444575-03000
WEATHER	50's, Clear; Wind: 0-5 mph NE
DATE/TIME START:	April 23, 2009/0840
DATE/TIME FINISH:	April 23, 2009/1120
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Rene Robles

TEST PIT ID: TP-15

LOCATION:

Approximate L X W X D
= 13' X 3.5' X 9.5'
Located in Hawkeye Yard
32nd Avenue

PHOTOGRAPH

Excavation close-up Picture taken from the south. Inactive gas line shown in the center of picture Suspected gas house southern foundation at the top of the picture.

Excavation close-up Picture taken from the north, Straight down. Inactive gas line shown at the top of picture Suspected gas house southern foundation at the bottom of the picture.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB - 17 Sheet 1 of 1

Contractor: ADT
Driller: Jiri Kamenicek, Rayvon Mortley
Inspector: Zohar Lavy
Rig Type: Geoprobe 6620 DT

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: Farrington St./Con Edison Yard

Location Plan

See Site Plan

Weather: Clear, 60's, Wind: 0-5 mph W

Date/Time Start: 5/20/09 1050

Date/Time Finish: 5/21/09 1040

GROUNDWATER OBSERVATIONS

Water Level	~14'			
Date	5/21/09			
Time				
Meas. From	5' Acetate Sleaves			

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+3							
+2							
+1							
0		Vac-tron			0"-4.5' Dark brown/grey coarse SAND and medium to coarse angular GRAVEL, some Cobble Stone, trace Silt		
1		Vac-tron					
2		Vac-tron					
3		Vac-tron					
4		Vac-tron		105.0	4.5'-8' Dark brown/dark grey fine to coarse SAND, some sub-round Gravel, trace Silt		
5		Vac-tron					
6		Vac-tron					
7		Vac-tron					
8		NA	67	354.0	Black fine to medium SAND, little sub-angular Gravel, little light grey fine to medium Sand, trace Silt, moist, hydrocarbon odor, staining		
9							
10							
11							
12							
13	SB-17 (13-18)	NA	100	484.0	0"-20" Dark brown/black fine SAND, trace sub-round Gravel, saturated, hydrocarbon		
14				256.0	odor, staining, NAPL globules, sheen; 20"-50" Black fine to medium SAND, trace fine		
15					Gravel and Silt, saturated, hydrocarbon odor, NAPL globules		
16				321.0	50"-60" Black fine to medium SAND, trace Silt and Mica, hydrocarbon odor, staining		
17							
18		NA	100	335.0	0"-44" Black fine to medium SAND, trace Silt and Mica, hydrocarbon odor, staining		
19				10.1	44"-60" Orange/brown medium to coarse SAND, trace fine Gravel, trace Mica		
20							
21							
22							
23		NA	67	10.0	0"-30" Orange/brown medium to coarse SAND, trace fine Gravel, trace Mica		
24				0.5	30"-40" Tan/Orange fine SAND and SILT		
25							
26							
27							
28	SB-17 (28-33)	NA	33	1.6	Brown coarse SAND, trace Mica		
29							
30							
31							
32							
33					**End Boring at 33' bgs**		
34							
35							
36							
37							

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 8' bgs; Geoprobe from 8' to 33' bgs
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB - 18 Sheet 1 of 1

Contractor: ADT
Driller: Jiri Kamenicek, Andrea Babel
Inspector: Zohar Lavy
Rig Type: Geoprobe 6620 DT

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: Farrington St./Hawkeye Yard

Location Plan
See Site Plan

GROUNDWATER OBSERVATIONS				
Water Level	~14'			
Date	5/26/09			
Time				
Meas. From	5' Acetate Sleaves			

Weather: Clear, 60's, Wind: 5-10 mph W
Date/Time Start: 5/19/09 1000
Date/Time Finish: 5/26/09 1000

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+3							
+2							
+1							
0		Vac-tron		0.0	0"-1' Dark brown medium to coarse SAND and Gravel, trace Silt		
1		Vac-tron		0.0	1'-1.8' COBBLE STONE		
2		Vac-tron		0.0	1.8'-5' Orange/brown medium to coarse SAND, some Gravel, trace Silt and Cobble		
3		Vac-tron					
4		Vac-tron					
5		Vac-tron		0.0	5'-8' Yellow/brown fine to coarse SAND, trace Silt		
6		Vac-tron					
7		Vac-tron					
8	SB-18 (8-13)	NA	90	3.6	0"-14" Dark brown medium to coarse SAND and COBBLE		
9				0.1	14"-35" Orange/tan medium SAND, some Silt, little sub-round Gravel		
10				1.3	35"-54" Orange/brown medium to coarse SAND, trace fine Gravel, moist		
11							
12							
13		NA	100	0.5	0"-12" Dark green/tan medium to coarse SAND, moist		
14				0.7	12"-50" Dark orange/brown medium to coarse SAND, trace Silt, trace sub-round		
15					Gravel, saturated		
16				0.7	50"-60" Dark orange/brown coarse SAND, saturated		
17							
18	SB-18 (18-22)	NA	46	0.5	0"-20" Dark orange/brown coarse SAND, saturated		
19				0.5	20"-38" Dark orange/brown coarse SAND, trace Silt and Mica, saturated		
20				0.5	38"-46" Light brown/orange fine to medium SAND, trace Silt and Mica		
21							
22					**End Boring at 22' bgs**		
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 8' bgs; Geoprobe from 8' to 22' bgs
Geoprobe refusal at 22' bgs
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB - 19 Sheet 1 of 1

Contractor: ADT
Driller: Jiri Kamenicek, Rayvon Mortley
Inspector: Zohar Lavy
Rig Type: Geoprobe 6620 DT

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: Farrington St./Con Edison Yard

GROUNDWATER OBSERVATIONS

Water Level	~14'			
Date	5/21/09			
Time				
Meas. From	5' Acetate Sleaves			

Weather: Clear, 60's, Wind: 0-5 mph W

Date/Time Start: 5/20/09 1020

Date/Time Finish: 5/21/09 1410

Location Plan

See Site Plan

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL
+3					
+2					
+1					
0		Vac-tron		0.0	0"-1' Dark brown medium to coarse SAND, little Silt, trace Cobble
1		Vac-tron		0.0	1'-2' Dark brown medium to coarse SAND, little Silt, trace Cobble and sub-angular
2		Vac-tron			Gravel and Slag
3		Vac-tron		12.5	2'-5' Dark brown medium to coarse SAND, trace Silt and Cobble, slight hydrocarbon
4		Vac-tron			odor
5		Vac-tron		30.0	5'-8' Dark brown/black medium to coarse SAND, trace Cobble and Silt and Slag, heavy
6		Vac-tron			hydrocarbon odor
7		Vac-tron			
8		NA	83	162.0	0"-40" Brown medium to coarse SAND and COBBLE, some Gravel, trace Silt, slight
9					hydrocarbon odor
10					40"-50" Dark brown medium SAND and fine GRAVEL, moist, heavy hydrocarbon odor
11					
12					
13	SB-19 (13-18)	NA	67	423.0	0"-5" Dark brown medium SAND and fine GRAVEL, moist, heavy hydrocarbon odor
14					5"-30" Dark brown/grey fine to medium SAND, little sub-angular Gravel, trace Silt,
15					saturated, heavy hydrocarbon odor, staining, NAPL globules
16					30"-40" Black medium to coarse SAND and fine GRAVEL, little Silt, saturated, heavy
17					hydrocarbon odor, staining, NAPL globules
18		NA	100	286.0	0"-20" Black medium to coarse SAND and fine GRAVEL, little Silt, saturated, heavy
19					hydrocarbon odor, staining, NAPL globules
20				286.0	20"-50" Black medium to coarse SAND, trace Silt, heavy hydrocarbon odor, staining,
21					small NAPL globules
22				15.3	50"-60" Brown fine to medium SAND, little Silt
23		NA	50	305.0	0"-20" Dark brown/black medium to coarse SAND, trace Silt, hydrocarbon odor,
24					staining, sheen
25				2.3	20"-30" Orange/brown fine SAND, some Silt
26					
27					
28	SB-19 (28-33)	NA	30	12.9	0"-8" Orange/brown fine SAND, some Silt, little Clay
29				8.2	8"-18" Dark grey SILT, some Clay, little medium to coarse Sand, trace Gravel
30					
31					
32					
33					**End Boring at 33' bgs**
34					
35					
36					
37					

SCHEMATIC (drawing not to scale)

COMMENTS

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 8' bgs; Geoprobe from 8' to 33' bgs
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB - 22 Sheet 1 of 1

Contractor: ADT
Driller: Jeremy Meyers, Chris Migliori
Inspector: Zohar Lavy
Rig Type: Track Mounted HSA - CME55

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: Farrington St./Con Edison Yard

Location Plan
See Site Plan

GROUNDWATER OBSERVATIONS				
Water Level	~14'			
Date	5/15/09			
Time				
Meas. From	Split spoon			

Weather: Clear, 60's, Wind: 5-10 mph NW
Date/Time Start: 5/1/09 0845
Date/Time Finish: 5/15/09 1305

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+3							
+2							
+1							
0		Vac-tron		0.0	0"-1' Yellow/brown fine to coarse SAND, some fine to coarse angular Gravel, trace Silt		
1		Vac-tron					
2		Vac-tron		12.5	1'-2.5' Dark brown/black fine to medium SAND, some Silt, trace coarse angular Gravel and Metal		
3		Vac-tron					
4		Vac-tron		1.3	2.5'-8' Yellow/brown fine to coarse SAND and SILT, little sub-angular Gravel, moist		
5		Vac-tron					
6		Vac-tron					
7		Vac-tron					
8		11-11-15-17	25	140.0	Dark grey/brown fine SAND, little Silt, trace Gravel, moist, hydrocarbon odor, staining		
9							
10		5-12-17-11	42	194.0	0"-6" Dark grey/brown fine SAND, little Silt, trace Gravel, moist, hydrocarbon odor, staining; 6"-10" Tan medium SAND, hydrocarbon odor		
11							
12		9-7-8-9	100	1494.0	0"-18" Tan medium SAND, hydrocarbon odor; 18"-22" Dark brown medium-coarse SAND, hydrocarbon odor; 22"-24" Tan medium to coarse SAND, moist, hydrocarbon odor		
13							
14		4-7-7-6	75	1100.0	0"-8" Tan medium to coarse SAND, moist, hydrocarbon odor; 8"-18" Dark brown/black coarse SAND and fine sub-round GRAVEL, saturated, hydrocarbon odor, staining, NAPL		
15							
16	SB-22 (16-18)	4-5-5-7	100	1315.0	0"-6" Dark brown/black coarse SAND and fine sub-round GRAVEL, saturated, hydrocarbon odor, staining, NAPL; 6"-18" Dark brown/black medium to coarse SAND, saturated, hydrocarbon odor, staining, NAPL; 18"-24" Dark grey medium SAND, saturated, hydrocarbon odor, staining, sheen		
17							
18		9-5-5-6	50	324.0	Dark grey medium SAND, saturated, hydrocarbon odor, staining, sheen		
19							
20		2-3-4-8	83	303.0	0"-14" Dark grey medium SAND, saturated, hydrocarbon odor, staining, sheen; 14"-20" Dark brown/black medium to coarse SAND, saturated, hydrocarbon odor, staining		
21							
22		4-4-9-11	58	325.0	Grey/tan medium to coarse SAND, saturated, hydrocarbon odor, staining		
23							
24		4-3-4-4	75	219.0	0"-10" Grey/tan medium to coarse SAND, saturated, hydrocarbon odor, staining		
25					10"-18" Dark brown coarse SAND, saturated, slight hydrocarbon odor		
26	SB-22 (26-28)	5-6-5-8	58	3.5	0"-3" Dark brown coarse SAND, saturated, slight hydrocarbon odor		
27					3"-14" Brown medium to coarse SAND, trace Mica, saturated		
28					**End Boring at 28' bgs**		
29							
30							
31							
32							
33							
34							
35							
36							
37							

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 8' bgs
Hollow Stem Augers used from 8'-28' bgs.
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB - 21 Sheet 1 of 1

Contractor: ADT
Driller: Jiri Kamenicek, Rayvon Mortley
Inspector: Zohar Lavy
Rig Type: Geoprobe 6620 DT

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: Farrington St./Con Edison Yard

GROUNDWATER OBSERVATIONS

Water Level	~14'			
Date	5/22/09			
Time				
Meas. From	5' Acetate Sleaves			

Weather: Clear, 60's, Wind: 0-5 mph W

Date/Time Start: 5/20/09 0800

Date/Time Finish: 5/22/09 1315

Location Plan

See Site Plan

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL
+3					
+2					
+1					
0		Vac-tron		0.0	0"-3" Dark brown fine to medium SAND, some medium to coarse angular Gravel, little Silt
1		Vac-tron			
2		Vac-tron		0.0	3"-8' Brown fine to medium SAND, some Silt and fine to coarse angular to sub-round Gravel, trace coarse rounded Cobble
3		Vac-tron			
4		Vac-tron			
5		Vac-tron			
6		Vac-tron			
7		Vac-tron			
8		NA	67	5.3	0"-15" Dark brown medium to coarse SAND, little sub-angular Gravel, trace Silt
9					15"-40" Orange/brown medium SAND, trace Gravel and Silt and Mica
10					
11					
12					
13	SB-21 (13-18)	NA	100	29.6	0"-12" Orange/brown medium SAND, trace Gravel and Silt and Mica
14				14.8	12"-20" Orange/brown medium SAND, trace Gravel and Silt and Mica, saturated
15				112.0	20"-30" Black fine to medium SAND, trace Silt and Mica, hydrocarbon odor, staining,
16				8.3	sheen; 30"-60" Dark grey/tan medium to coarse SAND, some fine Gravel, slight
17					hydrocarbon odor
18		NA	33	13.8	Dark brown/grey coarse SAND, trace fine Gravel and Mica, saturated
19					
20					
21					
22					
23		NA	58	27.1	0"-28" Light brown/tan medium to coarse SAND, trace Mica, saturated
24				5.9	28"-35" Light brown/tan medium to coarse SAND, trace Mica, saturated
25					
26					
27					
28	SB-21 (28-33)	NA	67	3.2	Light brown/tan medium to coarse SAND, trace Mica, saturated
29					
30					
31					
32					
33					**End Boring at 33' bgs**
34					
35					
36					
37					

SCHEMATIC (drawing not to scale)

COMMENTS

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 8' bgs; Geoprobe from 8' to 33' bgs
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB - 23 Sheet 1 of 1

Contractor: ADT
Driller: Jiri Kamenicek, Andrea Babel
Inspector: Zohar Lavy
Rig Type: Geoprobe 6620 DT

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: Farrington St./Hawkeye Yard

GROUNDWATER OBSERVATIONS

Water Level	~13'			
Date	5/26/09			
Time				
Meas. From	5' Acetate Sleaves			

Weather: Clear, 60's, Wind: 5-10 mph W

Date/Time Start: 5/7/09 1120

Date/Time Finish: 5/26/09 1135

Location Plan

See Site Plan

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+3							
+2							
+1							
0		Vac-tron		0.5	0"-1.5' Dark brown medium to coarse SAND and GRAVEL, trace Silt		
1		Vac-tron			1.5'-2' COBBLE STONE		
2		Vac-tron		3.1	2'-5' Dark brown medium to coarse SAND, some Gravel, trace Cobble and Silt		
3		Vac-tron					
4		Vac-tron					
5		Vac-tron		0.0	5'-7' Brown fine to coarse SAND, little fine to coarse angular to sub-round Gravel,		
6		Vac-tron		0.0	moist; 7'-8' Brown fine to coarse SAND, some fine to coarse rounded Cobble, little		
7		Vac-tron			fine to coarse angular to sub-round Gravel, moist		
8		NA	100	2.1	0"-25" Dark brown/tan medium to coarse SAND and sub-round GRAVEL and		
9					COBBLE		
10				5.6	25"-32" Dark brown medium SANDand sub-round GRAVEL		
11				307.0	32"-58" Black/grey medium SAND, little sub-round Gravel, trace Mica and Silt, moist,		
12					hydrocarbon odor, staining, NAPL globules		
					58"-60" Black/grey medium SAND, little sub-round Gravel, trace Mica and Silt,		
					saturated, hydrocarbon odor, staining, NAPL globules		
13	SB-23 (13-18)	NA	100	458.0	0"-15" Black/grey medium SAND, little sub-round Gravel, trace Mica and Silt, saturated,		
14					hydrocarbon odor, staining, NAPL		
15					15"-60" Dark grey fine to medium SAND, saturated, hydrocarbon odor, staining, NAPL		
16							
17							
18		NA	100	105.0	0"-14" Dark grey fine to medium SAND, trace Silt and Mica, hydrocarbon odor, staining		
19					NAPL globules		
20				15.3	14"-60" Dark green/grey fine to medium SAND, little Silt, trace Mica		
21							
22							
23		NA	50	3.2	0"-15" Dark brown/orange coarse SAND, trace sub-round Gravel		
24				96.5	15"-19" Black/dark grey coarse SAND, trace sub-round Gravel and Silt, hydrocarbon		
25					odor, staining, small globules		
26				2.9	19"-30" Dark grey/tan medium to coarse SAND, trace fine Gravel and Mica		
27							
28	SB-23 (28-33)	NA	80	3.1	0"-14" Dark orange/grey medium to coarse SAND, trace Silt and sub-round Gravel and		
29					Mica		
30				1.2	14"48" Dark orange/red medium to coarse SAND, trace Silt		
31							
32							
33					**End Boring at 33' bgs**		
34							
35							

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 8' bgs; Geoprobe from 8' to 33' bgs
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB - 24 Sheet 1 of 1

Contractor: ADT
Driller: Chris Straton, Bernie Cruz
Inspector: Zohar Lavy
Rig Type: Track Mounted HSA - LC55

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: 32nd Ave/ECI Yard

GROUNDWATER OBSERVATIONS

Water Level	~12'			
Date	6/5/09			
Time				
Meas. From	Split spoon			

Weather: Rain, 60's, Wind: 0-10 mph E

Date/Time Start: 6/5/09 0800

Date/Time Finish: 6/5/09 0930

Location Plan

See Site Plan

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+3							
+2							
+1							
0		Vac-tron		0.0	0"-1' Red/brown fine to coarse SAND, some fine to medium angular Gravel, and Brick		
1		Vac-tron			and Slag, little Silt		
2		Vac-tron		0..0	1'-7' Brown fine to medium SAND, little Silt, moist		
3		Vac-tron		0.0	7'-8' Brown fine to medium SAND, little Silt, saturated		
4		Vac-tron					
5		Vac-tron					
6		Vac-tron					
7		Vac-tron					
8		WH	0	NA	No Recovery		
9							
10	SB-24 (10-12)	1/12"-1/12"	33	0.0	Green/grey fine SAND little Silt, moist		
11							
12	SB-24 (12-14)	50/4"	13	15.3	Brown fine SAND and SILT and weathered GNIESS, saturated, hydrocarbon odor,		
13					staining		
14					**End boring at 13' bgs**		
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 8' bgs;
Hollow Stem Augers used from 8'-13' bgs; Auger refusal at 13 ft bgs
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB - 25 Sheet 1 of 1

Contractor: ADT
Driller: Jiri Kamenicek, Rayvon Mortley
Inspector: Zohar Lavy
Rig Type: Geoprobe 6620 DT

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: Farrington St./Con Edison Yard

GROUNDWATER OBSERVATIONS				
Water Level	~14.5'			
Date	5/22/09			
Time				
Meas. From	5' Acetate Sleaves			

Weather: Clear, 60's, Wind: 5-10 mph E

Date/Time Start: 5/20/09 1300

Date/Time Finish: 5/22/09 1115

Location Plan

See Site Plan

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+3							
+2							
+1							
0		Vac-tron		2.3	0"-6" Dark brown fine SAND and sub-angular GRAVEL		
1		Vac-tron		86.1	6"-4' Dark brown medium to coarse SAND, some sub-round Gravel, trace Slag and Wood		
2		Vac-tron					
3		Vac-tron		156.0	4'-8' Dark brown/black medium to coarse SAND, little Silt, trace Cobble, hydrocarbon odor		
4		Vac-tron					
5		Vac-tron					
6		Vac-tron					
7		Vac-tron					
8		NA	83	533.0	0"-40" Light brown fine to medium SAND and COBBLE, some Gravel, little black fine to medium Sand		
9							
10					40"-50" Black medium to coarse SAND, trace Silt and sub-angular Gravel, moist, hydrocarbon odor, staining		
11							
12							
13	SB-25 (13-18)	NA	100	547.0	0"-18" Black medium to coarse SAND, trace Silt and sub-angular Gravel, moist, hydrocarbon odor, staining; 18"-40" Black medium to coarse SAND, some fine Gravel, trace Silt, saturated, heavy hydrocarbon odor, staining, NAPL		
14							
15							
16					40"-60" Black fine to medium SAND, trace Silt, saturated, heavy hydrocarbon odor, staining, NAPL globules		
17							
18		NA	100	482.0	0"-30" Black fine to medium SAND, trace Silt, saturated, heavy hydrocarbon odor, staining, NAPL globules		
19							
20				311.0	30"-50" Dark grey fine to medium SAND, little Silt, hydrocarbon odor, staining		
21				12.9	50"-60" Brown/tan fine to medium SAND, little Silt, trace Mica, slight hydrocarbon odor		
22							
23		NA	58	5.4	0"-10" Brown/tan fine to medium SAND, little Silt, trace Mica, slight hydrocarbon odor		
24				7.9	10"-30" Dark grey coarse SAND, some fine Gravel		
25				31.6	30"-35" Black medium to coarse SAND, trace fine Gravel, slight hydrocarbon odor		
26							
27							
28	SB-25 (28-33)	NA	50	854.0	0"-27" Black medium SAND, trace fine Gravel, heavy hydrocarbon odor, staining, black NAPL		
29							
30				23.5	27"-30" Orange/brown fine SAND and SILT, little sub-round Gravel		
31							
32							
33	SB-25 (33-38)	NA	50	112	0"-10" Orange/brown fine SAND and SILT, little sub-round Gravel		
34				8	10"-30" Tan/grey coarse SAND and fine GRAVEL, trace Silt		
35							
36							
37							
38					**End boring at 38' bgs**		

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 8' bgs; Geoprobe from 8' to 38' bgs
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB - 26 Sheet 1 of 1

Contractor: ADT
Driller: Chris Straton, Bernie Cruz
Inspector: Zohar Lavy
Rig Type: Track Mounted HSA - LC55

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: Farrington St./Con Edison Yard

Location Plan

See Site Plan

GROUNDWATER OBSERVATIONS				
Water Level	~15'			
Date	6/5/09			
Time				
Meas. From	Split spoon			

Weather: Rain, 60's, Wind: 0-10 mph E

Date/Time Start: 4/29/09 0845

Date/Time Finish: 6/5/09 1249

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+3							
+2							
+1							
0		Vac-tron		0.0	0"-1.5' Light brown/grey fine SAND and sub-angular GRAVEL, trace Silt		
1		Vac-tron		0.0	1.5'-2.5' Dark brown medium to coarse SAND, some sub-angular Gravel		
2		Vac-tron		0.0	2.5'-3' CONCRETE fragments and black weathered COBBLE		
3		Vac-tron		0.0	3'-3.5' WOOD (on west side of hole); CONCRETE fragments (on east side of hole)		
4		Vac-tron		0.5	3.5'-4' Dark brown medium to coarse SAND, some fine Gravel, trace Silt		
		Vac-tron		0.8	4'-5' Dark brown medium to coarse SAND, some fine Gravel, little Slag, trace Silt		
5		Vac-tron		10.7	5'-7' Dark brown/green medium to coarse SAND, little fine Gravel, slightly moist		
6		Vac-tron					
7		Vac-tron		0.5	7'-8' Dark brown/dark grey medium SAND, some fine Gravel		
8		47-13-9-9	58	7.3	Green/grey fine SAND and SILT, little angular Gravel		
9							
10		25-12-11-10	58	192.0	Green/grey fine SAND, some Silt		
11							
12		8-7-7-7	100	806.0	0"-20" Green/grey fine SAND, some Silt; 20"-24" Green/grey fine SAND, some Silt,		
13					hydrocarbon odor, staining		
14	SB-26 (14-16)	5-5-5-7	100	983.0	0"-12" Green/grey fine SAND, some Silt, hydrocarbon odor, staining; 12"-20" Black		
15					medium to coarse SAND, saturated, NAPL globules; 20"-24" Green/grey SILT		
16		12-4-4-7	100	818.0	0"-12" Green/grey SILT		
17					12"-24" Green/grey medium to coarse SAND, little Silt		
18		5-4-4-5	50	453.0	Green/grey medium to coarse SAND, little Silt		
19							
20		5-9-4-4-	100	484.0	Green/grey medium to coarse SAND, little Silt		
21							
22		5-7-7-5	100	67.7	Green/grey medium to coarse SAND, little Silt		
23							
24	SB-26 (24-26)	6-7-4-5	25	14.0	Green/grey medium to coarse SAND, little Silt		
25							
26					**End Boring at 26' bgs**		
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 8' bgs
Hollow Stem Augers used from 8'-26' bgs.
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB - 29 Sheet 1 of 1

Contractor: ADT
Driller: Jiri Kamenicek, Bernie Cruz
Inspector: Rene Robles
Rig Type: Geoprobe 6620 DT

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: Farrington St./Con Edison Yard

GROUNDWATER OBSERVATIONS

Water Level	~13'			
Date	7/6/2009			
Time				
Meas. From	5' Acetate Sleaves			

Weather: Clear, 80's, Wind: 0-5 mph NE

Date/Time Start: 6/24/09 0900

Date/Time Finish: 7/5/09 1430

Location Plan

See Site Plan

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+3							
+2							
+1							
0		Vac-tron		0.0	0-4" Concrete		
1		Vac-tron		0.0	4"-1.5' Dark brown medium to course SAND, some subangular Gravel, little Silt, slag,		
2		Vac-tron			trace silt, dry		
3		Vac-tron		0.2	1.5'-3.5' Light brown/orange medium to course SAND, trace Gravel.		
4		Vac-tron		0.5	3.5'-6.5' Dark orange/brown medium to course SAND.		
		Vac-tron			6.5'-8.5' Same as above (3.5'-6.5' interval)		
5		Vac-tron					
6		Vac-tron					
7		Vac-tron					
8		NA	40	0.9	Light brown-light grey fine SAND, dry, loose, slight hydrocarbon like odor.		
9							
10							
11							
12							
13		NA	50	0.8	0-1.5' Same as above (8'-13' interval).		
14					1.5'-2.5' Brown fine SAND, trace Silt, dense. Wet at 13' bgs.		
15							
16							
17							
18	SB-29 (18-23)	NA	70	33.3	Same as above (1.5'-2.5' interval). Slight hydrocarbon like odor.		
19							
20							
21							
22							
23	SB-29 (23-28)	NA	80	16.2	Same as above (18'-23' intval). Silght hydrocarbon like odor.		
24							
25							
26							
27							
28					**End Boring at 28' bgs**		
29							
30							
31							
32							
33							
34							
35							
36							
37							

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 8.5' bgs
Geoprobe used from 8'-28' bgs.
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB - 30 Sheet 1 of 1

Contractor: ADT
Driller: Jiri Kamenicek, Bernie Cruz
Inspector: Rene Robles
Rig Type: Geoprobe 6620 DT

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: Farrington St./Con Edison Yard

GROUNDWATER OBSERVATIONS

Water Level	~13'			
Date	7/7/09			
Time				
Meas. From	5' Acetate Sleaves			

Weather: Clear, Chance of rain, 80's, Wind: Calm

Date/Time Start: 6/24/09 1145

Date/Time Finish: 7/7/09 0937

Location Plan

See Site Plan

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+3							
+2							
+1							
0		Vac-tron		0.0	0-4" Concrete		
1		Vac-tron		0.0	4"-2' Dark brown medium to course SAND, some subangular and subrounded		
2		Vac-tron			Gravel, dry.		
3		Vac-tron			2'-2.8' Concrete debris.		
4		Vac-tron		0.5	2.8'-5.5' Dark brown/orange medium to course SAND, trace rounded Cobble, trace		
		Vac-tron			Silt, slightly moist.		
5		Vac-tron		0.2	5.5'-8.0' Dark brown/orange medium to course SAND, little subrounded Gravel, trace		
6		Vac-tron			Silt.		
7		Vac-tron					
8		NA	70	55.1	Orange/brown fine SAND, trace Silt, dry, loose. Black stain at last 1".		
9							
10							
11							
12							
13	SB-30 (13-18)	NA	60	164.0	Orange/brown-brown/grey fine to medium SAND, trace Silt. Balck stain from 0-2.5'		
14					with hydrocarbon like odor. Wet at 13'.		
15							
16							
17							
18		NA	50	3.9	Orange/brown mf SAND, trace Silt, wet, loose.		
19							
20							
21							
22							
23	SB-30 (23-28)	NA	100	1.3	Same as above (18'-23' interval).		
24							
25							
26							
27							
28					**End Boring at 26' bgs**		
29							
30							
31							
32							
33							
34							
35							
36							
37							

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 8' bgs
Geoprobe used from 8'-28' bgs.
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/WELL ID: SB-38

Sheet 1 of 1

Contractor: Advanced Drilling Technology (ADT)
Driller: Chris Stratton/Tom Sheerin
Inspector: Lopa Naik
Rig Type: Track Mounted Hollow Stem Auger CME 55

PROJECT NAME: Con Edison /Farrington Street Works
PROJECT NUMBER: 446109-03000

Location Description: approx. 200' W. of Farrington St., adjacent to 31st St.

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~13.5' bgs	DTW		
Date	9/30/2011			
Time	9:00			
Meas. From	ft bgs - Split Spoon			

Weather: Clear, 70s-90s, Wind: 0-5 mph East

Date/Time Start: 9/30/2011 - 0840

Date/Time Finish: 9/30/2011 - 1430

See Site Plan

Sample Depth	Sample I.D.	SPT	Rec. (%)	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
+1						
0		Vactron			0-1' Moist, dark brown, fine to coarse SAND and sub-angular GRAVEL	
1		Vactron			1-5' Moist, dark brown, fine to coarse SAND and sub-angular GRAVEL, trace Wood, trace Brick, trace Metal	
2		Vactron				
3		Vactron				
4		Vactron				
5					0-12" Black medium to coarse SAND, little fine to medium Gravel, trace Silt, slight hydrocarbon odor; 12-18" Dry, black fine to medium SAND and SLAG	
6		1-2-3-1	75	35.0		
7					Moist, black medium to coarse SAND, little medium to coarse angular Gravel, trace Silt, slight hydrocarbon odor	
8		1-1-1-1	67	34.0		
9					Moist, olive green, fine to coarse SAND, little fine to medium Gravel, trace Silt, stong hydrocarbon odor	
10		2-4-5-7	75	113.0		
11					Moist, olive green, fine to medium SAND, some fine to medium Gravel, little Silt, trace Mica, strong hydrocarbon odor	
12		6-7-7-4	83	135.0		
13					Wet, olive green, fine to coarse SAND, some fine to medium Gravel, little Silt, slight hydrocarbon odor	
14		2-7-10-14	75	25.0		
15	SB-38 (15-17)				0-8" Wet, olive green, fine SAND, trace Silt, NAPL saturated, staining, strong hydrocarbon odor; 8-24" Wet, olive green, fine to medium SAND, trace Silt, trace Mica, NAPL blebs/saturation, staining, hydrocarbon odors	
16		10-10-10-12	100	382.0		
17					Wet, olive green fine SAND, trace Silt, trace Mica, slight hydrocarbon odor	
18		3-5-5-6	83	30.0		
19					0-20" Moist, olive green, fine to medium SAND, little fine angular Gravel, trace Mica, trace Silt, slight hydrocarbon odor; 20-24" Moist, olive green, fine SAND, trace Mica, trace Silt	
20		8-8-8-12	100	35.0		
21					Wet, olive green, fine to medium SAND, trace fine to medium angular Gravel, trace Mica, slight hydrocarbon odor	
22		6-8-7-8	50	13.5		
23					Wet, olive green, fine to medium SAND, trace Silt, trace Mica, hydrocarbon odor.	
24		5-4-6-8	33	65.0		
25					Wet, olive green, fine to medium SAND, little well graded sub-round to round Gravel, trace Silt, trace Mica, hydrocarbon odor	
26		8-8-9-10	75	60.0		
27					Wet, olive green, fine to medium SAND, trace Silt, trace Mica, silght hydrocarbon odor	
28		6-8-5-6	75	20.0		
29					Wet, olive green, fine to medium SAND, trace sub-round Gravel, trace Silt, trace Mica, hydrocarbon odor.	
30		3-2-4-5	83	61.0		
31					Moist, olive green, fine to medium SAND, trace Silt, trace Mica	
32		6-6-8-10	100	4.9		
33					Wet, olive green, fine to medium SAND, trace Silt, trace Mica, slight hydrocarbon odor	
34		6-8-12-15	100	8.9		
35					Wet, olive green, fine to medium SAND, trace Silt, trace Mica, slight hydrocarbon odor	
36		10-12-10-12	100	13.7		
37					Moist, olive green, fine to medium SAND, trace Silt, trace Mica, slight hydrocarbon odor	
38		5-9-15-15	75	9.0		
39				20.6	0-16" Wet, olive green, fine to medium SAND, trace Silt, trace Mica, slight hydrocarbon odor; 16-24" Moist, orange/brown SILT, some Clay, little fine to medium Sand, trace round fine Gravel	
40		5-5-6-10	100	0.0		
41					Moist, brown/orange, SILT, some Clay, little fine to medium Sand	
42		3-4-6-13	92	0.0		
43	SB-38 (43-45)				Moist, olive green, fine SAND, trace fine Gravel, trace Silt, trace Mica	
44		9-8-10-13	75	0.0		
45					**End of Boring at 45 ft bgs**	

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
0-5 ft bgs was hand cleared
5-45 ft bgs advanced utilizing hollow stem augers and split spoons
NAPL encountered from approximately 15 to 17 ft bgs

PARSONS
DRILLING RECORD

BORING/WELL ID: SB-39

Sheet 1 of 1

Contractor: Advanced Drilling Technology (ADT)
Driller: Chris Capabianco /Jamey Meyers
Inspector: Lopa Naik
Rig Type: Track Mounted Hollow Stem Auger CME 55

PROJECT NAME: Con Edison /Farrington Street Works
PROJECT NUMBER: 446109-03000

Location Description: Southeastern portion of the Con Ed Yard

Location Plan

See Site Plan

Weather: Clear, Sunny, 80F, Wind: 0-5 mph East
Date/Time Start: 9/26/2011 ; 0920
Date/Time Finish: 09/26/2011 ; 1430

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~19'			
Date	09/26/2011			
Time	1100			
Meas. From	ft bgs - Split Spoon			

Sample Depth	Sample I.D.	SPT	Rec. (%)	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+1							
0		Vactron		0.0	0-12" Dry, grey, coarse sub-angular GRAVEL		
1		Vactron		0.0	1-4' Dry, brown, fine to medium SAND, some angular fine to medium Gravel, trace silt		
2		Vactron		0.0	4-4.5' WOOD		
3		Vactron		0.0	4.5-5' Dry, brown, fine to medium SAND, some Wood		
4		Vactron					
5		2-2-1-1	83	9.3	Dry, black, fine to medium SAND, trace fine angular Gravel, trace Silt		
6							
7		1-21-2-1	50	51.3	Dry, black, fine to medium SAND, trace fine angular Gravel, trace Silt, slight hydrocarbon odor		
8							
9		2-1-4-5	67	41.1	Dry, black, fine to medium SAND, little fine angular Gravel, trace Silt, slight hydrocarbon odor, NAPL blebs		
10							
11		3-18-6-2	83	47.5	Dry, dark gray, fine SAND, trace Mica, trace fine round to sub-round Gravel, slight hydrocarbon odor		
12							
13	SB-39 (13-15)	2-3-4-7	83	478.0	Moist, dark black, fine to coarse SAND, trace fine Gravel, trace Mica, strong hydrocarbon odor, NAPL saturated, staining		
14							
15		4-4-4-5	92	152.0	Moist, dark black, fine to medium SAND, trace Mica, strong hydrocarbon odor, NAPL saturated, staining		
16							
17		4-4-11-15	100	267.0	0-16" Moist, dark black, fine to medium SAND, trace Mica, strong hydrocarbon odor, NAPL saturated, staining; 16-24" Moist, green/gray, fine to medium SAND, trace Mica		
18							
19		2-2-4-5	50	151.0	Wet, green/gray, fine SAND, trace Silt, strong hydrocarbon odor, NAPL saturated, staining		
20							
21		6-4-6-8	100	115.0	Wet, olive green, fine SAND, trace Silt, trace Mica, strong hydrocarbon odor		
22							
23		12-11-4-8	100	84.9	Wet, gray, fine SAND, trace Mica		
24							
25		10-9-10-12	100	25.8	Wet, gray, fine SAND, trace fine to medium angular Gravel, trace Mica		
26							
27		13-15-17-8	100	55.8	Moist, olive green, fine SAND, trace Mica, trace Wood, slight hydrocarbon odor		
28							
29		4-6-11-12	100	32.8	Moist, gray, fine SAND, trace Mica, slight hydrocarbon odor		
30							
31		14-12-9-3	100	69.8	Moist, gray, fine SAND, trace Mica, slight hydrocarbon odor		
32							
33		2-4-8-4	50	35.2	0-6" Moist, gray, fine SAND, trace Mica, slight hydrocarbon odor		
34				0.0	6-12" Moist, orange/brown, fine to medium SAND, trace fine Gravel, trace Clay		
35	SB-39 (35-37)	8-17-14-14	67	0.0	0-8" Wet, orange/brown SILT, some Clay, trace fine Sand, trace fine Gravel		
36					8-16" Wet, olive green, fine to medium SAND, trace fine round Gravel		
37					**End of Boring at 37 ft bgs**		

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 5' bgs; Hollow stem auger and split spoon from 5' to 37' bgs
HCN detected from 18-20 ft bgs
NAPL encountered from approximately 9-11 ft bgs and 13-21 ft bgs

PARSONS
DRILLING RECORD

BORING/WELL ID: SB-40

Sheet 1 of 1

Contractor: Advanced Drilling Technology (ADT)
Driller: Chris Stratton/German Torres
Inspector: Lopa Naik
Rig Type: Track Mounted Hollow Stem Auger CME 55

PROJECT NAME: Con Edison /Farrington Street Works
PROJECT NUMBER: 446109-03000

Location Description: Central portion of the Con Ed Yard

Location Plan

See Site Plan

Weather: Cloudy, 70s, Wind: 0-5 mph South East

Date/Time Start: 09/29/11 0900

Date/Time Finish: 09/29/11 1400

GROUNDWATER OBSERVATIONS

Water Level	DTW ~5'	DTW		
Date	08/18/2011			
Time	1200			
Meas. From	Hand clearance			

Sample Depth	Sample I.D.	SPT	Rec. (%)	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+1							
0		Vactron		0.0	0-12" Dry, fine to coarse GRAVEL and BRICK		
1		Vactron		0.0	1-4' Dry, black medium to coarse SAND, some fine to coarse angular Gravel and Brick		
2		Vactron		0.0	4-5' Moist, black medium to coarse SAND, little fine to coarse angular Gravel		
3		Vactron		0.0			
4		Vactron		0.0			Water encountered at 5 ft bgs
5		1-1-2-1	17	0.0	Moist, black, fine to medium SAND, some medium to coarse angular Gravel, trace Silt		
6							
7		3-3-8-11	83	0.0	0-16" Wet, grey, SILT, some Clay		
8				51.0	16-24" Wet, grey, fine to medium SAND, little fine to medium angular Gravel, trace Silt, slight hydrocarbon odor		
9		2-6-7-9	50	218.0	Moist, grey, fine to medium SAND, little fine to medium angular Gravel, trace Silt, strong hydrocarbon odor		
10							
11		8-7-13-15	42	84.0	Moist, grey, fine to medium SAND, trace Silt, trace Mica, strong hydrocarbon odor		
12							
13		3-4-4-9	67	335.0	Wet, dark grey, fine to medium SAND, trace Silt, trace Mica, trace fine Gravel, NAPL blebs, staining, strong hydrocarbon odors		
14							
15	SB-40 (15-17)	6-9-13-12	100	350.0	Moist, dark grey, fine to medium SAND, trace Silt, trace Mica, NAPL saturation, staining, stronghydrocarbon odors		
16							
17		3-4-5-5	50	219.0	Moist, dark grey, fine to medium SAND, trace Silt, trace Mica, NAPL saturation, staining, stronghydrocarbon odors		
18							
19		5-7-8-15	100	227.0	0-18" Moist, dark grey, fine to medium SAND, trace Silt, trace Mica, NAPL blebs, staining, strong hydrocarbon odor; 18-24" Moist, olive green, fine SAND, trace Mica, trace Silt, slight hydrocarbon odor		
20				13.8			
21		5-5-6-7	100	34.4	Wet, olive green, fine SAND, trace Mica, trace fine Gravel, trace Silt		
22							
23		7-7-10-13	100	96.6	Moist, olive green, fine SAND, trace Mica, trace fine Gravel, trace Silt, strong hydrocarbon odor		
24							
25		6-8-13-15	100	1.3	Moist, olive green fine SAND, trace Silt, trace Mica		
26							
27		5-7-10-12	100	11.3	0-16" Moist, olive green fine SAND, trace Silt, trace Mica, slight hydrocarbon odor		
28				1.3	16-24" Moist, orange/brown SILT and CLAY, little medium to coarse SAND		
29		6-8-10-13	33	0.6	Moist, orange/brown SILT and CLAY, some fine to medium SAND, trace fine Gravel		
30							
31		2-5-8-8	100	24.4	Wet, olive green, fine SAND, trace Silt, trace fine Gravel, slight hydrocarbon odor		
32							
33		2-4-4-8	100	24.8	0-18" Moist, dark grey, fine SAND, trace Silt, trace Mica, slight hydrocarbon odor		
34					18-24" Moist, orange/brown medium to coarse SAND, trace Silt, trace fine to medium Gravel		
35		8-10-13-16	50	2.1	Wet, yellow/brown, fine to coarse SAND, trace fine Gravel, trace Mica		
36							
37		5-6-6-7	50	0.0	Moist, yellow/brown, medium to coarse SAND, trace Silt, trace Clay, trace fine Gravel		
38							
39	SB-40 (39-41)	7-10-8-11	75	0.0	Moist, yellow/brown, fine to coarse SAND, trace fine Gravel, trace Mica		
40							
41					**End of Boring at 41 ft bgs**		

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 5' bgs; Hollow stem auger and split spoon from 5' to 41' bgs
NAPL encountered from approximately 13 to 21 ft bgs

PARSONS
DRILLING RECORD

BORING/WELL ID: SB-41
Sheet 1 of 1

Contractor: Advanced Drilling Technology (ADT)
Driller: Chris Stratton, Tom Sheerin
Inspector: Zohar Lavy
Rig Type: Track Mounted Hollow Stem Auger CME 55

PROJECT NAME: Con Edison /Farrington Street Works
PROJECT NUMBER: 446109-03000

Location Description:
East central portion of the Con Edison Yard

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~13'	DTW		
Date	9/26/2011			
Time	1035			
Meas. From	ft bgs - Split Spoon			

Weather: Partly Cloudy, High of 80F
Date/Time Start: 9/26/2011 ; 0950
Date/Time Finish: 9/26/2011 ; 1330

Location Plan
See Site Plan

Sample Depth	Sample I.D.	SPT	Rec. (%)	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+1							
0		Vactron			0-8" Black, fine to medium angular to sub-angular GRAVEL		
1		Vactron			8"-1.5' Brown, fine to medium SAND, some fine to medium sub-angular Gravel, little Silt 1.5'-2' Belgium BLOCKS		
2		Vactron		776.0	2-5' Black, fine to medium SAND, little fine to medium sub-angular Gravel, trace Silt, strong petroleum-like odor		
3		Vactron					
4		Vactron					
5		3-1-1-1	42	800.0	0-6" Wet, dark brown, fine to coarse SAND, little Silt, strong hydrocarbon odor, slight staining, little sub-angular Gravel		
6					6-10" Moist, olive/brown, fine to coarse SAND, little sub-angular to round Gravel, trace Silt, slight hydrocarbon odor, staining		
7		3-2-2-3	75	1216.0	0-8" Moist, olive/brown, fine to coarse SAND, little sub-angular to round Gravel, little Silt,trace fine sub-round Gravel, slight hydrocarbon odor, staining; 8-10" Dry, gray, fine SAND, slight hydrocarbon odor		
8							
9		4-3-4-6	67	1301.0	Dry, gray, fine SAND, slight hydrocarbon odor, striated black staining, trace mica		
10							
11		8-4-5-4	75	1268.0	Dry, gray, fine to medium SAND, slight hydrocarbon odor		
12							
13	SB-41 (13-15)	10-4-5-5	75	2043.0	Wet, black, medium SAND, heavy staining, hydrocarbon odor, NAPL Blebs-saturated		
14							
15		1-1-2-2	50	1834.0	Wet, black, medium SAND, heavy staining, hydrocarbon odor, NAPL saturated		
16							
17		5-6-6-5	100	1475.0	0-16" Wet, black, medium SAND, heavy staining, hydrocarbon odor, NAPL saturated		
18				926.0	16-24" Moist, gray, fine SAND, trace Mica, hydrocarbon odor		
19		1-2-3-2	50	197.0	Wet, dark gray, fine to medium SAND, slight hydrocarbon odor		
20							
21		1-3-2-2	67	350.0	Wet, gray/brown, fine to medium SAND, slight hydrocarbon odor		
22							
23		2-2-5-5	71	125.0	Wet, brown, fine to medium SAND, trace Mica, slight hydrocarbon odor		
24							
25		WH-WH-1-1	58	36.7	Wet, brown, fine to medium SAND, trace Mica		
26							
27		1-1-2-1	67	34.2	0-12" Wet, brown, fine to medium SAND, trace Mica		
28					12-16" Wet, brown/gray, fine to medium SAND, trace Mica, trace Silt		
29		2-4-5-6	75	59.1	Wet, brown, fine to coarse SAND		
30							
31		2-5-1-1	0	NA	No Recovery		
32							
33	SB-41 (33-35)	2-2-3-3	75	2.5	0-6" Wet, tan, coarse SAND, some fine round Gravel		
34					6-18" Moist, brown/gray, fine SAND, little Silt, trace Mica		
35					**End of Boring at 35 ft bgs**		

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 5' bgs; Hollow stem auger and split spoon from 5' to 35' bgs
NAPL encountered from approximately 13 to 18.5 ft bgs

PARSONS
DRILLING RECORD

BORING/WELL ID: SB-42

Sheet 1 of 1

Contractor: Advanced Drilling Technology (ADT)
Driller: Chris Stratton, Tom Sheerin
Inspector: Zohar Lavy
Rig Type: Track Mounted Hollow Stem Auger CME 55

PROJECT NAME: Con Edison /Farrington Street Works
PROJECT NUMBER: 446109-03000

Location Description: Approx. 200' W of Farrington St., 80' N of 32nd Ave

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~4' bgs	DTW		
Date	8/23/2012			
Time	930			
Meas. From	ft bgs Hand Clearance			

Weather: Cloudy, slight rain, 70s, wind 5-10 mph E

Date/Time Start: 9/29/2011 - 1400

Date/Time Finish: 9/30/2011 - 1020

Location Plan

See Site Plan

Sample Depth	Sample I.D.	SPT	Rec. in.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+1							
0		Vactron		0.0	0-8" Dry, coarse sub-angular GRAVEL		
1		Vactron		0.0	8"-2' Dry, brown, fine to coarse SAND, some sub-angular Gravel, trace Silt		
2		Vactron		0.0	2-4' Moist, brown, fine to coarse SAND, little fine to coarse round Gravel, trace Silt		
3		Vactron		0.0	4-5' Wet, brown, fine to coarse SAND, little fine to coarse round Gravel, trace Silt		
4		Vactron		0.0			
5		3-7-1-18	50	10.1	0-8" Wet Dark brown, fine to coarse SAND and angular GRAVEL		
6					8-12" COBBLE/CONCRETE		
7		50/1"	0	NA	No Recovery		Due to refusal, auger was advanced to 8 ft bgs
8		15-21-13-19	75	18.3	Moist, dark brown/black, fine to coarse SAND, some Cobble and agular Gravel		
9							
10		19-19-22-21	33	165.0	Moist, dark brown/black, fine to coarse SAND, some Cobble and agular Gravel, slight hydrocarbon odor		
11							
12		10-10-9-12	67	632.0	0-6" Wet, dark brown/black, fine to coarse SAND, some Cobble and agular Gravel, slight hydrocarbon odor; 6"-14" Wet, fine to medium SAND, trace Silt, hydrocarbon odor; 14-16" Wet, fine to medium SAND, NAPL blebs, staining, hydrocarbon odor		
13							
14	SB-42(14-16)	8-10-11-9	67	656.0	0-8" Wet, fine to medium SAND, NAPL blebs to saturation, staining, hydrocarbon odor; 8-16"Wet, black, medium to coarse SAND, NAPL saturation, strong hydrocarbon odor, staining		
15							
16		4-7-7-7	0	NA	No Recovery		
17							
18		3-3-4-8	75	76.8	0-14" Moist, dark grey, fine SAND, trace Mica, hydrocarbon odor; 14-18" Moist, dark grey, fine SAND, trace Mica, trace Silt, hydrocarbon odor		
19							
20		5-5-7-10	58	48.6	0-10" Moist, dark grey, fine SAND, trace Mica, trace Silt, hydrocarbon odor; 10-14" Wet, black fine to coarse SAND, trace sub-angular fine Gravel, slight hydrocarbon odor		
21							
22		3-4-5-5	83	585.0	0-8" Wet, black fine to coarse SAND, trace sub-angular fine Gravel, slight hydrocarbon odor; 8-20" Wet, black, medium SAND, NAPL saturation, strong hydrocarbon odor		
23	SB-42(22-24)						
24		4-5-6-6	58	521.0	Wet, black, medium SAND, NAPL saturation, strong hydrocarbon odor		
25							
26		4-8-8-6	100	33.6	0-12" Wet, black, medium SAND, NAPL saturation, strong hydrocarbon odor; 12-24" Moist, olive/grey, fine SAND, trace Silt, slight hydrocarbon odor		
27							
28		3-6-6-12	50	128.0	Moist, dark grey, fine SAND, NAPL blebs, staining, hydrocarbon odor		
29							
30		3-4-7-9	42	18.5	Wet, brown, fine to medium SAND, slight hydrocarbon odor		
31							
32		3-4-8-10	50	10.3	0-8" Moist, orange/brown, fine to medium SAND, trace fine sub-round Gravel; 8-12" Moist, orange/brown SILT, trace Clay		
33							
34	SB-42(34-36)	2-4-3-5	75	2.1	0-8" Moist, orange fine SAND, some Silt, trace Clay; 8-18" Moist, orange, fine SAND and SILT, little Clay, trace round fine Gravel		
35							
36					**End of Boring at 36 ft bgs**		

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 5' bgs; Hollow stem auger and split spoon from 5' to 36' bgs
NAPL encountered from approximately 12 to 16 and 22.5 to 30 ft bgs

PARSONS
DRILLING RECORD

BORING/WELL ID: SB-43

Sheet 1 of 1

Contractor: Advanced Drilling Technology (ADT)
Driller: Chris Stratton, Tom Sheerin
Inspector: Lopa Naik
Rig Type: Track Mounted Hollow Stem Auger CME 55

PROJECT NAME: Con Edison /Farrington Street Works
PROJECT NUMBER: 446109-03000

Location Description: Approx. 90' W of Farrington St., 100' N of 32nd Ave.

GROUNDWATER OBSERVATIONS

Water Level	DTW ~13.5' bgs			
Date	9/27/11			
Time	1155			
Meas. From	ft bgs - Split Spoon			

Weather: Cloudy, 70s-80s, Wind: 0-5 mph NS

Date/Time Start: 09/27/11 1100

Date/Time Finish: 09/27/11 1500

Location Plan

See Site Plan

Sample Depth	Sample I.D.	SPT	Rec. in.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+2							
+1							
0		Vactron			0-12" Dry, fine to coarse GRAVEL		
1		Vactron			1-2' COBBLE		
2		Vactron			2-5' Dry, brown, fine to medium SAND, some sub-round to round fine to coarse Gravel		
3		Vactron		0.0			
4		Vactron					
5		11-9-8-11	24	0	0-12" Dry, black, fine to coarse SAND, little angular fine to medium Gravel		
6					12-24" Brown/tan, fine to medium SAND, trace round fine Gravel		
7		11-12-9-6	24	0	Dry, brown/tan, fine to medium SAND, trace round fine Gravel		
8							
9		1-2-1-1	16	3	0-12" Moist, brown/tan, fine SAND, trace Mica, trace Silt		
10					12-16" Moist, olive green, fine SAND, little round fine Gravel, trace Mica, slight hydrocarbon odor		
11		4-5-5-7	20	70.1	Moist, dark gray, fine to coarse SAND, little round fine Gravel, trace Mica, slight hydrocarbon odor		
12							
13		5-7-7-6	12	170	Wet, black, fine to coarse SAND, trace fine Gravel, trace Mica, NAPL staining/blebs, strong hydrocarbon odor		
14							
15	SB-43(15-17)	6-12-10-6	20	223	Wet, dark gray, fine to medium SAND, trace Mica, trace Silt, NAPL blebs, staining, strong hydrocarbon odor		
16							
17		3-2-2-4	20	92.8	Wet, dark gray, fine SAND, trace Mica, trace Silt, stong hydrocarbon odor		
18							
19		2-3-3-8	18	1.4	Wet, brown/tan, fine SAND, trace Mica, trace Silt		
20							
21		5-6-6-1	24	1.5	Moist, brown/tan, fine SAND, trace sub-round Gravel, trace Mica, trace Silt		
22							
23		6-6-6-8	24	2	Wet, brown/tan, fine SAND, trace Mica, trace Silt		
24							
25		5-6-6-8	24	1.6	Moist, brown/tan, fine SAND, trace Mica, trace Silt		
26							
27		3-3-5-3	24	0.6	Wet, brown/tan, fine SAND, trace Mica, trace Silt		
28							
29	SB-43(29-31)	6-8-7-12	24	2	Moist, brown/tan, fine SAND, trace fine to medium sub-round Gravel, trace Mica, trace Silt		
30							
31					**End of Boring at 31 ft bgs**		

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 5' bgs; Hollow stem auger and split spoon from 5' to 36' bgs
NAPL encountered from approximately 13 to 17 ft bgs

PARSONS
DRILLING RECORD

BORING NO. SB-44 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Chris Capabianco /Jamey Meyers
Inspector: Lopa Naik
Rig Type: Truck Mounted Hollow Stem Auger CME 85

PROJECT NAME: Con Edison /Farrington Street
PROJECT NUMBER: 446110-02000

Location Description: Southern portion of ECI (leased) Yard

Location Plan
See Site Plan

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~16 ft bgs			
Date	9-28-14			
Time	1030			
Meas. From	ft bgs - Split Spoon			

Weather: Cloudy, 70's, wind 5-10 mph NW
Date/Time Start: 9/28/11 9:55
Date/Time Finish: 9/28/11 12:55

Sample Depth	Sample I.D.	SPT	Rec. (%)	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
0		Vac-tron		0.0	0-4" GRAVEL		
1		Vac-tron		0.0	4'-2' CONCRETE		
2		Vac-tron		0.0	2-8' Dry, brown, fine to coarse SAND, some fine to coarse sub-round to round Gravel, little		Slag at 2 ft.
3		Vac-tron			Silt,		
4		Vac-tron		0.0			
5		Vac-tron					
6		Vac-tron		0.0			
7		Vac-tron					
8		5-5-9-13	50	0.9	Dry, olive green, medium to coarse SAND, some angular fine to coarse Gravel, trace Silt		
9							
10		9-7-7-5	50	1.3	Dry, olive green, medium to coarse SAND, some angular fine to coarse Gravel, trace Silt		
11							
12		10-8-9-6	67	0.3	Moist, black, medium to coarse SAND, some round medium to coarse Gravel, trace Silt		
13							
14		3-7-8-5	17	13.5	Moist, black, medium to coarse SAND, little round fine Gravel, trace Silt		
15							
16	SB-44(16.5-18)	7-5-5-5	100	15.0	0-6" Wet, grey, fine to coarse SAND, little round fine Gravel, slight hydrocarbon odor		
17				77.0	6-24" Wet, black, medium to coarse SAND, little round fine Gravel, NAPL blebs, staining		
18		5-8-10-24	100	48.0	Wet, olive green, fine to coarse SAND, little fine Gravel, trace Mica, slight hydrocarbon odor,		
19					staining		
20		3-6-7-12	100	17.3	Moist, dark grey, fine SAND, trace Mica, trace Silt, slight hydrocarbon odor		
21							
22		5-2-1-3	100	21.0	Moist, dark grey, fine to coarse SAND, trace round fine Gravel, trace Mica, slight		
23					hydrocarbon odor		
24		10-9-13-11	100	41.0	0-18" Moist, dark grey, fine to medium SAND, trace round fine to medium Gravel, trace		
25				0.3	Mica, slight hydrocarbon odor; 18-24" Wet, olive green fine SAND, trace Mica		
26		6-8-9-11	75	0.0	Moist, brown/tan, fine SAND, trace Mica		
27							
28	SB-44(28-30)	7-5-5-8	67	0.0	Moist, brown/tan, fine SAND, trace Mica		
29							
30					**End of Boring at 30 ft bgs**		

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 5' bgs; Hollow stem auger and split spoon from 5' to 30' bgs
NAPL encountered from approximately 16.5 to 18 ft bgs

PARSONS
DRILLING RECORD

BORING NO. SB-45 — Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Chris Stratton/German Torres
Inspector: Zohar Lavy
Rig Type: Track Mounted Hollow Stem Auger CME 55

PROJECT NAME: Con Edison /Farrington Street Works
PROJECT NUMBER: 446109-03000

Location Description: South portion of the Hawkeye Yard

Location Plan
See Site Plan

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~20' bgs	DTW		
Date	9/29/2011			
Time	9:05			
Meas. From	ft bgs - Split Spoon			

Weather: Cloudy, slight rain, 70s, wind 5-10 mph E
Date/Time Start: 9/28/2011 - 0940
Date/Time Finish: 9/29/2011 - 1020

Sample Depth	Sample I.D.	SPT	Rec. in.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+3							
+2							
+1							
0		Vactron		NA	0-8" COBBLE		
1		Vactron		0.0	8"-1.5' Dark brown, fine to coarse SAND and sub-angular to round GRAVEL		
2		Vactron		0.0	1.5-2' CONCRETE		
3		Vactron		0.0	2-6' Dry, dark brown, fine to coarse SAND and sub-angular GRAVEL, trace Wood, trace		
4		Vactron			Brick, trace Cobble		
5		2-3-4-13	58	4.2	Dry, orange/brown, fine to coarse SAND, some angular to sub-round Gravel		
6							
7		13-12-14-15	75	7.3	Dry, orange/brown, fine to coarse SAND, some angular to sub-round Gravel, trace Cobble		
8							
9		2-5-6-2	33	28.7	0-4" Dry, orange/brown, fine to coarse SAND, trace sub-angular to round Gravel, trace Silt; 4-8" Moist, gray/black, medium to coarse SAND, staining, hydrocarbon odor, NAPL blebs		
10							
11		6-6-6-5	58	346	Moist, gray/black, medium to coarse SAND, staining, hydrocarbon odor, NAPL blebs		
12							
13	**SB-45(13-15)**	5-6-7-6	75	671	0-10" Moist, gray/black, medium to coarse SAND, staining, hydrocarbon odor, NAPL blebs; 10-18" Wet, dark gray, fine SAND, trace Mica, hydrocarbon odor, slight staining		
14							
15		1-2-1-2	83	395	Wet, dark gray/black, fine to medium SAND, trace Mica, hydrocarbon odor, NAPL blebs/saturated		
16							
17		3-3-3-3	58	321	Wet, dark gray/black, fine to medium SAND, trace Mica, hydrocarbon odor, slight NAPL blebs		
18							
19		3-2-3-7	100	141	0-14" Wet, dark brown, medium SAND, little sub-angular to round fine Gravel, slight hydrocarbon odor; 14-24" Wet, orange/brown, medium SAND, little sub-angular to round fine Gravel, slight hydrocarbon odor		
20							
21		3-4-4-6	100	422	0-18" Wet, orange/brown, medium SAND, little sub-angular to round fine Gravel, slight hydrocarbon odor		
22					18-24" Wet, black, medium SAND, NAPL saturated, strong hydrocarbon odor, staining		
23		5-3-3-2	83	267	0-8" Wet, orange/brown, medium SAND, NAPL blebs, hydrocarbon odor		
24				429	8-12" Wet, black medium SAND, NAPL saturated, strong hydrocarbon odor		
				302	12-20" Wet, orange/brown, medium SAND, NAPL blebs, hydrocarbon odor		
25		4-3-5-6	58	154	Wet, orange/brown, fine to medium SAND, trace Mica, slight hydrocarbon odor		
26							
27	**SB-45(27-29)**	5-4-4-5	100	225	0-6" Wet, orange/brown, fine to medium SAND, trace Mica, slight hydrocarbon odor		
28				692	6-14" Wet, black, medium SAND, NAPL saturated, staining, strong hydrocarbon odor 14-24" Wet, orange/brown, medium to coarse SAND, little sub-round fine Gravel, NAPL blebs, sheen, hydrocarbon odor		
29		4-6-8-8	67	244	Wet, orange/brown, medium to coarse SAND, little sub-round fine Gravel, NAPL blebs,		
30					sheen, hydrocarbon odor		
31		7-8-12-12	75	240	0-10" Wet, orange/brown, medium to coarse SAND, little sub-round fine Gravel, NAPL blebs, sheen, hydrocarbon odor		
32					10-14" Wet, black, medium to coarse SAND, NAPL saturated, staining, strong hydrocarbon odor		
33		5-7-9-12	0	NA	No Recovery		
34							
35		3-4-4-6	50	12.8	Wet, orange/brown, fine to medium SAND, trace Mica, slight hydrocarbon odor		
36							
37		16-14-15-13	0	NA	No Recovery		
38							
39		12-10-10-14	58	14.6	Wet, brown, medium to coarse SAND, hydrocarbon odor		
40							
41		5-8-8-7	0	NA	No Recovery		
42							
43	**SB-45(43-45)**	5-11-8-13	100	1.6	0-16" Wet, orange/brown, medium SAND; 16-24" Wet, orange/brown, fine SAND, trace silt		
44							
45		2-2-9-6	17	2.1	Wet, orange/brown, fine SAND, trace silt		
46							
47					**End of Boring at 47 ft bgs**		

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 5' bgs; Hollow stem auger and split spoon from 5' to 47' bgs
NAPL encountered from approximately 9-19 ft bgs, 21-25 ft bgs, and 27.5 to 33 ft bgs

PARSONS
DRILLING RECORD

BORING/ WELL NO. MW-17 — Sheet 1 of 1

Contractor: Aquifer Drilling Technology
Driller: Chris Migliori/Rayvon Mortley
Inspector: Zohar Lavy
Rig Type: Truck Mounted HSA - B61

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: Farrington St./Con Edison Yard

Weather: Overcast, 50's, Wind: 0-5 mph E
Date/Time Start: 4/29/09 1230
Date/Time Finish: 5/11/09 1140

Location Plan

N

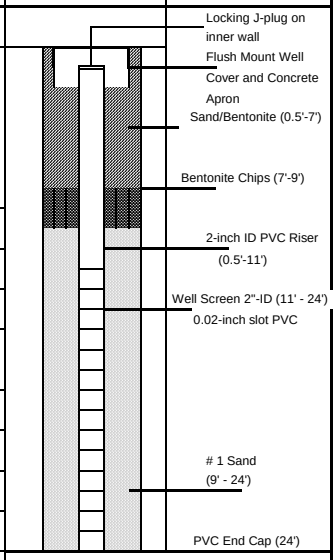
See Site Plan

GROUNDWATER OBSERVATIONS

Water Level	DTW ~13.5	DTW 13.05		
Date	5/11/09	5/26/09		
Time		0940		
Meas. From	Split spoon	Top of Casing		

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL
0		Vac-tron		0.2	0"-2' Dark brown medium SAND and sub-angular GRAVEL, little Cobble, trace Cloth and Brick and Silt
1		Vac-tron			
2		Vac-tron		0.1	2'-3.5' Dark brown medium SAND and fragmented CONCRETE, some Metal
3		Vac-tron		0.8	3.5'-5.5' Dark brown/black medium to coarse SAND, some Cobble, trace Silt and Cloth
4		Vac-tron			
5		Vac-tron		0	5.5'-8' Brown fine to coarse SAND, little Silt, fine to medium angular to sub-round Gravel, moist
6		Vac-tron			
7		Vac-tron			
8		13-5-5-6	0	NA	No Recovery
9					
10		7-5-5-8	0	NA	No Recovery
11					
12		6-9-16-18	21	125.0	0"-2" GRAVEL; 2"-5" Dark brown/black medium to coarse SAND, trace Silt, saturated,
13					hydrocarbon odor, staining
14	MW-17 (14-16)	7-6-8-10	50	207.0	0"-5" Dark brown/black medium to coarse SAND, trace Silt, saturated, hydrocarbon odor,
15					staining; 5"-9" Light grey medium to coarse SAND, saturated, hydrocarbon odor, staining;
					9"-12" Dark brown fine to medium SAND, little Silt, saturated, hydrocarbon odor
16		7-13-17-21	100	12.5	0"-6" Dark brown fine to medium SAND, little Silt, saturated, hydrocarbon odor
17					6"-24" Light grey/tan medium to coarse SAND, saturated
18		5-6-9-14	100	11.6	0"-22" Light grey/tan medium to coarse SAND, trace Silt and Gravel, saturated
19					22"-24" Tan coarse SAND, saturated, slight hydrocarbon odor
20		8-12-13-17	100	2.0	0"-10" Tan coarse SAND, saturated, slight hydrocarbon odor
21					10"-24" Brown fine to medium SAND, little Mica, trace Silt, saturated
22	MW-17 (22-24)	5-7-7-12	50	1.3	Brown fine to medium SAND, little Mica, trace Silt, saturated
23					
24					**End Boring at 24' bgs**
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					

SCHEMATIC



COMMENTS

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

Boring was hand cleared to 8' bgs;
Hollow Stem Augers used from 8'-24' bgs.
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. MW-18 — Sheet 1 of 1

Contractor: Aquifer Drilling Technology
Driller: Chris Migliori/Rayvon Mortley
Inspector: Zohar Lavy
Rig Type: Truck Mounted HSA - B61

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: Farrington St./Con Edison Yard

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~16	DTW 13.87		
Date	5/12/05	5/26/09		
Time		1120		
Meas. From	Split spoon	Top of Casing		

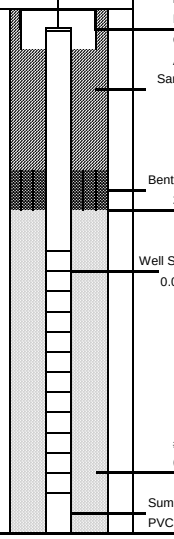
Weather: Clear, 60's, Wind: 0-5 mph N
Date/Time Start: 4/17/09 0900
Date/Time Finish: 5/12/09 1100

Location Plan

N

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL
0		Vac-tron		0.0	0"-6" GRAVEL/BLUESTONE, some coarse SAND, little fine SAND, trace Silt, saturated
1		Vac-tron		0.0	6"-5' Dark brown/black medium to coarse SAND and sub-angular GRAVEL, little Silt, trace
2		Vac-tron			Cobble, saturated
3		Vac-tron			
4		Vac-tron			
5		Vac-tron		0.0	5'-8' Dark brown fine to coarse SAND and SILT, little sub-angular Gravel, moist to saturated
6		Vac-tron			
7		Vac-tron			
8		16-4-5-4	17	7.5	Dark brown/green fine to medium SAND, trace Silt and Gravel, moist
9					
10		6-8-14-18	33	131.0	Tan fine to medium SAND, some black fine to medium Sand, trace Silt, hydrocarbon odor,
11					staining
12		9-12-16-16	63	277.0	Tan fine to medium SAND, some black fine to medium Sand, trace Silt and Mica, hydrocarbon
13					odor, staining
14	MW-18 (14-16)	9-15-20-22	50	305.0	0"-6" Dark grey/black fine to medium SAND, trace Silt and Mica, slightly moist, hydrocarbon
15					odor, staining; 6"-12" Dark brown fine to medium SAND, trace Silt and Mica, moist,
					hydrocarbon odor
16		7-8-13-10	58	248.0	0"-4" Dark brown fine to medium SAND, trace Silt and Mica, saturated, hydrocarbon odor
17					4"-14" Dark grey/brown medium to coarse SAND, saturated, hydrocarbon odor, staining,
					NAPL globules, sheen
18		12-6-4-13	75	169.0	Dark grey/brown medium to coarse SAND, saturated, hydrocarbon odor, staining, small NAPL
19					globules
20		7-11-15-19	75	13.5	Black medium to coarse SAND, saturated, hydrocarbon odor, stained, sheen
21					
22	MW-18 (22-24)	20-13-39-43	58	8.2	Dark tan coarse SAND, trace Mica, saturated
23					
24					**End boring at 24' bgs**
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					



SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

Boring was hand cleared to 8' bgs;
Hollow Stem Augers used from 8'-24' bgs.
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. MW-14 — Sheet 1 of 1

Contractor: Aquifer Drilling Technology
Driller: Chris Migliori/Jeremy Meyers
Inspector: Zohar Lavy
Rig Type: Track Mounted HSA - CME55

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: Farrington St./Hawkeye Yard

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~14	DTW 12.72		
Date	4/16/09	6/1/09		
Time		1100		
Meas. From	Split spoon	Top of Casing		

Weather: Overcast 60's, Wind: 10-15 mph NE

Date/Time Start: 5/8/09 0800

Date/Time Finish: 5/14/09 1130

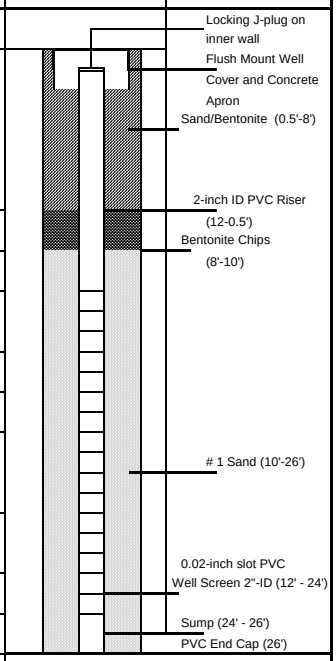
Location Plan

N

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL
0		Vac-tron		0	0"-1' Dark brown fine to medium SAND, some medium to coarse sub-angular Gravel, little Silt
1		Vac-tron		0.0	1'-2' COBBLE STONE
2		Vac-tron		0.0	2'-3.5' Brown/orange fine to coarse SAND, some fine to coarse angular to rounded Gravel,
3		Vac-tron			trace Silt and Concrete and Brick and Metal
4		Vac-tron		0.0	3.5'-8' Orange/brown fine to medium SAND, some medium to coarse sub-round to rounded
5		Vac-tron			Cobble, trace Silt, moist
6		Vac-tron			
7		Vac-tron			
8		10-10-6-5	100	1.3	0"-20" Brown medium to coarse SAND, some sub-angular Gravel, trace Silt and Brick
9					20"-24" Dark tan medium to coarse SAND, little sub-angular Gravel
10		8-5-6-6	25	5.6	Dark brown medium to coarse SAND, little Gravel, trace Brick
11					
12		6-5-5-5	100	258.0	0"-18" Dark grey/black medium SAND, trace Silt, moist, hydrocarbon odor, staining, NAPL
13					globules; 18"-24" Grey fine to medium SAND, trace Silt, moist, hydrocarbon odor, staining,
					NAPL globules
14	MW-14 (14-16)	4-5-5-7	75	340.0	Grey medium to fine SAND, trace Silt and Gravel, saturated, hydrocarbon odor, staining,
15					NAPL
16		6-7-10-13	50	237.0	Dark grey/black fine to medium SAND, saturated, hydrocarbon odor, staining, NAPL globules,
17					sheen
18		1-7-12-8	100	165.0	0"-10 Dark grey/black fine to medium SAND, saturated, hydrocarbon odor, staining, NAPL
19					globules, sheen; 10"-20" Dark grey fine SAND, saturated, hydrocarbon odor, staining, sheen;
					20"-24" Black coarse SAND, some fine Gravel, saturated, hydrocarbon odor, staining, NAPL
					globules.
20		2-2-5-6	75	134.0	0"-15" Black coarse SAND, some fine Gravel, saturated, hydrocarbon odor, staining, NAPL
21					globules; 15"-18" Brown medium to coarse SAND, trace Mica, saturated, hydrocarbon odor,
					staining, small NAPL globules
22		5-7-8-11	50	6.2	0"-9" Brown coarse SAND, some fine Gravel, trace Mica, saturated
23					9"-12" Dark brown coarse SAND, some fine Gravel, trace Mica
24	MW-14 (24-26)	6-8-9-10	50	3.1	Dark brown coarse SAND, some fine Gravel, trace Mica
25					
26					**End Boring at 26' bgs**
27					
28					
29					
30					
31					
32					
33					
34					
35					

SCHEMATIC



SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

Boring was hand cleared to 8' bgs;
Hollow Stem Augers used from 8'-26' bgs.
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. MW-15 — Sheet 1 of 1

Contractor: Aquifer Drilling Technology
Driller: Chris Migliori/Rayvon Mortley
Inspector: Zohar Lavy
Rig Type: Truck Mounted HSA - B61

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: 32nd Ave/ECI Yard

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~14	DTW 11.59		
Date	5/7/09	6/1/09		
Time		0830		
Meas. From	Split spoon	Top of Casing		

Weather: Overcast, showers 50's, Wind: 5-10 mph E

Date/Time Start: 4/17/09 0745

Date/Time Finish: 5/7/09 1135

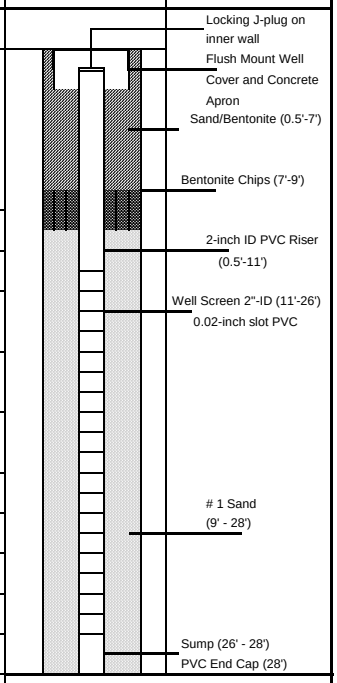
Location Plan

N

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL
0		Vac-tron		0.2	0"-8" Dark brown medium to coarse SAND, some Gravel, little Organic Matter, trace Silt, moist
1		Vac-tron			
2		Vac-tron		0.1	8"-5' Dark brown medium to coarse SAND, some Gravel, little Silt, trace Cobble
3		Vac-tron			
4		Vac-tron			
5		Vac-tron		0	5'-8' Brown fine to coarse SAND, some Silt, little fine to medium sub-angular to sub-round Gravel, moist
6		Vac-tron			
7		Vac-tron			
8		4-5-5-9	17	6.0	Dark brown coarse SAND, trace sub-round Gravel and fine Gravel and Silt, moist
9					
10		6-6-13-13	25	10.4	Dark brown coarse SAND, little fine Gravel, trace Cobble, moist
11					
12		29-21-18-23	58	316.0	0"-6" Dark brown coarse SAND, trace sub-round Gravel and fine Gravel and Silt, moist
13					6"-14" Dark brown/black medium SAND, trace fine Gravel, moist, heavy hydrocarbon odor, staining
14	MW-15 (14-16)	11-16-19-23	100	386.0	0"-4" Dark brown/black medium SAND, trace fine Gravel, saturated, heavy hydrocarbon odor, staining; 4"-24" Dark brown/black medium SAND, saturated, heavy hydrocarbon odor, staining, small NAPL globules, sheen
15					
16		13-29-32-40	75	159.0	0"-6" Dark brown/black medium SAND, saturated, heavy hydrocarbon odor, staining, small NAPL globules, sheen; 6"-18" Dark brown/black medium to coarse SAND and fine Gravel, trace Cobble, saturated, heavy hydrocarbon odor, staining, sheen
17					
18		16-18-26-16	25	38.9	Dark brown medium to coarse SAND and tan fine GRAVEL, little Cobble, saturated, small NAPL globules
19					
20		12-14-14-14	0	NA	No recovery
21					
22		7-10-20-26	33	65.2	Dark brown/black medium to coarse SAND, trace fine Gravel, saturated, hydrocarbon odor, sheen
23					
24		10-10-9-9	50	43.2	0"-8" Dark brown/black medium to coarse SAND, trace fine Gravel, saturated, hydrocarbon odor, sheen; 8"-12" Light brown medium SAND, little Mica, saturated
25					
26		7-8-9-9	21	2.3	Light brown medium SAND, little Mica, saturated
27					
28	MW-15 (28-30)	7-7-5-7	38	2.8	Light brown fine to medium SAND, trace Mica, saturated
29					
30					**End Boring at 30' bgs**
31					
32					
33					
34					
35					

SCHEMATIC



COMMENTS

Boring was hand cleared to 8' bgs;
Hollow Stem Augers used from 8'-28' bgs.
HCN not detected in any interval.

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

PARSONS
DRILLING RECORD

BORING/ WELL NO. MW-16 Sheet 1 of 1

Contractor: Aquifer Drilling Technology
Driller: Chris Migliori/Rayvon Mortley
Inspector: Zohar Lavy
Rig Type: Truck Mounted HSA - B61

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: Farrington St./Con Edison Yard

GROUNDWATER OBSERVATIONS

Water Level	DTW ~14	DTW 14.01'		
Date	5/12/09	5/27/09		
Time		1315		
Meas. From	Split spoon	Top of Casing		

Weather: Clear, 60's, Wind: 0-5 mph N

Date/Time Start: 4/30/09 0800

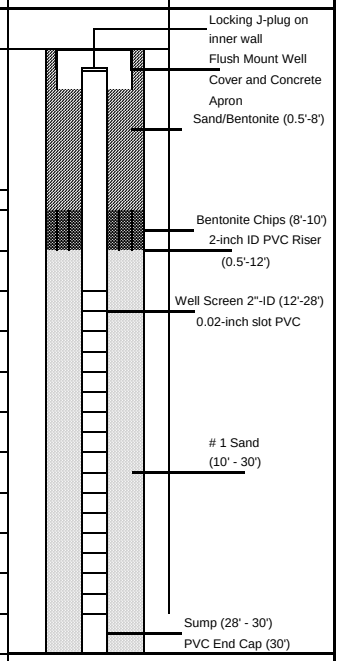
Date/Time Finish: 5/12/09 1000

Location Plan

N

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL
0		Vac-tron		0	0"-1' Dark brown fine to medium SAND, some medium to coarse angular Gravel, little Silt
1		Vac-tron		0.0	1'-2' COBBLE STONE
2		Vac-tron		48.7	2'-3' Black/dark brown fine to medium SAND, some Silt, Metal, Rubber, hydrocarbon odor,
3		Vac-tron			staining
4		Vac-tron		1810.0	3'-7.5' Black/dark brown fine SAND, some Silt, heavy hydrocarbon odor, staining
5		Vac-tron			
6	MW-16 (6)	Vac-tron			
7		WH	25	1312	Black/dark brown fine SAND, some Silt, heavy hydrocarbon odor, staining
8	MW-16 (8-10)	4-7-10-8	75	1148.0	0"-12" Dark brown/black medium SAND, little Silt, trace sub-round Gravel, moist, hydrocarbon
9					odor; 12"-18" Tan medium to coarse SAND, trace Silt, heavy hydrocarbon odor
10		5-8-7-8	50	368.0	0"-12" Tan medium to coarse SAND, heavy hydrocarbon odor
11					
12		5-5-5-10	33	358.0	Dark brown/black coarse SAND, some tan fine to medium Sand, heavy hydrocarbon odor,
13					staining
14	MW-16 (14-16)	5-6-6-6	50	746.0	Dark tan coarse SAND, saturated, hydrocarbon odor, staining, small NAPL globules
15					
16		5-7-11-7	100	555.0	0"-20" Dark tan coarse SAND, saturated, hydrocarbon odor, staining, NAPL; 20"-24" Dark
17					brown/black medium to coarse SAND, trace Silt, hydrocarbon odor, small NAPL globules
18		8-10-9-14	100	410.0	Dark tan coarse SAND, trace Silt, hydrocarbon odor, staining, small NAPL globules
19					
20		7-11-13-13	63	205.0	0"-10" Dark tan/grey coarse SAND, hydrocarbon odor
21					10"-15" Brown medium to coarse SAND, slight hydrocarbon odor
22		5-5-5-5	50	101.0	Brown medium to coarse SAND, slight hydrocarbon odor, small NAPL globules
23					
24		15-10-12-8	33	27.4	Dark brown fine to medium SAND, trace Mica, slight hydrocarbon odor
25					
26		16-18-21-30	42	71.7	Dark brown medium SAND, trace Mica
27					
28	MW-16 (28-30)	8-11-10-13	50	20.8	Dark brown medium SAND, trace Mica
29					
30					**End Boring at 30' bgs**
31					
32					
33					
34					
35					



SAMPLING METHOD
WH = WEIGHT OF RODS
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

Boring was hand cleared to 7.5' bgs; split spoon was manually pushed from 7.5' to 8' bgs
Hollow Stem Augers used from 8'-30' bgs.
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. MW-17 — Sheet 1 of 1

Contractor: Aquifer Drilling Technology
Driller: Chris Migliori/Rayvon Mortley
Inspector: Zohar Lavy
Rig Type: Truck Mounted HSA - B61

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: Farrington St./Con Edison Yard

Weather: Overcast, 50's, Wind: 0-5 mph E
Date/Time Start: 4/29/09 1230
Date/Time Finish: 5/11/09 1140

Location Plan

N

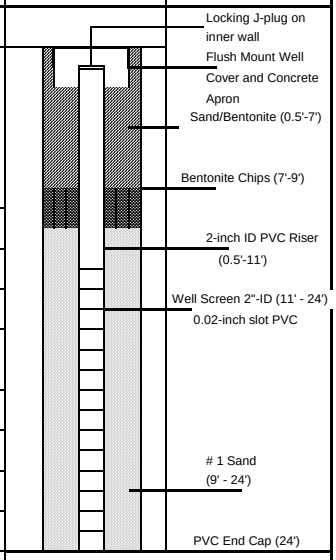
See Site Plan

GROUNDWATER OBSERVATIONS

Water Level	DTW ~13.5	DTW 13.05		
Date	5/11/09	5/26/09		
Time		0940		
Meas. From	Split spoon	Top of Casing		

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL
0		Vac-tron		0.2	0"-2' Dark brown medium SAND and sub-angular GRAVEL, little Cobble, trace Cloth and Brick and Silt
1		Vac-tron			
2		Vac-tron		0.1	2'-3.5' Dark brown medium SAND and fragmented CONCRETE, some Metal
3		Vac-tron		0.8	3.5'-5.5' Dark brown/black medium to coarse SAND, some Cobble, trace Silt and Cloth
4		Vac-tron			
5		Vac-tron		0	5.5'-8' Brown fine to coarse SAND, little Silt, fine to medium angular to sub-round Gravel, moist
6		Vac-tron			
7		Vac-tron			
8		13-5-5-6	0	NA	No Recovery
9					
10		7-5-5-8	0	NA	No Recovery
11					
12		6-9-16-18	21	125.0	0"-2" GRAVEL; 2"-5" Dark brown/black medium to coarse SAND, trace Silt, saturated,
13					hydrocarbon odor, staining
14	MW-17 (14-16)	7-6-8-10	50	207.0	0"-5" Dark brown/black medium to coarse SAND, trace Silt, saturated, hydrocarbon odor,
15					staining; 5"-9" Light grey medium to coarse SAND, saturated, hydrocarbon odor, staining;
					9"-12" Dark brown fine to medium SAND, little Silt, saturated, hydrocarbon odor
16		7-13-17-21	100	12.5	0"-6" Dark brown fine to medium SAND, little Silt, saturated, hydrocarbon odor
17					6"-24" Light grey/tan medium to coarse SAND, saturated
18		5-6-9-14	100	11.6	0"-22" Light grey/tan medium to coarse SAND, trace Silt and Gravel, saturated
19					22"-24" Tan coarse SAND, saturated, slight hydrocarbon odor
20		8-12-13-17	100	2.0	0"-10" Tan coarse SAND, saturated, slight hydrocarbon odor
21					10"-24" Brown fine to medium SAND, little Mica, trace Silt, saturated
22	MW-17 (22-24)	5-7-7-12	50	1.3	Brown fine to medium SAND, little Mica, trace Silt, saturated
23					
24					**End Boring at 24' bgs**
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					

SCHEMATIC



COMMENTS

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

Boring was hand cleared to 8' bgs;
Hollow Stem Augers used from 8'-24' bgs.
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. MW-18 — Sheet 1 of 1

Contractor: Aquifer Drilling Technology
Driller: Chris Migliori/Rayvon Mortley
Inspector: Zohar Lavy
Rig Type: Truck Mounted HSA - B61

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: Farrington St./Con Edison Yard

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~16	DTW 13.87		
Date	5/12/05	5/26/09		
Time		1120		
Meas. From	Split spoon	Top of Casing		

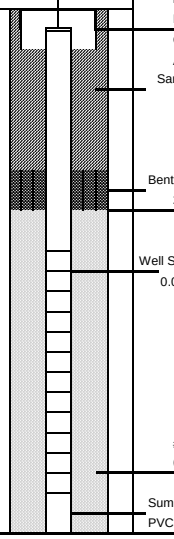
Weather: Clear, 60's, Wind: 0-5 mph N
Date/Time Start: 4/17/09 0900
Date/Time Finish: 5/12/09 1100

Location Plan

N

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL
0		Vac-tron		0.0	0"-6" GRAVEL/BLUESTONE, some coarse SAND, little fine SAND, trace Silt, saturated
1		Vac-tron		0.0	6"-5' Dark brown/black medium to coarse SAND and sub-angular GRAVEL, little Silt, trace
2		Vac-tron			Cobble, saturated
3		Vac-tron			
4		Vac-tron			
5		Vac-tron		0.0	5'-8' Dark brown fine to coarse SAND and SILT, little sub-angular Gravel, moist to saturated
6		Vac-tron			
7		Vac-tron			
8		16-4-5-4	17	7.5	Dark brown/green fine to medium SAND, trace Silt and Gravel, moist
9					
10		6-8-14-18	33	131.0	Tan fine to medium SAND, some black fine to medium Sand, trace Silt, hydrocarbon odor,
11					staining
12		9-12-16-16	63	277.0	Tan fine to medium SAND, some black fine to medium Sand, trace Silt and Mica, hydrocarbon
13					odor, staining
14	MW-18 (14-16)	9-15-20-22	50	305.0	0"-6" Dark grey/black fine to medium SAND, trace Silt and Mica, slightly moist, hydrocarbon
15					odor, staining; 6"-12" Dark brown fine to medium SAND, trace Silt and Mica, moist,
					hydrocarbon odor
16		7-8-13-10	58	248.0	0"-4" Dark brown fine to medium SAND, trace Silt and Mica, saturated, hydrocarbon odor
17					4"-14" Dark grey/brown medium to coarse SAND, saturated, hydrocarbon odor, staining,
					NAPL globules, sheen
18		12-6-4-13	75	169.0	Dark grey/brown medium to coarse SAND, saturated, hydrocarbon odor, staining, small NAPL
19					globules
20		7-11-15-19	75	13.5	Black medium to coarse SAND, saturated, hydrocarbon odor, stained, sheen
21					
22	MW-18 (22-24)	20-13-39-43	58	8.2	Dark tan coarse SAND, trace Mica, saturated
23					
24					**End boring at 24' bgs**
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					



SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

Boring was hand cleared to 8' bgs;
Hollow Stem Augers used from 8'-24' bgs.
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. MW-19 — Sheet 1 of 1

Contractor: Aquifer Drilling Technology
Driller: Jeremy Meyers, Chris Migliori
Inspector: Zohar Lavy
Rig Type: Track Mounted HSA - CME55

PROJECT NAME: Con Edison / Farrington St.
PROJECT NUMBER: 444575-03000

Location Description: 31st Dr. (West of Farrington St.), Parcel 1

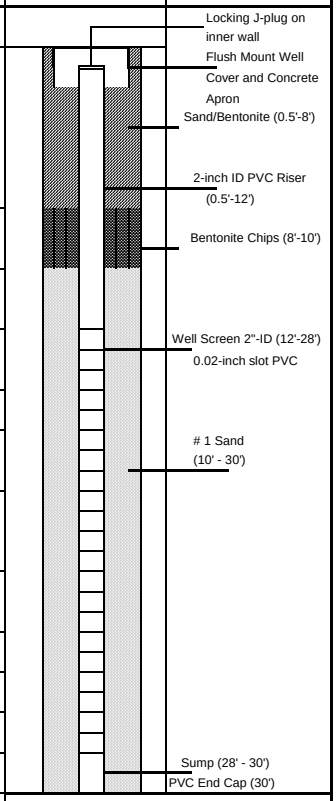
Location Plan — See Site Plan

Weather: Cloudy, 50's, Wind: 5-10 mph W
Date/Time Start: 5/14/09 1130
Date/Time Finish: 5/18/09 1150

GROUNDWATER OBSERVATIONS

Water Level	DTW ~14	DTW 13.8		
Date	5/18/09	5/27/09		
Time		1135		
Meas. From	Split spoon	Top of Casing		

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL
0		Vac-tron		0.0	0"-4" CONCRETE; 4"-3' Brown fine to medium SAND, some Silt, little medium to coarse
1		Vac-tron			angular Gravel and Brick, moist
2		Vac-tron			
3		Vac-tron		1.5	3'-6.5' Dark grey/dark brown fine to medium SAND, little Silt, little fine to coarse angular to
4		Vac-tron			sub-round Gravel and Brick and Clay and Wood, moist
5		Vac-tron			
6		Vac-tron		1.5	6.5'-8' Dark grey/dark brown fine to medium SAND, little Silt, little fine to coarse angular to
7		Vac-tron			sub-round Gravel and Brick and Clay and Wood, moist, slight hydrocarbon odor
8		1-1-50/5"	33	95.0	0"-4" Dark brown/grey fine to medium SAND, little Silt and sub-angular Gravel, moist
9					4"-8" Dark brown/grey fine to medium SAND, some Silt, trace Gravel and Wood, moist,
					hydrocarbon odor
10		1-1-3-5	75	257.0	0"-6" Dark brown/grey fine to medium SAND, some Silt, trace Gravel and Wood, moist,
11					hydrocarbon odor; 6"-18" Dark brown/black medium SAND, little fine Gravel and Silt, moist
					hydrocarbon odor, slight staining
12		2-2-3-4	75	520.0	0"-14" Dark brown/black medium SAND, little fine Gravel and Silt, moist, hydrocarbon odor,
13					slight staining; 14"-18" Brown fine to medium SAND, trace Silt and Mica, moist, slight
					hydrocarnon odor
14		4-5-8-9	0	NA	No Recovery - NAPL observed on Spoon
15					
16	MW-19 (16-18)	5-6-6-9	58	555.0	0"-7" Dark brown/grey fine to medium SAND, trace Mica, saturated, hydrocarbon odor,
17					staining, NAPL; 7"-14" Dark brown medium to coarse SAND, trace Mica, saturated,
					hydrocarbon odor, staining, NAPL globules
18		6-9-4-7	100	477.0	0"-12" Dark brown medium to coarse SAND, trace Mica, saturated, hydrocarbon odor, staining,
19					NAPL globules; 12"-15"Dark brown/black medium to coarse SAND, little sub-round Gravel,
					trace Mica, saturated, hydrocarbon odor, staining, NAPL globules; 15"-24" Dark brown medium
					to coarse SAND and fine GRAVEL, saturated, small NAPL globules
20		4-4-4-6	63	119.0	0"-10" Dark brown medium to coarse SAND and fine GRAVEL, saturated, small NAPL
21					globules; 10"-13" Dark brown fine SAND, some Silt, hydrocarbon odor; 13"-15" Dark brown/grey
					medium to coarse SAND, hydrocarbon odor, sheen
22		8-10-9-10	100	136.0	Dark grey medium to coarse SAND, trace sub-round Gravel, hydrocarbon odor, staining,
23					sheen
24		3-2-4-5	75	84.8	Dark grey medium to coarse SAND, trace sub-round Gravel, hydrocarbon odor, staining,
25					sheen
26		5-6-9-11	50	12.4	0"-5" Dark grey medium to coarse SAND, trace sub-round Gravel, hydrocarbon odor, staining,
27					sheen; 5"-12" Dark brown fine to medium SAND, little Mica
28	MW-19 (28-30)	3-3-6-10	50	3.8	Dark brown fine to medium SAND, little Mica
29					
30					**End Boring at 30' bgs**



SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

Boring was hand cleared to 8' bgs;
Hollow Stem Augers used from 8'-30' bgs.
HCN not detected in any interval.

PARSONS
DRILLING RECORD

BORING/WELL ID: MW-23
Sheet 1 of 1

Contractor: Advanced Drilling Technology (ADT)
Driller: Tom Sheerin, German Torres
Inspector: Zohar Lavy
Rig Type: Track Mounted Hollow Stem Auger (CME 55)

PROJECT NAME: Consolidated Edison - Farrington Street
PROJECT NUMBER: 446109-03000

Location Description:

GROUNDWATER OBSERVATIONS

Water Level	~10'			
Date	9/1/2011			
Time	1005			
Meas. From	ft bgs - Split Spoon			

Weather: Clear, mid 70s-80s, Wind: 0-5 mph East

Date/Time Start: 09/1/11 0945

Date/Time Finish: 09/1/11 1345

See Site Plan

Sample Depth	Sample I.D.	SPT	Rec. (%)	PID (ppm)	TION OF MATERIAL	COMMENTS
+1						
0		Vac-tron		NA	0-4" CONCRETE	
1		Vac-tron		0.0	4"-3' Moist, dark brown, fine to coarse SAND, some Gravel, little Cobble	
2		Vac-tron		0.0	3-5' Moist, dark brown, fine to coarse SAND, some Gravel, little Cobble, trace Boulder and Brick	
3		Vac-tron		0.0		
4		Vac-tron		0.0		
5		7-10-12-13	0	NA	No Recovery	
6						
7		5-5-7-10	58	18.2	0-8" Moist, dark brown, fine to coarse SAND, little Silt, little angular to sub-angular fine Gravel, slight hydrocarbon odor; 8-14" Dry to moist, black, fine SAND and COAL, trace angular Gravel, hydrocarbon odor and staining	
8						
9		5-6-8-6	42	85.6	0-8" Dry to moist, black, fine SAND and COAL, trace angular Gravel, trace Concrete, hydrocarbon odor and staining; 8-10"Dry to moist, black, fine SAND and COAL, trace angular Gravel, trace Concrete, trace Organics and Silt, hydrocarbon odor and staining	
10						
11		7-5-2-2	75	152.0	0-10" Wet, black, fine SAND, some Silt and angular Gravel, little Organics, hydrocarbon odor, slight sheen; 10-18" Orange/brown PEAT, hydrocarbon odor, staining	
12						
13		WH-WH-1-1	0	NA	No Recovery	
14						
15		WH-WH-10-6	50	88.7	0-6" Wet, black, fine SAND and SILT, some Peat, hydrocarbon odor; 6-12" Moist, light gray, fine SAND, little Silt, trace fine round Gravel, slight hydrocarbon odor	
16						
17		4-10-15-10	58	18.5	0-7" Wet, gray/light brown, fine SAND and SILT	
18					7-14" Moist, gray/light brown, fine SAND, little Silt	
19		4-5-7-6	75	29.2	0-5" Moist, gray/light brown, fine SAND, little silt; 5-16" Wet, brown, fine to coarse SAND, trace Silt, slight hydrocarbon odor; 16-18" Wet, brown, fine to coarse SAND, trace Silt, slight Hydrocarbon odor, sheen	
20						
21	MW-23 (21-23)	5-10-10-9	100	486.0	0-12" Wet, brown, fine to medium SAND, trace silt, strong hydrocarbon odor, staining, NAPL blebs, sheen; 12-24" Wet, black, medium SAND, strong hydrocarbon odor, staining, NAPL saturated	
22						
23		15-11-15-14	83	21.2	0-20" Wet, brown, fine to medium SAND, slight sheen, hydrocarbon odor	
24						
25		10-8-7-8	92	25.5	Wet, brown, fine to medium SAND, slight sheen, slight hydrocarbon odor	
26						
27		10-12-12-12	67	22.1	0-5" Wet, brown, fine to medium SAND, slight sheen, slight hydrocarbon odor	
28				1.8	5-16" Moist, brown, fine to medium SAND, trace Silt, trace Mica	
29		7-7-7-8	50	5.8	Moist, brown, fine SAND, trace Silt, trace Mica	
30						
31		12-15-18-17	100	2.3	0-10" Moist, brown, fine SAND, trace Silt, trace Mica	
32				1.6	10-24" Orange/brown, fine SAND and SILT, trace round Gravel	
33		4-7-10-21	33	4.2	Orange/brown, fine SAND and SILT, trace round Gravel, trace Clay	
34						
35		4-8-10-6	100	3.9	Brown/dark gray, fine SAND and SILT, some Clay, trace round fine Gravel	
36						
37		5-8-8-8	100	18.3	Brown/dark gray, fine to medium SAND and SILT, little Clay, trace round fine Gravel	
38						
39	MW-23 (39-41)	10-8-10-10	75	1.5	0-6" Brown/dark gray, fine to medium SAND and SILT, little Clay, trace round fine Gravel	
40					6-18" Wet, dark brown/gray, fine to medium SAND	
41					**End of Boring at 41 ft bgs**	

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 5' bgs; Hollow stem auger and split-spoon from 5' to 41' bgs
NAPL encountered from approximately 21 to 23 ft bgs
Monitoring well not installed at this location

PARSONS
DRILLING RECORD

BORING/WELL ID: MW-24
Sheet 1 of 1

Contractor: Advanced Drilling Technology (ADT)
Driller: Tom Sheerin, German Torres
Inspector: Zohar Lavy
Rig Type: Track Mounted Hollow Stem Auger (CME 55)

PROJECT NAME: Con Edison /Farrington Street Works
PROJECT NUMBER: 446109-03000

Location Description: North sidewalk of 31st Drive.

Location Plan
See Site Plan

GROUNDWATER OBSERVATIONS				
Water Level	~15'			
Date	8/30/2011			
Time	940			
Meas. From	ft bgs - Split Spoon			

Weather: Clear, 70s, Wind: 0-5 mph South
Date/Time Start: 08/30/11 0900
Date/Time Finish: 08/31/11 1330

Sample Depth	Sample I.D.	SPT	Rec. (%)	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+1							
0		Vac-tron		NA	0-4" CONCRETE		
1		Vac-tron		0.0	4-24" Brown, fine to coarse SAND and sub-angular GRAVEL, some Cobble, little Brick		
2		Vac-tron		0.0	24-60" Brown, fine to coarse SAND and sub-angular GRAVEL, some Cobble, little Brick,		
3		Vac-tron		0.0	trace Boulder		
4		Vac-tron		0.0			
5		5-5-20-10	50	0.0	0-8" Dry, dark brown, fine to coarse SAND, little sub-angular to round fine Gravel, trace Silt;		
6					8-12" Moist, dark brown, fine to coarse SAND, little sub-angular to round fine Gravel, trace Silt		
7		30-50/2	25	2.7	Wet, black, fine to coarse SAND, some angular to sub-round fine Gravel, trace Silt		
8							
9		18-10-21-28	25	1.5	0-3" Moist, brown, medium SAND, some angular Gravel and Concrete		
10					3-6" Moist, brown, medium SAND, little sub-angular fine Gravel, hydrocarbon odor		
11		17-26-24-28	58	126.0	0-8" Moist, brown, medium SAND, strong hydrocarbon odor		
12					8-14" Moist, brown, medium SAND, black staining, hydrocarbon odor		
13		5-6-6-7	100	226.0	0-10" Moist, dark brown, fine to medium SAND, trace Silt, trace Mica, black staining, strong		
14					hydrocarbon odor; 10-24" Wet, brown/tan, medium SAND, strong hydrocarbon odor		
15		3-4-5-6	67	238.0	Wet, dark brown, fine to medium SAND, trace Silt, hydrocarbon odor, staining		
16							
17	MW-24 (17-19)	5-7-7-7	58	245.0	Wet, dark brown/gray, fine to medium SAND, hydrocarbon odor and staining		
18							
19		4-4-3-4	67	39.8	Wet, dark brown, medium to coarse SAND, trace sub-round to round fine Gravel, slight		
20					hydrocarbon odor		
21		7-12-10-10	75	14.2	0-6" Wet, dark brown, medium to coarse SAND, trace sub-round to round fine Gravel, slight		
22					hydrocarbon odor; 6-18" Moist, dark brown, fine SAND, trace Silt, trace Mica, slight hydrocarbon odor		
23		4-4-3-2	0	NA	No Recovery		
24							
25		13-7-4-5	58	30.0	Wet, brown, medium to coarse SAND, slight hydrocarbon odor		
26							
27		10-6-6-9	75	46	Wet, brown/gray, medium to coarse SAND, slight hydrocarbon odor		
28							
29		14-5-6-6	83	15	Wet, brown/gray, medium to coarse SAND, slight hydrocarbon odor		
30							
31		16-20-14-16	0	NA	No Recovery		
32							
33		15-18-18-19	0	NA	No Recovery		
34							
35		16-16-12-16	100	14.5	Wet, dark brown, medium to coarse SAND, slight hydrocarbon odor		
36							
37		17-12-12-16	100	294	0-16" Dark brown, medium SAND, hydrocarbon odor		
38	MW-24 (38-40)				16-20" Dark brown, medium SAND, NAPL saturated; 20-24" Wet, dark brown, fine SAND, NAPL blebs		Primarily Heaving Sands (material pushed out of augers; begin sampling at 38 ft bgs)
39		17-16-22-45	100	192	0-8" Wet, dark brown, fine SAND, NAPL blebs		
40				2.5	8-24" Orange/brown, fine SAND and SILT, little clay, trace round fine Gravel		
41	MW-24 (41-42)						
42					**End of Boring at 42 ft bgs**		

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 5' bgs; Hollow stem auger from 5' to 40' bgs
NAPL encountered from approximately 38 to 40 ft bgs
Monitoring well not installed in this location

PARSONS
DRILLING RECORD

BORING/WELL ID: MW-25
Sheet 1 of 1

Contractor: Advanced Drilling Technology (ADT)
Driller: Tom Sheerin/German Terres
Inspector: Zohar Lavy
Rig Type: Track Mounted Hollow Stem Auger CME 55

PROJECT NAME: Consolidated Edison - Farrington Street
PROJECT NUMBER: 446109-03000

Location Description:

Location Plan

N

See Site Plan

Weather: Overcast, cloudy, up to mid 70s, 5-10 mph North East

Date/Time Start: 9/20/2011 ; 0905

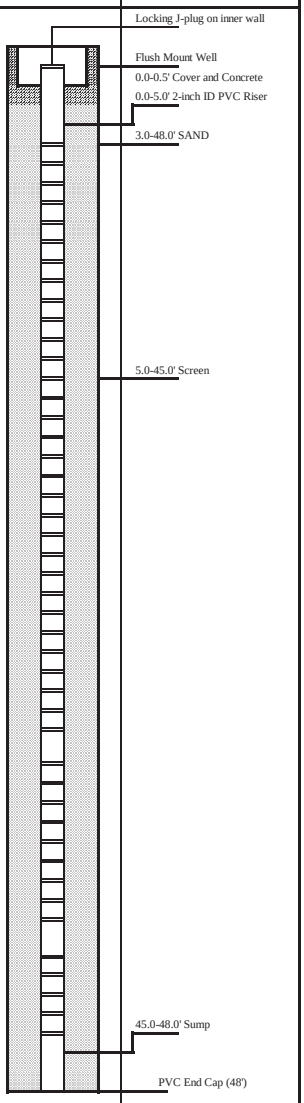
Date/Time Finish: 9/21/2011 ; 1445

GROUNDWATER OBSERVATIONS

Water Level	DTW ~26'	DTW 12.77		
Date	9/20/2011	6/8/2015		
Time	1320	1200		
Meas. From	ft bgs - Split Spoon	Top of PVC		

Sample Depth	Location/ Sample I.D.	SPT	Rec. (%)	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL
+1					
0		Vac-tron		0.0	0-3' Dry, dark brown, fine to coarse SAND, some fine to coarse sub-angular to round Gravel and Brick
1		Vac-tron		0.0	
2		Vac-tron		0.0	3-6' Moist, dark brown, fine to coarse SAND, some fine to coarse sub-angular to round Gravel and Brick
3		Vac-tron		0.0	
4		Vac-tron		0.0	
5		3-2-1-1	0	-	No Recovery
6					
7		1-1-1-1	0	-	No Recovery
8					
9		3-3-8-12	33	185	0-3" Dry, tan, medium SAND and angular GRAVEL
10					3-8" Moist, black, medium SAND, staining, strong hydrocarbon odor, sheen, NAPL blebs
11		9-14-16-10	75	567	0-12" Moist, black, fine to medium SAND, trace Silt, strong hydrocarbon odor, sheen, NAPL blebs-saturation; 12-18" Tan/brown, medium SAND, trace fine round Gravel, strong hydrocarbon odor, yellow NAPL blebs
12					
13		3-4-5-4	67	595	0-4" Tan/brown, medium SAND, trace fine round Gravel, strong hydrocarbon odor, yellow NAPL blebs; 4-16" Tan/brown, medium SAND, trace fine round Gravel, trace Silt, trace Mica, strong hydrocarbon odor, yellow NAPL blebs
	MW-25 (13-15)				
14					
15		3-5-5-7	83	449	0-6" Tan/brown, medium SAND, trace fine round Gravel, trace Silt, trace Mica, strong hydrocarbon odor, yellow NAPL blebs, sheens
16					6-20" Gray, fine to medium SAND, strong hydrocarbon odor and sheens
17		4-5-5-5	100	101	Gray, fine to medium SAND, strong hydrocarbon odor and sheens
18					
19		4-6-8-8	100	108.0	0-12" Gray, fine to medium SAND, slight hydrocarbon odor and sheens
20					12-24" Moist, olive/brown, fine SAND, trace Silt, trace Mica, slight hydrocarbon odor
21		8-10-10-11	83	51.5	Moist, olive/brown, fine SAND, trace Silt, trace Mica, slight hydrocarbon odor
22					
23		6-5-4-5	67	68.7	Moist, olive/brown, fine SAND, trace Silt, trace Mica, slight hydrocarbon odor
24					
25		5-9-11-10	67	10.5	0-13" Moist, brown, fine SAND, trace Silt, trace Mica
26					13-16" Wet, brown medium to coarse SAND
27		6-6-7-10	100	61.2	0-18" Moist, brown, fine to medium SAND, trace Silt, trace Mica, slight hydrocarbon odor
28					18-24" Wet, black, medium SAND, staining, hydrocarbon odor, NAPL blebs
29		6-5-7-10	42	389	Wet, black, medium SAND, staining, hydrocarbon odor, NAPL saturated
30					
31		8-9-8-10	100	776	0-12" Wet, black, medium SAND, trace Silt, staining, hydrocarbon odor, NAPL blebs
32	MW-25 (31-33)				12-24" Moist, black, fine to medium SAND, trace Silt, trace sub-angular to round Gravel, hydrocarbon odor, NAPL blebs
33		8-10-13-15	25	48.3	0-6" Gray/brown, fine SAND, little Silt, trace fine sub-round Gravel
34					
35		19-20-20-19	67	14.5	Wet, brown/orange, fine to medium SAND, trace Silt, trace sub-round to round Gravel
36					
37		23-30-29-31	100	15.5	Moist, red/brown, fine to medium SAND, some Silt, little fine to medium sub-round to round Gravel, trace Mica
38					
39		34-45-49-49	33	24.8	(Rock from 40-41' - Auger through)
40					
41		6-8-7-9	75	419	0-12" Moist, olive/brown, fine to medium SAND, trace Silt, trace angular Gravel/Cobble, hydrocarbon odor, sheen, NAPL blebs; 12-18" Wet, olive/dark gray, medium SAND, trace angular Gravel, staining, strong hydrocarbon odor, NAPL blebs-saturation
42					
43		6-6-7-6	100	445	0-12" Wet, dark gray, medium to coarse SAND, trace fine round Gravel, hydrocarbon odor, NAPL saturated; 12-24" Moist, yellow/brown, fine to medium SAND, little Silt, trace sub-angular to round fine gravel
	MW-25 (43-45)				
44					
45		5-4-6-8	13	-	Moist, yellow/brown, fine to medium SAND, little Silt, trace fine round Gravel, slight hydrocarbon odor
46					
47		-	21	-	Moist, yellow/brown, fine to medium SAND, little Silt, trace fine round Gravel, slight hydrocarbon odor
48					
49		10-10-8-11	100	65.9	0-18" Wet, dark gray, fine to coarse SAND, trace Silt, slight hydrocarbon odor
50				0.8	18-24" Wet, yellow/brown, fine SAND, little Silt, trace round fine to medium Gravel
51		6-5-5-7	100	7.7	0-18" Wet, dark gray, fine to medium SAND, trace Silt, slight hydrocarbon odor
52					18-24" Wet, yellow/brown, fine SAND, some Silt, trace round fine Gravel
53	MW-25 (53-55)	12-10-13-10	100	1.7	0-6" Wet, dark gray, fine to coarse SAND, trace Silt
54					6-24" Wet, brown, fine SAND, trace Clay, trace Mica, trace round fine Gravel
55					**End of Boring at 55 ft bgs**

SCHEMATIC



COMMENTS

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 6' bgs; Hollow stem auger from 5' to 55' bgs
NAPL encountered from approximately 9-16 ft bgs; 27.5-33 ft bgs; and 41-44 ft bgs

PARSONS
DRILLING RECORD

BORING/WELL ID: MW-26

Sheet 1 of 1

Contractor: Advanced Drilling Technology (ADT)
Driller: Tom Sheerin/German Terres
Inspector: Zohar Lavy
Rig Type: Track Mounted Hollow Stem Auger CME 55

PROJECT NAME: Consolidated Edison - Farrington Street
PROJECT NUMBER: 446109-03000

Location Description:

GROUNDWATER OBSERVATIONS				
Water Level	DTW	DTW ~12'		
Date		8/25/2011		
Time		1120		
Meas. From	ft bgs - Split Spoon	Top of Casing		

Weather: Overcast, cloudy, 70s, 5-10 mph North East

Date/Time Start: 08/25/11 1100

Date/Time Finish: 08/25/11 1505

Location Plan

N

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	Rec. (%)	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC	COMMENTS
+1							A Vac-Truck was utilized from 5 to 8 ft bgs therefore lithology was not identified
0					0-10" CONCRETE		
1				0.0	10-4' Moist, brown, fine to coarse SAND, little fine to medium Gravel		
2				0.0	4-5' Moist, brown, fine to coarse SAND, little fine to coarse round Gravel, trace Silt		
3							
4							
5		Vac-Truck					
6		Vac-Truck					
7		Vac-Truck					
8		5-8-12-22	83	0.0	0-10" Dry, light brown, fine to coarse SAND, little sub-round to round Gravel		
9					10-20" Dry, dark brown, fine to coarse SAND, little sub-round to round Gravel		
10		11-20-20-18	33	109.0	0-8" Moist, black, medium to coarse SAND, little sub-round to round fine Gravel, hydrocarbon		
11					odor and staining, NAPL blebs		
12	MW-26 (12-14)	7-7-8-6	67	285.0	0-10" Wet, black, medium to coarse SAND, little sub-round to round fine Gravel, hydrocarbon odor and		
					staining, NAPL blebs		
13					10-16" Wet, black, fine to medium SAND, little sub-round to round Gravel, NAPL saturated, strong		
					hydrocarbon odor, sheen, staining		
14		7-7-4-6	75	27.5	0-8" Wet, brown, medium to coarse SAND, little fine sub-angular Gravel, slight hydrocarbon odor		
15					8-18" Wet, light brown/tan, medium to coarse SAND, trace fine sub-angular Gravel		
16		7-9-9-10	75	26.5	0-14" Wet, light brown/tan, medium to coarse SAND, trace fine sub-angular Gravel		
17					14-18" Wet, dark brown/black, medium to coarse SAND, trace fine sub-angular Gravel		
18		31-21-21-36	67	36.4	0-14" Wet, light brown, medium to coarse SAND, trace sub-round Gravel; 14-16" Wet, black, fine		
19					to medium SAND, some fine sub-angular to round Gravel, slight hydrocarbon odor		
20		30-28-40-35	75	119.0	0-12" Wet, black fine to coarse SAND, trace sub-angular Gravel, NAPL saturated, strong		
21					hydrocarbon odor and staining; 12-18" Wet, black, fine to coarse SAND, NAPL saturated, strong		
					hydrocarbon odor and staining, sheens		
22	MW-26 (22-24)	12-15-17-21	100	154.0	0-14" Wet, black, fine to coarse SAND, NAPL saturated, strong hydrocarbon odor and staining,		
23					sheens; 14-24" Wet, orange/brown, fine to medium SAND, little Silt, trace Mica, slight hydrocarbon odor		
24		12-16-18-20	75	146.0	0-12" Wet, black fine to coarse SAND, strong hydrocarbon odor, sheen, staining, NAPL blebs		
25					12-18" Wet, brown, medium to coarse SAND, hydrocarbon odor, sheen		
26	MW-26 (26-28)	13-15-18-24	100	3.2	0-10" Wet, brown, medium to coarse SAND, hydrocarbon odor, sheen; 10-24" Moist, orange/		
27					brown, fine to medium SAND, some Silt, trace Clay, trace rounded fine Gravel		
28		28-34-29-45	100	Error	Moist, orange/brown fine to medium SAND, some Silt, trace Clay, trace rounded fine Gravel		
29							
30					**End of Boring at 30 ft bgs**		

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
Boring was hand cleared to 5 ft bgs; Air knife/vac-truck to 8' bgs; Auger and split spoon to 30' bgs
No monitoring well installed at this location
NAPL encountered from approximately 10-14 ft bgs and 20-25 ft bgs. Hydrocarbon fingerprinting done for intervals 12-14 and 20-22.

PARSONS
DRILLING RECORD

BORING/WELL ID: MW-29
Sheet 1 of 1

Contractor: Advanced Drilling Technology (ADT)
Driller: Sean Miller/German Terres
Inspector: Zohar Lavy
Rig Type: Track Mounted Hollow Stem Auger CME 55

PROJECT NAME: Consolidated Edison - Farrington Street
PROJECT NUMBER: 446109-03000

Location Description:

Location Plan

See Site Plan

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~13'	DTW		
Date	09/02/2011			
Time	1125			
Meas. From	ft bgs - Split Spoon			

Weather: Clear, low 80s, Wind: 0-5 mph East

Date/Time Start: 09/2/11 1050

Date/Time Finish: 09/6/11 1040

Sample Depth	Sample I.D.	SPT	Rec. (%)	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC	COMMENTS
+1							
0		Vactron		NA	0-6" ASPHALT and GRAVEL		
1		Vactron		0.0	6"-2' Brown, fine to coarse SAND and sub-angular GRAVEL, some Brick		
2		Vactron		2.9	2'-4' Dark brown, fine to coarse SAND, some sub-angular to round Gravel, trace Brick		
3		Vactron		18.0	4'-5' Black, fine to coarse SAND, some sub-angular to round Gravel, trace Brick,		
4		Vactron			hydrocarbon odor and staining		
5		2-4-5-5	58	7.5	0-8" Moist, dark brown/black fine to coarse SAND, little Silt, little angular to sub-round		
6					Gravel, hydrocarbon odor and staining; 8-14" Moist, tan, fine to medium SAND, striated		
					staining, slight hydrocarbon odor		
7		8-7-7-7	67	10.2	Dry, tan fine to medium SAND, little sub-angular Gravel, striated staining, slight		
8					hydrocarbon odor		
9		4-4-4-4	58	307	Dry, light tan/grey, medium SAND, strong hydrocarbon odor		
10							
11		6-6-8-6	75	256.0	0-16" Dry, tan/grey, medium SAND, slight hydrocarbon odor		
12					16-18" Moist, tan/grey, medium SAND, slight hydrocarbon odor		
13		2-2-3-5	75	225.0	0-6" Moist, tan/grey medium SAND, slight hydrocarbon odor; 6-16" Wet, dark grey/		
14					black, medium SAND, strong hydrocarbon odor, sheen, NAPL blebs to saturation,		
					staining; 16-18"Dark grey/black, medium SAND, trace Silt, strong hydrocarbon odor,		
					sheen, NAPL blebs to saturation, staining		
15	MW-29 (15-17)	3-3-2-3	83	476.0	0-20" Wet, dark grey/black, fine to medium SAND, strong hydrocarbon odor, sheen,		
16					staining, NAPL blebs		
17		4-4-4-5	100	207.0	Wet, dark grey, fine to medium SAND, hydrocarbon odor, slight sheen		
18							
19		5-7-8-6	75	38.7	0-12" Wet, dark grey, fine to medium SAND, slight hydrocarbon odor, wet;		
20					12-18" Wet, brown/grey, medium SAND, slight hydrocarbon odor, trace Mica		
21		2-5-7-8	83	15.1	Wet, brown/grey, fine to medium SAND, little Mica, trace sub-angular Gravel, slight		
22					hydrocarbon odor		
23		3-10-11-10	13	12.5	Wet, orange/brown, medium SAND, trace Mica and sub-angular to round fine Gravel,		
24					slight hydrocarbon odor		
25		4-5-5-5	25	3.5	Orange/brown, medium SAND, trace Mica and sub-angular to round fine Gravel		
26							
27		5-4-4-5	58	7.3	Orange/brown, medium to coarse SAND, trace Mica and sub-angular to round fine		
28					Gravel		
29		14-16-15-15	83	12.5	Wet, orange/brown, medium to coarse SAND, trace sub-round Gravel slight		
30					hydrocarbon/chlorinated odor		
31		10-7-8-10	83	11.7	0-18" Wet, orange/brown, medium to coarse SAND, trace sub-round Gravel slight		
32				10.8	hydrocarbon/chlorinated odor; 18-20" Wet, dark brown/black, medium to coarse SAND,		
					trace sub-round Gravel slight hydrocarbon/chlorinated odor		
33		8-7-8-9	42	3	Moist, red/brown, fine SAND, trace Mica and Silt		
34							
35		5-5-6-8	50	6.2	Moist, red/brown, fine SAND, trace Mica and Silt		
36							
37	MW-29 (37-39)	8-9-7-9	92	2.2	Wet, orange/brown, fine to medium SAND, little sub-round to round Gravel, trace Silt		
38							
39					**End of Boring at 39 ft bgs**		

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was hand cleared to 5' bgs
Hollow stem auger and split spoons from 5' to 39' bgs
NAPL encountered from 13-17 ft bgs
No monitoring well installed at this location

PARSONS
DRILLING RECORD

BORING/WELL ID: MW-30
Sheet 1 of 1

Contractor: Advanced Drilling Technology (ADT)
Driller: Tom Sheerin/German Terres
Inspector: Zohar Lavy
Rig Type: Track Mounted Hollow Stem Auger CME 55

PROJECT NAME: Consolidated Edison - Farrington Street
PROJECT NUMBER: 446109-03000

Location Description: Northeastern portion of the Con Ed yard, adjacent to the property line

Location Plan

N

See Site Plan

Weather: Cloudy, light rain, mid 60s, Wind: 5-10 mph West

Date/Time Start: 09/6/11 1420

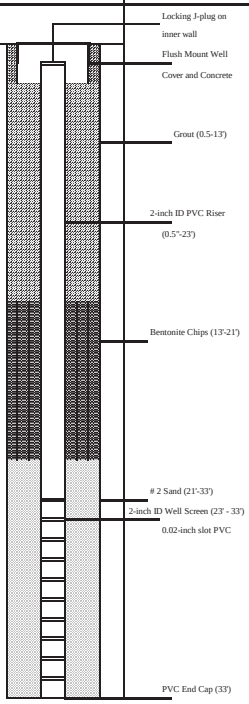
Date/Time Finish: 09/8/11 1000

GROUNDWATER OBSERVATIONS

Water Level	DTW ~14 ft bgs	DTW 14.03		
Date	9/6/2011	11/14/2011		
Time	1500			
Meas. From	ft bgs - Split Spoon	Top of Casing		

Sample Depth	Location/ Sample I.D.	SPT	Rec. (%)	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL
+1					
0		Vac-tron		0.0	0-8" ASPHALT and GRAVEL
1		Vac-tron		0.0	8"-3' Dry, brown, fine to coarse SAND and sub-angular GRAVEL
2		Vac-tron		0.0	3'-5' Moist, brown, fine to coarse SAND and sub-angular GRAVEL, trace Brick, trace Silt
3		Vac-tron			
4		Vac-tron			
5		3-3-4-4	88	1.8	0-10" Moist, light brown/tan, medium SAND, dry; 10-21" Grey fine to medium SAND, trace sub-
6				2.2	angular Gravel
7		7-8-9-9	75	2.0	0-8" Moist, grey, fine to medium SAND, trace sub-angular Gravel and Silt, moist; 8-18" Orange/
8				1.5	tan, medium SAND
9		4-5-8-7	83	2.5	Moist, orange/tan, medium SAND
10					
11		6-5-5-6	50	2.3	Moist, brown/tan, medium SAND
12					
13		6-7-7-10	75	2.8	Moist, brown/grey, fine to medium SAND, trace Silt and Mica
14					
15		2-2-6-8	83	18.6	Wet, brown/grey, fine to medium SAND, trace Silt and Mica, slight hydrocarbon odor
16					
17		7-11-11-8	92	21.5	0-6" Wet, brown/grey, fine to medium SAND, trace Silt and Mica, slight hydrocarbon odor; 6-22"
18					Grey/dark grey, medium SAND, trace Mica and fine sub-angular Gravel, slight hydrocarbon odor
19		7-6-5-7	75	16.7	Wet, dark grey/brown medium to coarse SAND, some fine sub-round to round Gravel, slight
20					hydrocarbon odor
21		6-9-9-10	67	17.5	0-5" Wet, dark grey/brown medium to coarse SAND, some fine sub-round to round Gravel, slight
22					hydrocarbon odor; 5-16" Moist, brown/grey fine SAND, trace Mica and Silt, hydrocarbon odor
23		WH-WH-2-2	33	51.6	Wet, brown/grey fine to medium SAND, trace Mica and sub-round Gravel, slight hydrocarbon
24					odor
25		5-6-8-7	75	69.3	Wet, dark brown/grey medium SAND, little sub-angular to round fine Gravel, slight hydrocarbon
26					odor
27		6-7-7-7	0	NA	No Recovery
28					
29	MW-30 (29-31)	8-10-11-15	67	138	Wet, dark brown/grey fine to coarse SAND, little sub-angular to round fine Gravel, slight
30					hydrocarbon odor
31		12-12-15-16	92	15.6	Wet, dark brown/grey fine to coarse SAND, little sub-angular to round fine Gravel, slight
32					hydrocarbon odor
33	MW-30 (33-35)	5-4-3-5	83	2.1	0-12" Wet, dark brown/grey fine to coarse SAND, little sub-angular to round fine Gravel
34					12-20" Wet, dark brown/grey fine to coarse SAND, some sub-angular to round Gravel
35					**End of Boring at 35 ft bgs**

SCHEMATIC



COMMENTS:
Boring was hand cleared to 5' bgs; Auger and split spoon to 35 ft bgs

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

PARSONS
DRILLING RECORD

BORING/WELL ID: CMW-32
Sheet 1 of 1

Contractor: Advanced Drilling Technology (ADT)
Driller: Tom Sheerin/German Torres
Inspector: Zohar Lavy
Rig Type: Track Mounted Hollow Stem Auger CME 55

PROJECT NAME: Con Edison /Farrington Street Works
PROJECT NUMBER: 446109-03000

North Sidewalk of 31st Drive

Location Plan
See Site Plan

Weather: Cloudy, Mid 60's-70's, Wind: 10-15 mph West
Date/Time Start: 09/08/11 ; 1405
Date/Time Finish: 09/09/11 ; 1325

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~5'	DTW		
Date	09/08/2011			
Time	1405			
Meas. From	ft bgs - Split Spoon			

Sample Depth	Sample I.D.	SPT	Rec. (%)	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+1							
0		Vac-tron		NA	0-4" CONCRETE		
1		Vac-tron		0.0	4"-2' Moist, dark brown, fine to coarse SAND, some Gravel and Cobble, trace Wood, trace Brick		
2		Vac-tron					
3		Vac-tron		0.0	2'-4.5' Moist, dark brown, fine to coarse SAND, little Gravel, trace Cobble, trace Brick		
4		Vac-tron		0.0	4.5'-5' Dark brown, medium to coarse SAND, some Cobble and Brick		
5		7-7-4-2	33	0.0	Wet, black, fine to coarse SAND and COAL, some Slag, little angular Gravel		
6							
7		7-9-7-4	42	10.0	Wet, black, fine to coarse SAND and COAL, some Slag, little angular Gravel		
8							
9		16-8-5-4	50	17.6	Wet, black, fine to coarse SAND and angular to subangular GRAVEL, trace Wood, slight hydrocarbon odor		
10							
11		4-6-6-8	75	178.0	0-8" Wet, black, fine to coarse SAND and angular to subangular GRAVEL, trace Wood, slight hydrocarbon odor		
12					8-18" Dark grey, fine SAND, little Wood, trace Silt, hydrocarbon odor, slight staining		
13	CMW-32 (13-15)	3-6-8-8	83	875.0	0-6" Dark grey, fine SAND, little Wood, trace Silt, hydrocarbon odor, slight staining		
14					6-20" Wet, dark brown, fine SAND and PEAT, strong hydrocarbon odor, staining, NAPL blebs		
15		1-1-1-1	83	88.5	Moist, tan/gray, fine SAND, some Silt, little Peat, hydrocarbon odor		
16							
17		1-2-1-3	75	38.7	0-14" Moist, tan/gray, fine SAND, some Silt, little Peat		
18					14-18" Moist, brown/green, fine SAND, some Silt		
19		6-7-8-9	83	25.1	0-10" Moist, brown/green, fine SAND, some Silt		
20					10-20" Moist, orange/brown, fine to coarse SAND and SILT, trace round fine Gravel		
21		10-10-11-13	50	5.5	Moist, dark brown, fine SAND, some Silt, trace fine sub-round to round Gravel		
22							
23		10-12-12-15	67	1.9	Moist, dark brown/gray, fine SAND and SILT, trace Clay, trace fine round Gravel		
24							
25		5-8-10-11	75	0.5	Moist, light brown/orange, fine SAND and SILT, little Clay, trace fine round Gravel		
26							
27		7-8-8-9	83	3.3	0-2" Moist, light brown/orange, fine SAND and SILT, little Clay, trace fine round Gravel		
					2-8" Brown, medium to coarse SAND, trace Silt		
28					8-20" Moist, orange/gray, fine SAND and SILT, some Clay, trace sub-angular to round Gravel		
29		16-15-15-16	75	4.4	Moist, dark brown, fine to medium SAND, trace Silt, trace Mica		
30							
31		10-12-20-19	92	3.9	0-8" Moist, dark brown/green, fine to medium SAND, trace Silt, trace Mica		
					8-12" Moist, dark brown/green, fine to medium SAND, trace Silt, trace Mica, trace Clay		
32					12-22" Moist, dark brown/gray, fine to medium SAND		
33		6-7-9-10	67	10	Moist, dark brown/gray, fine to medium SAND, trace Silt		
34							
35		12-17-19-18	100	6.3	0-10" Wet, olive/gray, fine to medium SAND, trace Silt		
36					10-22" Wet, olive/gray, fine to medium SAND, trace Clay, trace Mica, trace fine sub-angular to round Gravel; 22-24" Orange/brown, fine to medium SAND and SILT, trace Clay, trace sub-round fine Gravel		
37		22-25-22-24	100	5.7	0-6" Orange/brown, fine to medium SAND and SILT, trace Clay, trace sub-round fine Gravel; 6-24" Dark gray, fine to medium SAND, little Silt, trace sub-angular to round Gravel		
38							
39	CMW-32 (39-41)	10-15-15-17	100	1.5	0-8" Dark gray, fine to medium SAND, little Silt, trace sub-angular to round Gravel		
40					8-24" Brown, medium SAND, trace Silt, little sub-round to round Gravel		
41					**End of Boring at 41 ft bgs**		

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
0-5 ft bgs was hand cleared
5-41 ft bgs advanced with augers and split spoons
NAPL encountered from 13-15 ft bgs
No monitoring well installed at this location

PARSONS
DRILLING RECORD

BORING/WELL ID: CMW-33
Sheet 1 of 1

Contractor: Advanced Drilling Technology (ADT)
Driller: Tom Sheerin/German Torres
Inspector: Zohar Lavy
Rig Type: Track Mounted Hollow Stem Auger CME 55

PROJECT NAME: Con Edison /Farrington Street Works
PROJECT NUMBER: 446109-03000

Location Description:

Location Plan
See Site Plan

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~13.5'	DTW		
Date	9/12/2011			
Time	1020			
Meas. From	ft bgs - Split Spoon			

Weather: Partly Cloudy, High 60s-Low 80s, Wind: 5-10 mph E
Date/Time Start: 09/12/11 ; 0930
Date/Time Finish: 09/13/11 ; 1100

Sample Depth	Sample I.D.	SPT	Rec. (%)	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+1							
0		Vactron		0.0	0-12" CONCRETE		
1		Vactron		0.0	12-24" ASPHALT		
2		Vactron		0.0	2-5' Dry, black, fine to medium SAND, some fine to coarse round Gravel, little Silt		
3		Vactron		0.0			
4		Vactron		0.0			
5		2-2-3-4	75	12.8	0-8" Moist, brown, fine to mdeium SAND, trace Silt		
6					8-18" Slightly moist, brown, fine SAND		
7		4-5-4-5	67	13.2	Slightly moist, brown, fine SAND		
8							
9		5-6-8-10	83	11.4	Moist, olive/brown, fine SAND, trace round Cobble		
10							
11		10-8-7-7	75	6.8	0-14" Dry, dark tan, fine to medium SAND		
12					14-18" Slightly moist, olive/brown fine SAND, trace Silt		
13		7-6-6-5	92	34.9	0-5" Slightly moist, olive/brown fine SAND, trace Silt		
14					5-22" Wet, dark brown, fine SAND, little Mica, trace Silt, slight hydrocarbon odor		
15		5-5-5-6	67	42.8	Wet, dark brown, fine SAND, little Mica, trace Silt, slight hydrocarbon odor		
16							
17	CMW-33 (17-19)	5-4-5-3	83	546.0	0-14" Wet, dark brown, fine SAND, little Mica, trace Silt, slight hydrocarbon odor		
18					14-20" Wet, black, fine to coarse SAND, trace fine round Gravel, trace Mica, strong hydrocarbon odor, staining, NAPL blebs		
19		4-4-5-5	83	383.0	Wet, black, fine to coarse SAND, trace fine round Gravel, trace Mica, strong hydrocarbon		
20					odor, staining, slight NAPL blebs, sheen		
21		5-6-7-9	100	117.0	0-6" Wet, black, fine to coarse SAND, trace fine round Gravel, trace Mica, strong hydrocarbon odor, staining, slight NAPL blebs, sheen		
22					6-24" Wet, dark brown, medium SAND, trace fine round to sub-round Gravel, slight sheen,		
23		4-3-2-3	75	95.6	0-4" Wet, dark brown fine SAND, trace silt, trace mica, slight hydrocarbon odor		
24					4-18" Wet, dark brown, fine to medium SAND, trace Mica, slight hydrocarbon odor		
25		2-2-3-2	58	26.7	Wet, dark brown, fine to medium SAND, trace Mica, slight hydrocarbon odor		
26							
27		2-4-3-4	0	-	No recovery		
28							
29		WH-7-7-5	63	5.6	Wet, dark brown/tan, medium to coarse SAND, little fine sub-round Gravel		
30							
31		8-8-5-5	58	27.3	Wet, brown, medium to coarse SAND		
32							
33		12-12-14-12	100	36	Wet, brown, medium SAND, trace Mica, slight hydrocarbon odor		
34							
35		14-12-25-28	100	38	0-12" Wet, brown, medium SAND, trace Mica, slight hydrocarbon odor		
36					12-24" Orange/brown, fine SAND and SILT, trace fine sub-round to round Gravel		
37		25-25-26-27	50	43	Orange/brown, fine SAND and SILT, trace fine sub-round to round Gravel, slight		
38					hydrocarbon odor		
39		21-20-17-18	83	21	0-18" Orange/brown, fine SAND and SILT, trace fine sub-round to round Gravel, slight		
40					hydrocarbon odor; 18-20" Wet, orange/brown, medium to coarse SAND		
41	CMW-33 (41-43)	6-7-8-7	67	2.1	Wet, orange/brown medium to coarse SAND, trace sub-round Gravel		
42							
43					**End of Boring at 43 ft bgs**		

SAMPLING METHOD
WH = WEIGHT OF RODS
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
0-5 ft bgs was hand cleared
5-43 ft bgs advanced with augers and split spoons
NAPL encountered from 17-21.5 ft bgs
No monitoring well installed at this location

PARSONS
DRILLING RECORD

BORING/WELL ID: CMW-38
Sheet 1 of 1

Contractor: Advanced Drilling Technology (ADT)
Driller: Tom Sheerin
Inspector: Zohar Lavy
Rig Type: Track CME-75

PROJECT NAME: Consolidated Edison - Farrington Street
PROJECT NUMBER: 446109-03000

Location Description:
North side of 31st Drive, behind the Pathmark, on the corner of Farrington St.

Location Plan
See Site Plan

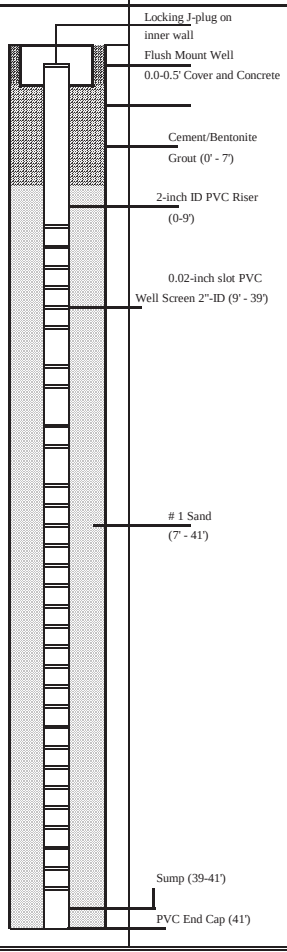
Weather: Partly Cloudy, Low 80s, Wind: 0-5 mph East
Date/Time Start: 9/27/2011 ; 1005
Date/Time Finish: 9/27/2011 ; 1420

GROUNDWATER OBSERVATIONS

Water Level	DTW ~ 13 ft bgs	DTW 17.42		
Date	9/27/12	6/8/2015		
Time	1040	1330		
Meas. From	ft bgs - Split Spoon	Top of PVC		

Sample Depth	Location/ Sample I.D.	SPT	Rec. (%)	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL
+1					
0		Vac-tron		NA	0-6" CONCRETE
1		Vac-tron		0.0	6"-2' Brown fine to coarse SAND, trace Silt
2		Vac-tron		0.0	2-7' Brown fine to coarse SAND, trace Gravel
3		Vac-tron			
4		Vac-tron			
5		Vac-tron			
6		Vac-tron			
7		4-4-6-5	75	2.9	0-14" Dry, brown, fine to medium SAND
8					14-18" Dry/moist, brown/grey fine SAND, trace Silt
9		1-3-3-5	83	3.4	0-10" Dry/moist, brown/grey fine SAND, trace Silt
10					10-20" Moist, brown/grey fine SAND, trace Silt, trace Mica
11		8-8-7-8	92	15.6	Moist, olive/brown, fine SAND, trace Silt, trace Mica, slight hydrocarbon odor
12					
13	CMW-38 (13-15)	4-3-6-5	83	1354	0-8" Moist/wet, olive/brown fine SAND, trace Silt, trace Mica, slight hydrocarbon odor
14					8-20" Wet, dark brown/black, medium SAND, strong hydrocarbon odor, NAPL saturated
15		5-8-5-10	100	1284	0-12" Wet, dark brown/black, fine to medium SAND, strong hydrocarbon odor, NAPL
16					blebs; 12-24" Wet, dark brown/black, medium SAND, strong hydrocarbon odor, NAPL blebs to saturation
17		3-5-6-9	100	1038	0-18" Wet, grey/brown, fine to medium SAND, little Mica, trace sub-angular fine Gravel,
18					NAPL blebs, strong hydrocarbon odor; 18-24" Wet, grey, medium to coarse SAND, NAPL blebs, hydrocarbon odor
19		4-5-5-7	75	127	Wet, grey, medium to coarse SAND, hydrocarbon odor
20					
21		5-3-5-6	50	38.7	Wet, grey, medium to coarse SAND, trace sub-angular fine Gravel, hydrocarbon odor
22					
23		3-5-3-6	58	61.5	Wet, grey/brown, medium SAND, little fine sub-round to round Gravel, hydrocarbon odor
24					
25		5-6-8-12	75	26.7	0-8" Wet, grey/brown, medium SAND, little fine sub-round to round Gravel, hydrocarbon
26					odor; 8-18" Wet, grey/brown, medium SAND, slight hydrocarbon odor
27		3-6-6-11	0	NA	No Recovery
28					
29		12-12-10-11	0	NA	No Recovery
30					
31		6-5-4-5	0	NA	No Recovery
32					
33		3-4-6-6	0	NA	No Recovery
34					
35		9-6-7-12	0	NA	No Recovery
36					
37		4-6-8-10	50	4.2	Moist, red/brown, fine to medium SAND, some Silt, trace fine sub-round to round Gravel,
38					trace Clay
39	CMW-38 (39-41)	5-6-6-5	100	4.2	0-12" Moist, red/brown, fine to medium SAND, some Silt, trace fine sub-round to round
40					Gravel, trace Clay; 12-24" Moist, grey fine to medium SAND, some Silt, trace Clay
41					**End of Boring at 41' bgs**

SCHEMATIC



COMMENTS

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
0-5 ft bgs was hand cleared
5-41 ft bgs advanced with augers and split spoons
NAPL encountered from 13-19 ft bgs

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Brian Kashick		**SB-86**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	63 degrees F and light rain, wind 14mph WSW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		Asphalt surface
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/18 0745		
WATER LEVEL:	15.5'	**DATE/TIME FINISH:**	2022/2/18 1050		
DATE:	2022/2/18	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		1.5/2.0	12	0.0	5.0-5.8' Dry, loose, dark brown, fine to coarse sand, black slate gravel 5.8-6.5' Dry, medium dense, brown, fine to coarse sand		
			13	0.0	6.5-7.0' No recovery		
6			19	0.0			
			15	-			
7		1.5/2.0	22	0.0	7.0-7.3' Dry, medium dense, brown, fine to coarse sand 7.5-7.5' Dry, medium dense, dark borwn, fine to coarse sand		
			19	0.0	7.5-8.5' Dry, loose, brown, fine to coarse sand, little subangular gravel		
8			23	0.0			
			17	-	8.5-9.0' No recovery		
9		1.0/2.0	14	0.0	9.0-9.4' Moist, loose, brown, fine to coarse sand, trace gravel 9.4-10.0' Moist, loose, light gray to light brown, fine to coarse sand, little gravel		
			18	0.0			
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-86**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 63 degrees F and light rain, wind 14mph WSW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/18 0745		
WATER LEVEL: 15.5'	**DATE/TIME FINISH:** 2022/2/18 1050		
DATE: 2022/2/18	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 0	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			16	-	10.0-11.0' No recovery		
			11	-			
11		0.5/2.0		0.0	11.0-11.5' Moist, medium dense, brown, fine to coarse sand, rock "core" in the end of bit 11.0-13.0' No recovery		
				-			
12				-			
				-			
13		2.0/2.0	7	8.1	13.0-14.0 Moist, medium dense, brown, fine to medium sand		
			5	49.5			
14			6	36.8	14.0-15.0 Moist, medium dense, gray, fine to medium sand, little silt, black banding/stain @14.7' (0.1' thick)		
			8	109.5			
15		2.0/2.0	2	4.1	15.0-15.5' Moist, medium dense, gray, fine to medium sand, little silt, black staining 15.5-17.0' Wet, medium dense, gray, fine to medium sand, little silt, black staining		
			5	6.8			
16			5	4.1			
			7	8.7			
17		2.0/2.0	5	5.9	17.0-19.0' Wet, medium dense, gray, fine to medium sand, little silt, light intermittent staining throughout, medium odor		
			13	52.0			
18			15	8.0			
			24	8.5			
19		2.0/2.0	12	0.0	19.0-21.0 Wet, medium dense, gray fine to medium sand, little silt, staining @ 20.0'		
			13	2.4			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-86**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 63 degrees F and light rain, wind 14mph WSW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/18 0745		
WATER LEVEL: 15.5'	**DATE/TIME FINISH:** 2022/2/18 1050		
DATE: 2022/2/18	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			19	3.3			
			17	2.4			
21		1.0/1.0	1	0.0	21.0-22.0' Moist, medium dense, gray, fine to medium sand, little silt, staining throught the core, strong odor		
			1	6.7			
22				5.7	22.0-23.0' Moist, medium dense, gray, fine to medium sand, little silt. NAPL saturated soil blebs (small) floating in water, strong odor		
				4.9			
23				2.1			
				2.8			
24				3.1			
				0.0			
25		1.5/2.0	6	0.0	25.0-26.0' Moist, medium dense, gray, fine to medium sand, little silt. Barely NAPL saturated soil, strong NAPL odor		
			20	0.0			
26			26	0.0	26.0-26.5' Wet, medium dense, light brown, fine to medium sand		
			25	-	26.5-27.0 No recovery		
27					27.0-29.0 Wet, medium dense, light brown, fine to medium sand		
28							
29					EOB @ 29.0'		

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Daniel Johnson		**SB-87**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	37 degrees F and cloudy, wind 10mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		Asphalt surface
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/3/1 1015		
WATER LEVEL:	13.0'	**DATE/TIME FINISH:**	2022/3/1 1315		
DATE:	2022/3/1	**WEIGHT OF HAMMER:**	140 lb.		
TIME:	1110	**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5	SB-87_20220310-5.0-10.0 SB-87_20220310-5.0-10.0-D	1.5/2.0	20	2.4	5.0-6.5' Dry, medium dense, dark brown to black, fine to coarse sand, little angualr gravel, brick and concrete fragments		
			22	17.3			
6			29	14.9			
			30	-	6.5-7.0' No recovery		
7		0.5/2.0	20	9.8	7.0-7.5' Moist, dense, dark brown, fine to coarse sand, little gravel, traces of concrete and brick fragments		
			40	6.7	7.5-9.0' No recovery		
8			42	-			
			37	-			
9		1.0/2.0	42	4.0	9.0-10.0' Moist, dense, dark brown, fine to coarse sand, little gravel, traces of concrete and brick fragments		
			30	16.6			

Notes:

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	**SB-87**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 37 degrees F and cloudy, wind 10mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/3/1 1015		
WATER LEVEL: 13.0'	**DATE/TIME FINISH:** 2022/3/1 1315		
DATE: 2022/3/1	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1110	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			32	-	10.0-11.0' No recovery		
			30	-			
11		1.5/2.0	28	39.5	11.0-12.0' Moist, medium dense, dark brown to black , fine to coarse sand, little gravel and concrete fragments		
			18	83.4			
12			12	191.4	12.0-12.5' Moist, dense, brown, fine to medium sand		
			11	-	12.5-13.0' No recovery		
13	SB-87_20220301-13.0-19.0	1.0/2.0	12	16.6	13.0-13.5' Wet, dense, dark brown to brown, fine to medium sand, odor		
			12	109.3	13.5-14.0' Wet, medium dense, brown, fine to coarse sand, trace gravel, odor		
14			18	69.7	14.0-15.0 No recovery		
			24	-			
15		1.0/2.0	7	68.8	15.0-16.0' Wet, medium dense, dark brown to brown, fine to medium sand, trace of rounded gravel, odor and sheen		
			9	110.3			
16			9	-	16.0-17.0' No recovery		
			10	-			
17		1.5/2.0	6	31.5	17.0-18.0' Wet, medium dense, dark brown, fine to coarse sand, little rounded and subangular, odor		
			10	109.6			
18			17	178.8	18.5-19.0 Wet, denser, gray-ish brown, fine to medium sand		
			10	-	18.5-19.0' No recovery		
19		1.5/2.0	14	333.9	19.0-19.5' Wet, dense, dark brown, fine to coarse sand, little gravel, odor		
			16	278.2	19.5-20.0 Wet, dense, dark brown to black, fine to coarse sand, little gravel, black staining throughout		
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	**SB-87**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 37 degrees F and cloudy, wind 10mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/3/1 1015		
WATER LEVEL: 13.0'	**DATE/TIME FINISH:** 2022/3/1 1315		
DATE: 2022/3/1	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1110	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: 1110	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			18	130.4	20.0-20.5' Wet, dense, gray-ish brown, fine to medium sand 20.5-21.0 No recovery		
			19	15.9			
21		1.0/1.0	6	12.1	21.0-22.0' Wet, medium dense, black, fine to coarse sand, NAPL saturated, strong odor		
			10	24.6			
22					22.0-25.0' Wet, medium dense, black, fine to coarse sand, sheen, strong odor		
23							
24							
25		1.5/2.0	4	16.8	25.0-25.5' Wet, medium dense, black, fine to coarse sand, sheen		
			4	24.7	25.5-26.0' Wet, medium dense, black, fine to coarse sand, black band staining throughout		
26			6	3.7	26.0-26.5' Wet, dense, gray-ish brown, fine to medium sand, trace silt		
			20	5.9	26.5-27.0 No recovery		
27				-	27.0-30.0 Wet, dense, light brown, fine to medium sand, trace silt		
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	**SB-87**
PROJECT LOCATION: Queens, New York	**WEATHER:** 37 degrees F and cloudy, wind 10mph S	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/3/1 1015	
WATER LEVEL: 13.0'	**DATE/TIME FINISH:** 2022/3/1 1315	
DATE: 2022/3/1	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 1110	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: 1110	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
30		2.0/2.0	4.0	0.0	30.0-31.0' Wet, dense, light brown, fine to medium sand		
			10.0	4.2			
31			18.0	0.2	31.0-32.0' Wet, dense, orange brown, fine to medium sand		
			20.0	0.4			
32					32.0-34.0 No recovery		
33							
34					EOB @34.0'		
35							
36							
37							
38							
39							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __4__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-88**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 63 degrees F and light rain, wind 14mph WSW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/18 1130		
WATER LEVEL: 13.0'	**DATE/TIME FINISH:** 2022/2/18 1445		
DATE: 2022/2/18	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1330	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		0.5/2.0	8	0.0	5.0-5.5' Moist, medium dense, dark brown, fine to coarse sand, some subangualr gravel		
			7	-	5.5-7.0' No recovery		
6			14	-			
			11	-			
7		1.0/2.0	16	0.0	7.0-8.0' Dry, loose, gray to brown, fine to coarse sand, some gravel, traces of concrete and brick fragments		
			20	0.0	8.0-9.0' No recovery		
8			20	-			
			17	-			
9		1.5/2.0	12	0.0	9.0-9.5' Dry, dense, brown, fine to medium sand		
			17	0.0	9.5-10.0 Dry, dense, dark brown, ftm sand, traces of concrete fragments and subangular gravel		
10	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __1__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	**SB-88**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 63 degrees F and light rain, wind 14 mph WSW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/18 1130		
WATER LEVEL: 13.0'	**DATE/TIME FINISH:** 2022/2/18 1445		
DATE: 2022/2/18	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1330	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			19	0.0	10.0-10.5' Moist, medium dense, black, fine to coarse sand		
			13		10.5-11.0' No recovery		
11	SB-88_20220218-17.0-21.0	1.0/2/0	8	4.1	11.0-11.5' Moist, dense, gray-ish brown, fine to medium sand		
			9	0.0	11.5-12.0' Moist, dense, gray, fine to coarse sand		
12			8	9.1	12.0-13.0' No recovery		
			8	-	12.5-13.0' No recovery		
13		2.0/2.0	8	0.0	13.0-15.0' Wet, dense, gray-ish brown, fine to coarse sand		
			10	0.0			
14			10	0.0			
			8	0.0			
15		1.5/2.0	6	0.6	15.0-15.5' Wet, dense, gray-ish brown, fine to medium sand		
			6	0.0	15.5-16.5 Wet, dense, black, fine to medium sand, sheen @16.0'		
16			10	26.6			
			8	-	16.5-17.0' No recovery		
17		2.0/2.0	12	0.0	17.0-18.5' Wet, dense, black, fine to medium sand		
			11	0.0			
18			12	14.0	18.5-19.0 Wet, denser, brown, fine to medium sand		
			14	2.4			
19		2.0/2.0	16	8.6	19.0-20.0' Wet, dense, dark brown, fine to medium sand, black staining @19.0' and 0.5' thick		
			16	9.8			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	**SB-88**
PROJECT LOCATION: Queens, New York	**WEATHER:** 63 degrees F and light rain, wind 14 mph WSW	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/18 1130	
WATER LEVEL: 13.0'	**DATE/TIME FINISH:** 2022/2/18 1445	
DATE: 2022/2/18	**WEIGHT OF HAMMER:** 140 lb.	0
TIME: 1330	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: 1330	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			19	11.3	20.0-20.5 Wet, dense, brown, fine to medium sand		
			17	1.3	20.5-21.0 Wet, medium dense, black, fine to coarse sand, sheen		
21					21.0-22.0' Wet, medium dense, black, fine to coarse sand, sheen		
22					22.0-24.0' No recovery		
23							
24					EOB @24.0'		
25							
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Chris Iodice		**SB-90**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	19 degrees F and windy, wind 19 mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		Asphalt surface
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/14 1235		
WATER LEVEL:	15.0'	**DATE/TIME FINISH:**	2022/2/14 1420		
DATE:	2022/2/14	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		3.5/5.0		0.0	5.0-6.0' Moist, medium dense, brown, fine to coarse sand, trace subangular gravel		
				0.0			
6				0.0	6.0-8.5' Moist, medium dense, brown, fine to coarse sand		
				0.0			
7				4.1			
				8.9			
8				9.7	8.5-10.0' No recovery		
				-			
9				-			
				-			
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Iodice	**SB-90**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 19 degrees F and windy, wind 19 mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/14 1235		
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2022/2/14 1420		
DATE: 2022/2/14	**WEIGHT OF HAMMER:** 140 lb.	0	
TIME: 0	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10		3.5/5.0		3.7	10.0-12.5' Moist, medium dense, brown to dark brown, fine to medium sand, light staining throughout and light odor		
				2.1			
11				0.0			
				4.8			
12				12.9			
				20.1	12.5-13.5' Moist, medium dense, brown to dark brown, fine to medium sand, visible staining and sheen throughout, NAPL saturated, strong odor		
13				7.1	13.0-15.0' No recovery		
				-			
14				-			
				-			
15		4.0/5.0		-	15.0-19.0' Wet, medium dense, dark brown, fine to medium sand, trace silt (@ 15.0'). NAPL saturated and strong odor		
				-			
16				-			
				-			
17				-			
				-			
18				-			
				-			
19				-	19.0-20.0' No recovery		
				-			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Chris Iodice		**SB-90**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	19 degrees F and windy, wind 19 mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		Asphalt surface
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/14 1235		
WATER LEVEL:	15.0'	**DATE/TIME FINISH:**	2022/2/14 1420		
DATE:	2022/2/14	**WEIGHT OF HAMMER:**	140 lb.		0
TIME:	0	**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	0	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20	SB-90_20220218-20.0-26.0	5.0/5.0		87.1	20.0-21.5 Wet, medium dense, black, fine to coarse sand, staining @20.0-21.0', NAPL saturated @21.0-21.5', strong NAPL odor		
				61.9			
21				112.1			
				124.4	21.5-23.0 Wet, medium dense, gray, fine to medium sand, little claym trace silt		
22				141.2			
				126.0			
23				67.2	23.0-25.0' Wet, medium dense, dark gray to dark brown, fine to coarse sand, NAPL saturated		
				28.7			
24				0.0			
				0.0			
25		1.0/1.0		0.0	25.0-26.0' Wet, medium dense, light brown, fine to coarse sand, light odor		
				0.0			
26					EOB @26.0'		
					Flash frozen sample was collected from 15.0-19.0', and cut into 15.0-17.0', 17.0-19.0' to fit into cooler.		
27							
28							
29							

Notes:

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	**SB-91**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 28 degrees F and Cloudy, wind 20 mph NNW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/28 1300		
WATER LEVEL: 11.0'	**DATE/TIME FINISH:** 2022/2/28 1445		
DATE: 2022/2/28	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1330	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		0.0/2.0	2	-	5.0-7.0' No recovery		
			2	-			
6			2	-			
			2	-			
7		0.5/2.0	4	0.0	7.0-7.5' Moist, loose, brown, fine to coarse sand, trace gravel		
			5	0.0	7.5-9.0 No recovery		
8			6	-			
			6	-			
9		1.0/2.0	5	0.0	9.0-10.0' Moist, medium dense, brown, fine to coarse sand, trace subangular gravel		
			5	0.1			
10	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __1__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	**SB-91**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 28 degrees F and Cloudy, wind 20 mph NNW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/28 1300		
WATER LEVEL: 11.0'	**DATE/TIME FINISH:** 2022/2/28 1445		
DATE: 2022/2/28	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1330	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			6	-	10.0-11.0' No recovery		
			4	-			
11	SB-91_20220228-11.0-21.0	<0.5/2.0	3	0.1	11.0-11.5 Wet, loose, brown, fine to coarse sand, trace gravel		
			3	-	11.5-13.0 No recovery		
12			2	-			
			1	-			
13		1.0/2.0	WH	0.0	13.0-14.0' Wet, loose, dark brown, fine to coarse sand, NAPL blebs, odor		
			WH	0.1			
14			WH	-	14.0-15.0 No recovery		
			WH	-			
15		1.0/2.0	4	0.1	15.0-19.0' Wet, medium dense, dark brown to black, fine to coarse sand, NAPL blebs, odor		
			7	0.1	16.0-17.0' No recovery		
16			24	-			
			17	-			
17		0.5/2.0	13	6.9	17.0-17.5 Wet, medium dense, black, fine to coarse sand, traces of concrete fragments and gravels		
			40	5.8	17.5-19.0 No recovery		
18			38	-			
			41	-			
19		1.5/2.0	10	4.0	19.0-20.5' Wet, medium dense, black, fine to coarse sand, NAPL blebs, odor		
			14	18.4			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:** SB-91
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	
PROJECT LOCATION: Queens, New York	**WEATHER:** 28 degrees F and Cloudy, wind 20 mph NNW	**LOCATION DESCRIPTION:** Asphalt surface
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/28 1300	
WATER LEVEL: 11.0'	**DATE/TIME FINISH:** 2022/2/28 1445	
DATE: 2022/2/28	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 1330	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: 1330	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			16	87.1			
			14	61.9	20.5-21.0 No recovery		
21		1.0/1.0	8	4.5	21.0-22.0 Wet, medium dense, dark brown to black, fine to coarse sand		
			11	8.5			
22					22.0-24.0 Wet, medium dense, dark brown, fine to coarse sand		
23							
24					EOB @24.0'		
25							
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han + Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-92**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 36 degrees F and Foggy, wind 9 mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/22 1100		
WATER LEVEL: 17.0'	**DATE/TIME FINISH:** 2022/2/22 1220		
DATE: 2022/2/22	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1155	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		1.0/2.0	7	0.1	5.0-5.5' Dry, loose, black, fine to coarse sand fill		
			7	0.1	5.5-6.0 ' Moist, dense, brown, fine to medium sand, trace silt		
6			6	0.1	6.0-7.0 No recovery		
			5	0.1			
7		2.0/2.0	5	0.1	7.0-7.5' Moist, dense, brown, fine to medium sand, trace silt		
			2	0.1	7.5-9.0 Moist, dense, black, fine to medium sand, some clay		
8			3	0.1			
			1	0.1			
9	SB-92_20220222-9.0-17.0	1.5/2.0	1	0.1	9.0-9.5' Moist, dense, black, fine to medium sand, some clay		
			2	12.4	9.5-10.5' Moist, dense, gray-ish brown, fine to medium sand, some clay		
10	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __1__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han + Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-92**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 36 degrees F and Foggy, wind 9 mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/22 1100		
WATER LEVEL: 17.0'	**DATE/TIME FINISH:** 2022/2/22 1220		
DATE: 2022/2/22	**WEIGHT OF HAMMER:** 140 lb.	0	
TIME: 1155	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			3	11.3			
			7	-			
11		1.5/2.0	1	17.6	11.0-12.0' Moist, medium dense, black, fine to medium sand, trace gravel		
			2	29.2			
12			3	58.3	12.0-12.5' Moist, medium dense, black to gray, fine to medium sand, trace gravel, odor		
			7	-	12.5-13.0' No recovery		
13		1.5/2.0	13	43.9	13.0-14.5' Moist, medium dense, black to gray, fine to medium sand		
			13	56.2			
14			12	27.2			
			12	-	14.5-15.0 No recovery		
15		2.0/2.0	9	16.4	15.0-17.0' Moist, dense, gray to brown, fine to medium sand, trace silt		
			7	35.5			
16			9	35.1			
			8	37.4			
17		2.0/2.0	4	12.5	17.0-18.5 Wet, dense, gray to brown, fine to medium sand, trace silt		
			5	21.9			
18			5	0.9			
			8	2.9	18.5-19.0 Wet, dense, gray to brown, fine to medium sand		
19		2.0/2.0	5	4.7	19.0-21.0' Wet, medium dense, gray to brown, fine to coarse sand, trace silt		
			6	29.2			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han + Aaron Feshbach-Meriney	**BORING/WELL NO.:** SB-92
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 36 degrees F and Foggy, wind 9 mph NE	**LOCATION DESCRIPTION:** Asphalt surface
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/22 1100	0
WATER LEVEL: 17.0'	**DATE/TIME FINISH:** 2022/2/22 1220	
DATE: 2022/2/22	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 1155	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: 1155	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			8	10.8			
			10	3.8			
21		1.0/1.0	3	1.5	21.0-22.0 Wet, medium dense, gray-ish brown, fine to coarse sand		
			5	0.7			
22					22.0-24.5 Wet, medium dense, gray-ish brown, fine to coarse sand		
23							
24							
					24.5-25.0 Wet, medium dense, black, fine to coarse sand		
25					EOB @25.0'		
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Brian Kashick		**SB-93**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	37 degrees F and Partly cloudy, wind 12 mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		Asphalt surface
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/8 0900		
WATER LEVEL:	17.0'	**DATE/TIME FINISH:**	2022/2/9 0940		
DATE:	2022/2/8	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5			1	-	5.0-5.5' Dry, medium dense, dark brown, fine to coarse sand, little subangular gravel		
			WH	-	5.5-7.0 ' No recovery		
6			WH	-			
				-			
7				-	7.0-8.0' Sonic (solid concrete)		
				-			
8			8	9.3	8.0-8.5' Moist, dense, dark brown, fine to medium sand		
			12	2.1	8.5-9.0' Moist, dense, dark brown, fine to medium sand, trace gravel		
9			19	-	9.0-10.0' No recovery		
			24	-			
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __5__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-93**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 37 degrees F and Partly cloudy, wind 12 mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/8 0900		
WATER LEVEL: 17.0'	**DATE/TIME FINISH:** 2022/2/9 0940		
DATE: 2022/2/8	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10		1.5/2.0	16	27.2	10.0-10.5' Moist, medium dense, dark brown, fine to coarse sand, some subangular gravel		
			28	26.9	10.5-11.5' Moist, medium dense, brown, fine to coarse sand, some gravel		
11	SB-86_20220218-11.0-21.0		31	7.1			
			28	-	11.5-12.0' No recovery		
12		2.0/2.0	21	5.1	12.0-13.0' Moist, medium dense, dark brown, fine to coarse sand		
			20	7.6			
13			23	1.6	13.0-13.6' Moist, dense, brown, fine to medium sand, some silt		
			20	19.7	13.6-14.0' Moist, medium dense, light brown, fine to coarse sand		
14		2.0/2.0	19	2.7	14.0-16.0' Moist, medium dense, black, fine to coarse sand		
			22	1.5			
15			26	1.7			
			26	1.7			
16		2.0/2.0	9	4.2	16.0-17.0' Moist, medium dense, black, fine to coarse sand		
			8	23.0			
17			12	20.0	17.0-18.0' Wet, medium dense, medium dense, fine to coarse sand		
			20	9.0			
18	SB-93_20220209-18.0-22.0	2.0/2.0	4	3.2	18.0-19.0' Wet, medium dense, black, fine to coarse sand		
			7	2.2			
19			7	4.4	19.0-20.0' Wet, medium dense, brown, fine to medium sand		
			8	4.9			

20 Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __5__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-93**
PROJECT LOCATION: Queens, New York	**WEATHER:** 37 degrees F and Partly cloudy, wind 12 mph NW	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/8 0900	
WATER LEVEL: 17.0'	**DATE/TIME FINISH:** 2022/2/9 0940	
DATE: 2022/2/8	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM:	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20		2.0/2.0	3	12.6	20.0-21.5' Wet, medium dense, black, fine to coarse sand, odor		
			6	7.2			
21			11	4.6			
			29	2.3	21.5-22.0' Wet, dense, brown, fine to coarse sand, NAPL blebs		
22					22.0-23.0' Wet, dense, brown, fine to coarse sand		
23					23.0-24.0' Wet, dense, brown, fine to coarse sand, little silt		
24					24.0-25.0' Wet, medium dense, black, fine to coarse sand		
25			1		25.0-27.0' No recovery		
			1		25.0-29.0' Wet, medium dense, black, fine sand		
26			3				
			5				
27							
28							
29					29.0-30.0' Wet, dense, brown, fine sand, little silt		

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __5__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-93**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 37 degrees F and Partly cloudy, wind 12 mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/8 0900		
WATER LEVEL: 17.0'	**DATE/TIME FINISH:** 2022/2/9 0940		
DATE: 2022/2/8	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM:	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
30		2.0/2.0	3	72.1	30.0-31.7' Wet, dense, black, fine to coarse sand, odor		
			8	32.2	31.7-32.0' Wet, medium dense, light brown to dark brown, fine to coarse sand		
31			14	125.1			
			19	117.0			
32					32.0-35.0' Wet, medium dense, dark brown, fine to coarse sand		
33							
34							
35		1.5/2.0	3	32.2	35.0-40.0' Wet, medium dense, brown, fine to coarse sand, NAPL blebs at 37.8' to 40'		
			4	26.6			
36			4	15.9			
			5	-			
37							
38							
39							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __4__ of __5__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:** SB-93
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 37 degrees F and Partly cloudy, wind 12 mph NW	**LOCATION DESCRIPTION:** Asphalt surface
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/8 0900	
WATER LEVEL: 17.0'	**DATE/TIME FINISH:** 2022/2/9 0940	
DATE: 2022/2/8	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM:	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
40		1.5/2.0	11	0.5	40.0-41.0' Wet, dense, brown, fine to coarse sand		
			16	0.9	41.0-45.0' wet, medium dense, brown, fine to coarse sand		
41			27	1.2			
			32	-			
42							
43							
44							
45		0.5/2.0	9	0.5	45.0-45.5' Wet, medium dense, brown, fine to coarse sand		
			16	-	45.5-47.0' No recovery 47.0-49.0' Wet, medium dense, brown, fine to coarse sand, trace subangular gravel		
46			29	-			
			40	-			
47							
48							
49					EOB @49.0'		

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __5__ of __5__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Brian Kashick		**SB-94**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	19 degrees F and windy, wind 19 mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		Asphalt surface
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/14 1000		
WATER LEVEL:	15.0'	**DATE/TIME FINISH:**	2022/2/14 1420		
DATE:	2022/2/14	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		0.5/2.0	4	0.1	5.0-5.5' Dry, loose, dark brwon, fine to coarse sand, little subangular gravel		
			9	-	5.5-7.0 No recovery		
6			6	-			
			5	-			
7		0.0/2.0		-	7.0-9.0 concrete and brick		
				-			
8				-			
				-			
9		1.5/2.0	14	0.2	9.0-9.5' Moist, medium densem black, fine to coarse sand, trace subangular gravel, odor and NAPL blebs		
			11	48.9	9.5-10.5' Moist, dense, gray-ish brown, fine to coarse sand		
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __4__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-94**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 19 degrees F and windy, wind 19 mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/14 1000		
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2022/2/14 1420		
DATE: 2022/2/14	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			13	6.1			
			13	-	10.5-11.0' No recovery		
11		1.0/2.0	10	11.4	11.0-12.0' Moist, dense, gray-ish brown, fine to coarse sand		
			21	3.0	12.0-13.0' No recovery		
12			26	-			
			17	-			
13		0.0/2.0	11	-	13.0-15.0 No recovery		
			13	-			
14			14	-			
			15	-			
15		1.5/2.0	1	19.4	15.0-16.5' Wet, dense, dark brown to black, fine to medium sand, odor		
			1	169.3			
16			5	403.6			
			7	-	16.0-17.0' No recovery		
17		0.5/2.0	1	66.9	17.0-17.5' Wet, dense, dark brown to black, fine to medium sand, odor		
			3				
18			7				
			8				
19	SB-94_20220214-19.0-23.0	1.0/2.0	3	24.6	19.0-20.0' Wet, dense, dark brown to black, fine to medium sand		
			8	77.6			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-94**
PROJECT LOCATION: Queens, New York	**WEATHER:** 19 degrees F and windy, wind 19 mph NW	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/14 1000	
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2022/2/14 1420	
DATE: 2022/2/14	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM:	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			5		20.0-21.0' No recovery		
			6				
21		1.0/1.0	5	124.9	21.0-21.5' Wet, dense, dark brown to black, fine to medium sand		
			8	135.0	21.5-22.0' Wet, dense, brown, fine to medium sand, odor 22.0-22.5' Wet, dense brown fine to medium sand, strong odor, NAPL blebs		
22							
23							
24							
25		2.0/2.0	1	16.5	25.0-26.0' Wet, dense, brown, fine to medium sand		
			2	14.9			
26			3	8.5	26.0-27.0' Wet, dense, brown, fine to coarse sand, little silt		
			5	36.5	27.0-29.0' Wet, dense, dark brown, fine to coarse sand, little silt		
27							
28							
29					29.0-29.5' Wet, dense, black, fine to coarse sand, little silt		
					29.5-30.0' Wet, dense, dark brown, fine to coarse sand, little silt, NAPL blebs		

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-94**
PROJECT LOCATION: Queens, New York	**WEATHER:** 19 degrees F and windy, wind 19 mph NW	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	Asphalt surface
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/14 1000	
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2022/2/14 1420	
DATE: 2022/2/14	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM:	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
30		2.0/2.0	6	2.6	30.0-31.0' Wet, dense, dark brown, fine to coarse sand 31.0-32.0' SAA, NAPL blebs		
			8	1.3			
31			18	7.9			
			25	3.9			
32					32.0-35.0' Wet, dense, dark brown, fine to coarse sand		
33							
34							
35		2.0/2.0	8	84.5	35.0-36.8' Wet, dense, black fine to medium sand, strong odor		
			10	170.0			
36			17	158.3			
			19	370.3	36.8-37.0 Wet, dense, brown, fine to medium sand, little silt, strong odor		
37					EOB @37.0'		
38							
39							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __4__ of __4__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Brian Kashick		**SB-95**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	32 degrees F and mostly cloudy, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/3 0900		
WATER LEVEL:	16.0'	**DATE/TIME FINISH:**	2022/2/3 1120		
DATE:	2/3/2022	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4					4.0-5.0' Concrete		
		5.0/5.0					
5					5.0-6.0' Cocrete		
6		1.5/2.0	18	0.0	6.0-7.0' Wet, loose, brown to gray, fine to medium sand, trace silt		
			33	0.0			
7			14	0.0	7.0-7.5' Moist, loose, light brown, fine to medium sand, trace silt		
			16	0.6	7.5-8.0' No Recovery		
8		2.0/2.0	17	0.0	8.0-10.0' Moist, loose, light brown, fine to medium sand, trace silt		
			16	0.0			
9		1.5/2.0	14	0.0			
			17	21.0			
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-95**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 32 degrees F and mostly cloudy, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/3 0900		
WATER LEVEL: 16.0'	**DATE/TIME FINISH:** 2022/2/3 1120		
DATE: 2/3/2022	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10	SB-95_20220203-10-20	1.5/2.0	6	0.0	10-11.5' Moist, loose, dark brown to dark gray, fine to medium sand, trace silt		
			8	194.1			
11			12	4.0			
			21	44.6	11.5-12' No Recovery		
12		1.5/2	11	72.3	12-13' Moist, loose, dark brown to dark gray, fine to medium sand, trace silt		
			13	342.0			
13			15	222.1	13.0-13.5 Moist, dense, gray brown, fine to coarse sand		
			13	87.8	13.5-14.0' No recovery		
14		1.5/2	11	118.2	14.0-15.5 Moist, dense, gray brown, fine to coarse sand		
			7	72.4	14.5' Black band staining		
15			7	377.0			
			7	128.4	15.5-16.0' No recovery		
16		1.5/2.0	3	2.6	16.0-17.5' Wet, dense, gray, fine to coarse sand		
			5	42.3			
17			6	93.1			
			9	184.4	17.5-18.0' No Recovery		
18		1.5/20	2	6.8	18.0-19.0' Wet, Dense, gray, fine to coarse sand		
			5	191.3			
19		1.0/2.0	6	33.1	19.0-19.5' Wet, medium dense, gray, fine to medium sand, trace silt		
			6		19.5-20.0' No recovery		
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:** SB-95
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 32 degrees F and mostly cloudy, wind 8mph NE	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/3 0900	
WATER LEVEL: 16.0'	**DATE/TIME FINISH:** 2022/2/3 1120	
DATE: 2/3/2022	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: in boring	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20		1.5/2.0	4	9.7	20-21.5' Wet, medium dense, gray, fine to medium sand, trace silt		
			9	9.6	20.5' Black staining		
21		1.0/1.0	11	39.1	21.0-22' No Recovery		
			9				
22		1.5/2	7	0.0	22.0-23.5' Wet, medium dense, gray, fine to coarse sand		
			8	0.7	22.5' Black staining		
23			14	0.6			
			17	0.0			
24		1.0/1.0	9	1.3	24.0-25.0 Wet, medium dense, gray, fine to coarse sand		
			11	27.0			
25					EOB @ 25'		
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Brian Kashick		**SB-96**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	32 degrees F and mostly cloudy, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/11 1045		
WATER LEVEL:	15.0'	**DATE/TIME FINISH:**	2022/2/11 1430		
DATE:	2/11/2022	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		2.0/2.0	3	3.0	5.0-6.0' Moist, dense, brown, fine to medium sand, traces of subangular gravel		
			2	13.6			
6			2	7.2	6.0-7.0' Moist, medium dense, black fine to coarse sand, traces of concrete fragments and rounded gravel		
			5	2.5			
7		0.0/2.0	7		7.0-9.0' No recovery		
			10				
8		2.0/2.0	8				
			16				
9		0.5/2.0	25	18.0	9.0-9.5' Moist, loose, black fine to coarse sand, some rounded and subangular gravel		
			28		9.5-11.0' No Recovery		
10	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __1__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-96**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 32 degrees F and mostly cloudy, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/11 1045		
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2022/2/11 1430		
DATE: 2/11/2022	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			32				
			30				
11	SB-96_20220211-11.0-15.0	1.5/2.0	17	9.5	11.0-11.5' Moist, loose, black fine to coarse sand, little gravel, odors		
			16	55.0	11.5-13' Moist, medium dense, brown, fine to medium sand, traces of silt		
12			10	49.6			
			12				
13		1.5/2.0	6	20.8	13.0-15.0' Moist, medium dense, brown, fine to medium sand, traces of silt, odors		
			6	13.9			
14			7	4.0			
			9	43.9			
15		1.5/2.0	3	3.3	15-15.5' Wet, dense, black, fine to medium sand, odors		
			6	13.5	15.5-16.5' Wet, dense, black, fine to coarse sand, sheen, odors		
16			7	9.4			
			10				
17		2.0/2.0	13	0.9	17.0-18.5' Wet, dense, black, fine to coarse sand, little silt		
			12	0.9			
18		1.5/20	15	13.9			
			18	39.5	18.5-19.0' Wet, dense, brown to black, fine to coarse sand		
19		2.0/2.0	10	0.7	19.0-20.0' Wet, medium dense, black, fine to coarse sand		
			15	1.4			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:** SB-96
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 32 degrees F and mostly cloudy, wind 8mph NE	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/11 1045	
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2022/2/11 1430	
DATE: 2/11/2022	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			13	8.5	20.0-21.0' Moist, dense, brown, fine to medium sand, odor		
			17	19.3			
21		1.0/1.0	2	33.0	21.0-21.5' SAA, NAPL blebs, odor		
			4	11.0	21.5-25.0' Wet, dense, brown to black, fine to medium sand, odors		
22							
23							
24					24.0-24.5' SAA, NAPL blebs, odors		
25		0.0/2.0	3		25.0-27.0' No recovery		
			2				
26			3				
			16				
27					27.0-29.0' Wet, dense, dark brown, fine to medium sand, NAPL blebs		
28							
					28.5-30.0' Wet, dense, brown, fine to medium sand		
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-96**
PROJECT LOCATION: Queens, New York	**WEATHER:** 32 degrees F and mostly cloudy, wind 8mph NE	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/11 1045	
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2022/2/11 1430	
DATE: 2/11/2022	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
30		1.5/2.0	7	9.8	30.0-30.5' Wet, medium dense, dark brown, fine to coarse sand		
			11	11.7	30.5-31.0' Wet, medium dense, dark brown, fine to medium sand		
31			24	10.0	31.0-31.5' Wet, dense, light brown, fine sand, some silt		
			48		31.5-32.0' No recovery		
32					32.0-34.5' Wet, dense, light brown, fine to medium sand, traces of silt		
33							
34							
					34.5-35.0' Wet, dense, reddish-brown, fine sand, little silt, and trace clay		
35		2.0/2.0	5	2.8	35.0-36.5' Wet, medium dense, dark brown to black, fine to coarse sand		
			11	20.2			
36			12	1.8			
			12	1.8	36.5-37.0' Wet, dense, reddish-brown to brown, fine to medium sand, little silt, and trace clay		
37					EOB @ 37.0' bgs		
38							
39							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __4__ of __4__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han and AFM	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Brian Kashick		**SB-97**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	32 degrees F and mostly cloudy, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/21 1230		
WATER LEVEL:	13.50	**DATE/TIME FINISH:**	2022/2/21 1440		
DATE:	2022/2/21	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automated Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		1.5/2.0		17.7	5.0-5.5' Dry, medium dense, dark brown, fine to coarse sand, strong odor		
				150.3	5.5-6.5' Dry, dense, yellow brown, fine to medium sand, traces of silt, strong odor		
6				366.6			
				301.9	6.5-7.0' No Recovery		
7		1.5/2.0		110.3	7.0-7.5' Dry, loose, black, fine to coarse sand, little subangular gravel, strong odor		
				447.1	7.5-8.5' Dry, dense, light brown, fine to medium sand, traces of subangular gravel		
8				336.3			
					8.5-9.0' No recovery		
9		1.0/2.0		233.6	9.0-10.0' Dry, medium dense, light brown, fine to medium sand, traces of subangular gravel		
				348.6			
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han and AFM	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-97**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 32 degrees F and mostly cloudy, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/21 1230		
WATER LEVEL: 13.50	**DATE/TIME FINISH:** 2022/2/21 1440		
DATE: 2022/2/21	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automated Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10				1.6			
					10.5-11.0' No recovery		
11		2.0/2.0	6	0.3	11.0-13.0' Moist, medium dense, brown to black, fine to medium sand		
			7	15.0			
12			8	30.5			
			10	14.5			
13	SB-97_20220221-13.0-19.0	1.5/2.0	6	16.2	13.0-13.5' Wet, medium dense, brown to black, fine to medium sand, odor		
			6	3.6	13.5-14.5' Wet, medium dense, brown to black, fine to medium sand		
14		1.5/2	5	37.4			
			6	68.2	14.5-15.0' No recovery		
15		1.5/2.0	4	5.7	15.0-16.5' Wet, medium dense, brown to light brown, fine to medium sand, strong odor		
			8	107.8			
16			8	135.7	16.0-16.5' SAA, sheen		
			12		16.5-17.0' No recovery		
17		2.0/2.0	5	84.8	17.0-18.0' Wet, medium dense, brown to light brown, fine to medium sand, odor		
			7	149.9	17.5-18.0' No Recovery		
18			8	193.2	18.0-19.0' Wet, medium dense, black, fine to medium sand, black staining, odor		
			9	21.3			
19		2.0/2.0	6	24.7	19.0-20.5' Wet, medium dense, brown, fine to medium sand, sheen		
			6	132.5			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han and AFM	**BORING/WELL NO.:** SB-97
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 32 degrees F and mostly cloudy, wind 8mph NE	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/21 1230	
WATER LEVEL: 13.50	**DATE/TIME FINISH:** 2022/2/21 1440	
DATE: 2022/2/21	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automated Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			4	146.6			
			7	162.4	20.5-21.0' Wet, medium dense, black, fine to medium sand, black staining, odor		
21		1.0/1.0	6	26.9	21.0-22.0' Wet, medium dense, brown, fine to medium sand, sheen, odor		
			10	20.6			
22			12		22.0-23.0' Wet, medium dense, brown, fine to medium sand, odor, black staining		
			22				
23					23.0-23.5' Black staining		
					23.5-25.0' Wet, medium dense, black, fine to medium sand, sheen, odor		
24							
25		2.0/2.0	5	35.2	25.0-27.0' Wet, medium dense, black, fine to medium sand, NAPL saturated		
			5	12.4			
26			16	9.0			
			26	26.8			
27					27.0-28.5' Wet, medium dense, black, fine to medium sand, NAPL saturated		
28							
					28.5-29.0' Wet, medium dense, black, fine to medium sand, strong odor		
29					EOB @ 29'		

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Chris Fodice		**SB-98**
PROJECT LOCATION:	Queens, New York	**WEATHER:**		**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	NAPL on Probe	**DATE/TIME START:**			
WATER LEVEL:	11.94	**DATE/TIME FINISH:**			
DATE:	2022/2/10	**WEIGHT OF HAMMER:**	140 lb.		
TIME:	1135	**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	Temporary monitoring well	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		2.5/5.0		0.0	5.0-6.0' Moist, medium dense, brown, fine to medium sand, trace subrounded medium gravel		
				0.0			
6				0.0	6.0-7.5' Moist, medium dense, brown, fine to coarse sand, trace medium subrounded gravel		
				0.0			
7				0.0			
					7.5-8.0' No Recovery		
8							
9							
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	**SB-98**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 0	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: NAPL on Probe	**DATE/TIME START:**		
WATER LEVEL: 11.94	**DATE/TIME FINISH:**		
DATE: 2022/2/10	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 11.35	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10		3.5/5.0		0.0	10.0-11.0' Moist, medium dense, brown, fine to coarse sand, trace medium subrounded gravel		
				0.0			
11				7.4	11.0-11.5' Moist, dense, light brown to gray, fine to coarse sand, little sub angular gravel		
				24.2	11.5-13.5' Wet, medium dense, dark brown, fine to coarse sand, trace silt, NAPL blebs, medium odor		
12				18.5			
				2.0			
13				0.6			
					13.5-15.0' No recovery		
14							
15		4.5/5.0		0.7	15.0-18' Wet, medium dense, dark brown, fine to coarse sand, trace silt, NAPL blebs, medium odor		
				39.5			
16				13.0	16.0-17.5' Wet, dense, gray, fine to coarse sand		
				20.8			
17				6.5			
				7.5			
18				9.0	18.0-18.5' Wet, medium dense, gray, fine sand, and silt, medium odor		
				12.5	18.5-19.5' Wet, medium dense, dark gray, fine to coarse sand, trace silt, sheen visible, strong odor		
19				10.0			
					19.5-20.0' No recovery		
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	**SB-98**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 0	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: NAPL on Probe	**DATE/TIME START:**		
WATER LEVEL: 11.94	**DATE/TIME FINISH:**		
DATE: 2022/2/10	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1135	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20		5.0/5.0		0.0	20-21.5' Wet, medium dense, light brown, fine to coarse sand, trace silt, sheen visible		
				5.9			
21				0.7			
	SB-98_20220209-21.5-25.0			10.1	21.5-25.0' Wet, medium dense, black, fine to coarse sand, sheen visible		
22				7.3			
				50.2			
23				12.1			
				12.9			
24				16.1			
				24.2			
25		2.5/5.0		0.0	25.0-27.5' Wet, medium dense, gray to brown, fine to medium sand, little clay, little silt, trace coarse sand (sampler stuck, cannot remove)		
				0.0			
26				0.0	26-27.5' Wet, medium dense, black to dark brown, fine to coarse sand, trace silt, medium odor		
				0.0			
27				0.0			
					27.5-30.0' No recovery		
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	**SB-98**
PROJECT LOCATION: Queens, New York	**WEATHER:** 0	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: NAPL on Probe	**DATE/TIME START:** 1/0/00 12:00 AM	
WATER LEVEL: 11.94	**DATE/TIME FINISH:** 1/0/00 12:00 AM	
DATE: 2022/2/10	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 1135	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
30		3.5/5.0		0.0	30.0-30.5' Wet, dense, gray, fine to medium sand, some silt, trace clay (sampler stuck, cannot remove)		
				0.0	30.5-33.5' Wet, medium dense, red brown, fine to medium sand, little silt		
31				0.0			
				0.0			
32				0.0			
				0.0			
33				0.0	33.5-35.0' No recovery		
34							
35					EOB @ 35' Temp well installed 2/9 0920, geotech sample collected, no blow counts		
36							
37							
38							
39							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __4__ of __4__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Daniel Johnson	**SB-99**	
PROJECT LOCATION:	Queens, New York	**WEATHER:**	32 degrees F and cloudy wintry mix, wind 15mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/25 1020		
WATER LEVEL:	16.50	**DATE/TIME FINISH:**	2022/2/25		
DATE:	2022/2/25	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		2.0/2.0		0.3	5.0-6.0' Dry, medium dense, brown, fine to medium sand, little silt		
				0.2			
6				0.2	6.0-7.0' Dry, medium dense, gray, light brown, fine to medium sand, little silt		
				0.2			
7		1.5/2.0	12	0.0	7.0-8.5' Dry, medium dense, black to gray banding, fine to medium sand, little silt		
			14	0.0			
8		2.0/2.0	15	2.4			
			12		8.5-9.0' No recovery		
9	SB-99_20220225-9.0-19.0	1.5/2.0	14	0.0	9.0-10.5' Moist, medium dense, black to gray banding, fine to medium sand, little silt		
			16	0.0			
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	**SB-99**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 32 degrees F and cloudy wintry mix, wind 15mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/25 1020		
WATER LEVEL: 16.50	**DATE/TIME FINISH:** 2/25/22 12:00 AM		
DATE: 2022/2/25	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			16	15.9			
			12		10.5-11.0' No recovery		
11		1.5/2.0	7	11.9	11.0-12.5' Moist, medium dense, light gray, fine to medium sand, little silt		
			10	40.1			
12		1.5/2	11	33.0			
			14		12.5-13.0' No recovery		
13		1.5/2.0	7	3.9	13.0-14.5' Moist, medium dense, light gray to black banding, light odor		
			12	2.8			
14		1.5/2	18	4.9			
			16		14.5-15.0' No recovery		
15		2.0/2.0	16	4.3	15.0-17.0' Moist, medium dense, black, fine to medium sand, trace silt		
			15	8.3			
16			14	19.0			
			18	23.6			
17			8	2.4	17.0-17.5' Wet, medium dense, brown, fine to coarse sand		
			6	27.7	17.5-18.5' Wet, medium dense, gray brown, fine to medium sand, light odor		
18		1.5/20	11	3.7			
			11		18.5-19.0' No recovery		
19		2.0/2.0	3	3.6	19.0-21.0' Wet, medium dense, gray brown, fine to medium sand, trace coarse sand, medium odor		
			6	7.2			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	**SB-99**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 32 degrees F and cloudy wintry mix, wind 15mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/25 1020		
WATER LEVEL: 16.50	**DATE/TIME FINISH:** 2/25/22 12:00 AM		
DATE: 2022/2/25	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			8	8.9			
			9	2.9			
21		2.0/2.0	11	0.0	21.0-22.0' Wet, medium dense, gray, fine to medium sand		
			9	0.1			
22			7	0.2	22.0-25.0' Wet, medium dense, gray to light brown, fine to medium sand		
			8	0.2			
23			14	0.0			
			17	0.0			
24				0.0	24.0-25.0 Wet, medium dense, gray, fine to coarse sand		
		11.0		0.0			
25				0.0	EOB @ 25'		
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Brian Kashick		**SB-111**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	45 degrees F with mostly cloudy, wind 12mph SW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	12.10	**DATE/TIME START:**	2022/2/10 0900		
WATER LEVEL:	12.15	**DATE/TIME FINISH:**	2022/2/10 1210		
DATE:	2022/2/14	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	Temporary monitoring well	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
		5.0/5.0					
5		1.5/2.0	2	0.4	5.0-5.5' Moist, medium dense, brown, fine to medium sand		
			3	0.4	5.5-5.6' Brick and silt		
6			4		5.6-7.0' Dry, loose, dark brown, fine to coarse sand, traces of subangular gravel		
			4	0.0			
7		1.5/2.0	2	0.0	7.0-7.5' Dry, loose, dark brown, fine to coarse sand, traces of subangular gravel		
			1	0.0	7.5-8.5' Moist, dense, light brown to brown, fine to medium sand, little clay		
8			8	0.0			
			13	0.0	8.5-9.0' No recovery		
9		1.5/2.0	18	0.0	9.0-9.5' Moist, medium dense, brown, fine to coarse sand, traces of gravel and clay		
			28	0.0	9.5-10.5' Dry, loose, black, fine to coarse sand, little gravel, and fragments of concrete		
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-111**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 45 degrees F with mostly cloudy, wind 12mph SW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: 12.10	**DATE/TIME START:** 2022/2/10 0900		
WATER LEVEL: 12.15	**DATE/TIME FINISH:** 2022/2/10 1210		
DATE: 2022/2/14	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 0	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			30	0.0			
			48	0.1	10.5-11.00' No recovery		
11		1.5/2.0	16	0.6	11.0-11.5' Moist, dense, brown, fine to coarse sand, traces of silt		
			23	5.9	11.5-12.5' Moist, loose, black, fine to coarse sand, traces of angular rounded gravel		
12			21	36.1	12-13' Moist, loose, dark brown to dark gray, fine to medium sand, trace silt, odor		
			17	57.4	12.5-13.0' No recovery		
13		2.0/2.0	12	2.8	13.0-15.0' Wet, medium dense, black, fine to coarse sand, NAPL blebs, odor		
			13	1.1			
14			13	1.8	14.0-15.5 Moist, dense, gray brown, fine to coarse sand		
			15	24.4	14.5' Black band staining		
15		1.5/2	6	2.0	15.0-16.5' Wet, medium dense, black, fine to coarse sand, NAPL blebs, odor		
			9	26.9			
16			11	18.7	16.0-17.5' Wet, dense, gray, fine to coarse sand		
			14	9.0	16.5-17.0' No recovery		
17		2.0/2.0	6	1.7	17.0-19.0' Wet, medium dense, black, fine to coarse sand, sheen		
			9	2.3			
18		1.5/20	11	1.6			
			14	1.3			
19	SB-111_20220210-19.0-22.0				19.0-20.0' Concrete/boulder		
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:** SB-111
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 45 degrees F with mostly cloudy, wind 12mph SW	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: 12.10	**DATE/TIME START:** 2022/2/10 0900	
WATER LEVEL: 12.15	**DATE/TIME FINISH:** 2022/2/10 1210	
DATE: 2022/2/14	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20		1.0/2.0	18	1.1	20.0-22.0' Wet, medium dense, black, fine to coarse sand, traces of rounded gravel, sheen		
			11	7.3			
21			21	2.8			
			14				
22					22.0-25.0' Wet, dense, brown, fine to medium sand		
23							
24							
25		2.0/2.0	2	0.7	25.0-26.0' Wet, medium dense, dark brown, fine to medium sand		
			8	0.9			
26			13	8.3	26.0-27.0' Wet, medium dense, black, fine to coarse sand, sheen		
			18	17.9			
27					27.0.28.5' Wet, medium dense, black, fine to coarse sand, sheen		
28							
					28.5-30.0' Wet, dense, dark brown to black, fine to medium sand		
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kashick	**SB-111**
PROJECT LOCATION: Queens, New York	**WEATHER:** 45 degrees F with mostly cloudy, wind 12mph SW	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: 12.10	**DATE/TIME START:** 2022/2/10 0900	
WATER LEVEL: 12.15	**DATE/TIME FINISH:** 2022/2/10 1210	
DATE: 2022/2/14	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 0	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
30		1.5/2.0	11	2.1	30.0-32.0' Wet, medium dense, dark brown to brown, fine to medium sand		
			8	49.7			
31			14	9.6			
			14				
32					32.0-34.5' Wet, medium dense, black, fine to coarse sand		
33							
34							
					34.5-35.0' Wet, dense, dark brown, fine to medium sand		
35					EOB @ 35'		
36							
37							
38							
39							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __4__ of __4__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Chris Fodice		**SB-147**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	38 degrees F with partly cloudy, wind 9mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	ND	**DATE/TIME START:**	2022/2/9		
WATER LEVEL:	13.80	**DATE/TIME FINISH:**	2022/2/9		
DATE:	2022/2/9	**WEIGHT OF HAMMER:**	140 lb.		
TIME:	1135	**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	Temporary monitoring well	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		2.5/5.0		0.0	5.0-6.0' Moist, medium dense, red brown, fine to medium sand, clay dense		
				0.0			
6				0.0	6.0-7.5' Moist, medium dense, brown with gray, light brown, medium striations, fine to medium sand, trace silt		
				0.0			
7				0.0			
					7.5-10.0' No recovery		
8							
9							
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	**SB-147**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 38 degrees F with partly cloudy, wind 9mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2/9/22 12:00 AM		
WATER LEVEL: 13.80	**DATE/TIME FINISH:** 2/9/22 12:00 AM		
DATE: 22/2/9	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1135	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10		3.0/5.0		0.0	10.0-11.0' Moist, medium dense, brown, medium striations, fine to medium sand, trace silt		
				0.0	10.7' Dense clay 0.2' thick		
11				8.0	11.0-13.0' Moist, loose, gray, fine to coarse sand		
				8.9			
12				24.7			
				47.6	13' SAA, Medium petroleum odor		
13					13.0-13.5 Moist, dense, gray brown, fine to coarse sand,		
					13.5-15.0' No recovery		
14							
15		3.0/5.0		14.1	15.0-18.0' Wet, medium dense, gray, fine to medium sand		
				3.3			
16				67.1			
				41.1			
17			6	6.7	17.2' dense clay 0.2' thick, medium odor		
			9	3.2			
18					18.0-20.0' No recovery		
19							
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:** SB-147
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	
PROJECT LOCATION: Queens, New York	**WEATHER:** 38 degrees F with partly cloudy, wind 9mph S	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2/9/22 12:00 AM	
WATER LEVEL: 13.08	**DATE/TIME FINISH:** 2/9/22 12:00 AM	
DATE: 22/2/9	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 1135	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20		4.0/4.0		31.2	20-22.5' Wet, medium dense, gray, fine to medium sand, light odor		
				45.8			
21				21.5			
				17.6			
22				10.6			
				6.7	22.5-24.0' Wet, medium dense, brown, fine to medium sand		
23				2.7			
				2.1			
24					EOB @ 24' Temp well installed 2/9/2022 at 1030		
25							
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Chris Fodice		**SB-155**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	48 degrees F with partly cloudy, wind 12mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/11		
WATER LEVEL:	12.00	**DATE/TIME FINISH:**	2022/2/11		
DATE:	2022/2/11	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		2.5/5.0		0.0	5.0-5.5' Fill material, subrounded gravel		
				0.0	5.5-6.0' Moist, medium dense, gray, clay, some silt		
6				3.7	6.0-7.5' Moist, medium dense, gray to black, fine to medium sand		
				45.6			
7				1.3			
					7.5-10.0' No recovery		
8							
9							
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	**SB-155**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 48 degrees F with partly cloudy, wind 12mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	0	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/11		
WATER LEVEL:	**DATE/TIME FINISH:** 2022/2/11		
DATE:	**WEIGHT OF HAMMER:** 140 lb.	0	
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM:	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10		3.0/5.0		4.1	10.0-11.0' Moist, medium dense, light brown, fine sand, trace clay		
				14.5			
11				88.4	11.0-12.0' Moist, medium dense, gray brown, fine to medium sand, trace silt		
				48.0			
12				25.7	12.0-13.0' Wet, medium dense, black, fine to medium sand, trace silt, light odor		
				16.7			
13					13.0-15.0' No recovery		
14							
15		2.5/5.0		32.1	15.0-16.5' Wet, medium dense, black, fine to medium sand, trace silt, medium odor		
				43.5			
16				74.2			
				19.4	16.5-17.5' Wet, medium dense, black, fine to medium sand, little silt, medium odor		
17				28.8			
					17.5-20.0' No recovery		
18							
19							
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	**SB-155**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 48 degrees F with partly cloudy, wind 12mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	0	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	**DATE/TIME START:** 2/11/22 12:00 AM		
WATER LEVEL:	**DATE/TIME FINISH:** 2/11/22 12:00 AM		
DATE:	**WEIGHT OF HAMMER:** 140 lb.	0	
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM:	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20		3.5/5.0		22.1	20.0-21.0 Wet, medium dense, black, fine to medium sand, NAPL saturated soil, seen in water, strong odor		
				44.6			
21				24.0	21.0-21.5' Wet, medium dense, black to gray, fine to medium sand, staining, sheen visible, strong odor		
				2.1	21.5-23.5' Wet, medium dense, light gray-brown, fine to medium sand		
22				1.0			
				1.9			
23				0.5			
					23.5-25.0' No recovery		
24							
25					EOB @ 25' Temp well installed 2/11/2022 at 1335		
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Chris Fodice		**SB-164**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	39 degrees with partyly cloudy, wind 10mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	ND	**DATE/TIME START:**	2022/2/8 1000		
WATER LEVEL:	6.40	**DATE/TIME FINISH:**	2022/2/8 1040		
DATE:	2022/2/9	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	Temporary monitoring well	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		2.5/5.0		0.0	5.0-5.5' Dry, loose, black, fine to coarse sand, little subrounded gravel, trace silt		
				0.0	5.5-7.0' Moist, medium dense, gray, clay, trace fine sand		
6				3.7			
				45.6			
7				1.3	7.0-7.5' Moist, medium dense, black, fine to coarse sand		
					7.5-10.0' No recovery		
8							
9							
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	**SB-164**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 39 degrees with partyly cloudy, wind 10mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2022/2/11		
WATER LEVEL: 6.40	**DATE/TIME FINISH:** 2022/2/8 1040		
DATE: 2022/2/9	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10		2.0/5.0		0.0	10.0-10.5' Moist, medium dense, black, fine to coarse sand		
				17.3	10.5-12.0' Moist, medium dense, light brown, fine to medium sand, and clay		
11				11.4			
				37.6			
12					12.0-15.0' No recovery		
13							
14							
15		4.0/5.0		3.7	15.0-15.5' Moist, medium dense, light brown, fine to medium sand, and clay		
				0.3	15.5-18.0' Wet, medium dense, gray, clay, trace fine sand		
16				0.0			
				6.0			
17				44.2			
				17.4			
18				20.2	18.0-19.0' Wet, medium dense, black, fine to coarse sand, little fine subangular gravel, sheen		
				12.4			
19					19.0-20.0' No recovery		
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:** SB-164
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	
PROJECT LOCATION: Queens, New York	**WEATHER:** 39 degrees with partyly cloudy, wind 10mph NW	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2022/2/8 1000	
WATER LEVEL: 6.40	**DATE/TIME FINISH:** 2022/2/8 1040	
DATE: 2022/2/9	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20		3.5/5.0		7.3	20.0-23.5 Wet, medium dense, black, fine to coarse sand, little fine subangular gravel		
				0.3			
21				10.9			
				4.8			
22				0.3	22.0-23.0' Wet, medium dense, light brown to brown, fine to coarse sand, little fine subangular gravel		
				13.5			
23				0.1			
					23.5-25.0' No recovery		
24							
25					EOB @ 25' Temp well installed 2/08/2022 at 1040		
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Chris Fodice		**SB-170**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	48 degrees F with partly cloudy, wind 12mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	ND	**DATE/TIME START:**	2022/2/11		
WATER LEVEL:	14.15	**DATE/TIME FINISH:**	2022/2/11		
DATE:	2022/2/15	**WEIGHT OF HAMMER:**	140 lb.		
TIME:	1235	**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	Temporary monitoring well	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		2.5/5.0		0.0	5.0-7.5' Moist, medium dense, light brown, fine to medium sand		
				0.0			
6				0.0			
				0.4			
7				0.3			
					7.5-10.0' No recovery		
8							
9							
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	**SB-170**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 48 degrees F with partly cloudy, wind 12mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2022/2/11		
WATER LEVEL: 14.15	**DATE/TIME FINISH:** 2022/2/11		
DATE: 2022/2/15	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1235	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10		3.0/5.0		0.0	10.0-12.0' Moist, medium dense, light brown, fine to medium sand		
				7.4			
11				7.5			
				7.2			
12				37.8	12.0-13.0' Wet, medium dense, brown to gray, fine to medium sand, light gray striation		
				18.7			
13					13.0-15.0' No recovery		
14							
15		4.5/5.0		1.7	15.0-16.5' Wet, medium dense, gray, fine sand, little silt, trace clay, light odor		
				0.0			
16				0.0			
				70.7	16.5-17.5' Wet, medium dense, black, fine to medium sand, sheen visible, staining, strong odor		
17				59.6			
				69.2	17.5-19.5' Wet, medium dense, gray, fine to coarse sand, trace silt		
18				76.3			
				40.6			
19				21.8			
					19.5-20.0' No recovery		
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:** SB-170
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	
PROJECT LOCATION: Queens, New York	**WEATHER:** 48 degrees F with partly cloudy, wind 12mph S	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2/11/22 12:00 AM	
WATER LEVEL: 14.15	**DATE/TIME FINISH:** 2/11/22 12:00 AM	
DATE: 2022/2/15	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 1235	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20		4.0/5.0		94.6	20.0-22.0' Wet, medium dense, gray, fine to coarse sand, trace silt		
				4.7			
21				21.0	21.0' Coarse sand 0.6' thick		
				4.5			
22				1.2	22.0-22.5' Wet, medium dense, gray, fine sand, trace clay		
				4.0	22.5-24.0' Wet, medium dense, gray, fine to medium sand		
23				0.1			
				0.0			
24					24.0-25.0' No recovery		
25					EOB @ 25' Temp well installed 10-20' 2/11/2022 at 1000		
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Chris Fodice		**SB-173**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	13.30	**DATE/TIME START:**	2022/2/7		
WATER LEVEL:	13.60	**DATE/TIME FINISH:**	2022/2/11		
DATE:	2022/2/9	**WEIGHT OF HAMMER:**	140 lb.		
TIME:	1125	**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	Temporary monitoring well	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		0.0/5.0		0.1	5.0-10.0' No recovery		Rock stuck in shoe
6							
7							
8							
9							
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	SB-173	
PROJECT LOCATION: Queens, New York	**WEATHER:** 35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: 13.30	**DATE/TIME START:** 2022/2/7		
WATER LEVEL: 13.60	**DATE/TIME FINISH:** 2022/2/7		
DATE: 2022/2/9	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1125	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10		3.0/5.0		74.2	10-10.5' Moist, medium dense, black, fine to coarse sound, some subangular stone		
				38.1	10.5-11.5' Moist, medium dense, black, fine to medium sand, trace silt		
11				121.1			
				16.4			
12				133.4			
				71.1			
13					13.0-15.0' No recovery		
14							
15		3.0/5.0		6.4	15.0-15.5' Moist, medium dense, brown with black striations, fine to medium sand, trace silt		
				181.9	15.5-18.0' Wet, medium dense, gray to brown with black and red striations, fine to medium sand		
16				181.0			
				45.1	16.5-17.5' Wet, medium dense, black, fine to medium sand, sheen visible, staining, strong odor		
17				61.2			
				69.4	17.5-19.5' Wet, medium dense, gray, fine to coarse sand, trace silt		
18					18.0-20.0' No recovery		
19							
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:** SB-173
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	
PROJECT LOCATION: Queens, New York	**WEATHER:** 35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: 13.60	**DATE/TIME START:** 2/7/22 12:00 AM	
WATER LEVEL: 13.60	**DATE/TIME FINISH:** 2/11/22 12:00 AM	
DATE: 2022/2/9	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 1125	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20		5.0/5.0		173.2	20.0-25.0' Wet, medium dense, gray, fine to coarse sand, trace silt		
				180.0			
21				96.1			
				35.4			
22				112.4			
				76.1			
23				50.2			
				80.1			
24				12.1	24.0-25.0' No recovery		
				47.1			
25					EOB @ 25' Temp well installed 10-20' 2/7/2022 at 1030, 10.0-20.0'		
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	**SB-178**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2022/2/7		
WATER LEVEL: 14.25	**DATE/TIME FINISH:** 2022/2/7		
DATE: 2022/2/8	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1103	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4					4.0-5.0' Concrete		
5		2.0/5.0			5.0-6.0' Concrete		
6				7.6	6.0-8.0' Dry, medium dense, brown with light brown to gray striations, fine to medium sand		
				2.5			
7				6.1			
				163.2			
8					8.0-10.0' No recovery		
9							
10	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __1__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	**SB-178**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2022/2/7		
WATER LEVEL: 14.25	**DATE/TIME FINISH:** 2022/2/7		
DATE: 2022/2/8	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1103	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10		3.0/5.0		56.0	10.0-12.0' Dry, medium dense, brown with light brown to gray striations, fine to medium sand		
				4.4			
11				55.1			
				38.4			
12				51.2	12.0' Dense clay 4" thick 12-13' Wet, medium dense, brown gray, fine to medium sand, trace silt, dark gray banding		
				33.1			
13					13.0-15.0' No recovery		
14							
15		1.5/5.0		0.0	15.0-16.5' Wet, medium dense, brown, fine to coarse sand, some fine subangular gravel		
				0.6			
16				0.4			
					16.5-20.0' No recovery		
17							
18							
19							
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:** SB-178
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	
PROJECT LOCATION: Queens, New York	**WEATHER:** 35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2/7/22 12:00 AM	
WATER LEVEL: 14.25	**DATE/TIME FINISH:** 2/7/22 12:00 AM	
DATE: 2022/2/9	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 1103	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20		5.0/5.0		3.2	20.0-22.5' Wet, medium dense, brown, fine to coarse sand		
				1.4			
21				30.1			
				16.1			
22				17.1			
				18.2	22.5-25.0' Wet, medium dense, brown, fine to medium sand, trace silt		
23				8.2			
				102.1			
24				31.0			
				17.6			
25					EOB @ 25' Temp well installed 2/7/2022 at 1400		
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Chris Fodice		**SB-181**
PROJECT LOCATION:	Queens, New York	**WEATHER:**		**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/11		
WATER LEVEL:	NA	**DATE/TIME FINISH:**	2022/2/11		
DATE:	2/11/2022	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	NA	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		3.0/5.0		0.0	5.0-6.0' Fill material, moist, loose, black, fine to coarse sand, glass		
				0.0			
6				0.0	6.0-7.0' Fill material, moist, loose, gray,fine to coarse sand, little silt		
				0.0			
7				2.4	7.0-8.0' Moist, dense, gray, clay, trace silt, trace fine sand		
				10.8			
8					8.0-10.0' No recovery		
9							
					EB @ 10.0 feet		
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __1__	trace - <10%

PARSONS

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Chris Fodice		**SB-183**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	ND	**DATE/TIME START:**	2022/2/7		
WATER LEVEL:	14.18	**DATE/TIME FINISH:**	2022/2/7		
DATE:	2022/2/8	**WEIGHT OF HAMMER:**	140 lb.		
TIME:	1230	**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	Temporary monitoring well	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		3.0/5.0		0.0	5.0-7.0' Moist, medium dense, brown gray, clay silt		
				0.1			
6				1.0			
				2.5			
7				26.5	7.0-8.0' Moist, medium dense, brown gray, sandy clay		
				51.1			
8					8.0-10.0' No recovery		
9							
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	**SB-183**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2022/2/7		
WATER LEVEL: 14.18	**DATE/TIME FINISH:** 2022/2/7		
DATE: 2022/2/8	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1230	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10		3.0/5.0		5.5	10.0-11.0' Moist, medium dense, brown gray, sandy clay		
				0.9	10.5' Gravel		
11				17.9	11.0-13.0' Wet, medium dense, gray with black striations, fine to medium sand, little silt		
				8.2			
12				17.0			
				94.7			
13				90.3	13.0-15.0' No recovery		
14							
15		4.0/5.0		68.4	15.0-18.0' Wet, medium dense, gray with black striations, fine to medium sand, little silt, sheen		
				18.2			
16				38.0			
				74.9			
17				105.3			
				108.0			
18				111.3	18.0-19.0' Wet, medium dense, gray with black striations, fine to coarse sand, sheen		
				86.1			
19					19.0-20.0' No recovery		
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:** SB-183
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	
PROJECT LOCATION: Queens, New York	**WEATHER:** 35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2/7/22 12:00 AM	
WATER LEVEL: 14.18	**DATE/TIME FINISH:** 2/7/22 12:00 AM	
DATE: 2022/2/8	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 1230	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20		4.5/5.0		5.1	20.0-24.5' Wet, medium dense, gray, fine to coarse sand, sheen		
				31.0			
21				2.8			
				31.6			
22				2.5			
				2.5	23' Black staining		
23				8.0			
				8.8			
24				10.4			
					24.5-25.0' No recovery		
25					EOB @ 25' Temp well installed 2/7/2022 at 0920		
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Chris Fodice		**SB-185**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	ND	**DATE/TIME START:**	2022/2/7		
WATER LEVEL:	13.95	**DATE/TIME FINISH:**	2022/2/7		
DATE:	2022/2/8	**WEIGHT OF HAMMER:**	140 lb.		
TIME:	1100	**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	Temporary monitoring well	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4					4.0-5.0' Concrete		
5		3.0/5.0			5.0-6.0' Concrete		
				0.5			
6				1.0	6.0-8.0' Wet, loose, gray brown, fine to coarse sand		
				1.1			
7				0.8			
				51.1			
8					8.0-10.0' No recovery		
9							
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	**SB-185**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2022/2/7		
WATER LEVEL: 13.95	**DATE/TIME FINISH:** 2022/2/7		
DATE: 2022/2/8	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1100	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10		5.0/5.0		0.0	10.0-13.0' Wet, loose, gray brown, fine to coarse sand		
				0.0			
11				0.0			
				0.0			
12				0.0			
				10.2			
13				5.9	13.0-14.0' Moist, medium dense, light gray brown, fine to coarse sand		
				5.6			
14				3.0	14.0-15.0' Wet, medium dense, gray brown, fine to coarse sand		
				6.1			
15		2.5/5.0		1.0	15.0/17.5' Wet, medium dense, gray brown, fine to coarse sand		
				0.6			
16				1.7			
				8.1			
17				12.1			
					17.5-20.0' No recovery		
18							
19							
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:** SB-185
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	
PROJECT LOCATION: Queens, New York	**WEATHER:** 35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2/7/22 12:00 AM	
WATER LEVEL: 13.95	**DATE/TIME FINISH:** 2/7/22 12:00 AM	
DATE: 2022/2/8	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 1100	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20		3.0/5.0		0.1	20.0-23.0' Wet, medium dense, gray brown, fine to medium sand, sheen		
				7.5			
21				12.4			
				0.9			
22				1.2			
				0.7			
23					23.0-25.0' No recovery		
24							
25					EOB @ 25' Temp well installed 2/7/2022 at 1215		
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Chris Fodice		**SB-187**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	39 degrees F with partly cloudy, wind 10mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	ND	**DATE/TIME START:**	2022/2/8		
WATER LEVEL:	14.00	**DATE/TIME FINISH:**	2022/2/8		
DATE:	2022/2/9	**WEIGHT OF HAMMER:**	140 lb.		
TIME:	1225	**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	Temporary monitoring well	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		2.5/5.0		0.0	5.0-7.5' Dry, medium dense, light brown, gray, fine to medium sand		
				0.0			
6				0.0	6.0-8.0' Wet, loose, gray brown, fine to coarse sand		
				0.0			
7				0.0			
					7.5-10.0' No recovery		
8							
9							
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	**SB-187**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 39 degrees F with partly cloudy, wind 10mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2022/2/8		
WATER LEVEL: 14.00	**DATE/TIME FINISH:** 2022/2/8		
DATE: 2022/2/9	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1225	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10		3.5/5.0		0.0	10.0-5.0' Moist, loose, gray brown, fine to coarse sand		
				0.0			
11				16.1			
				134.4			
12				53.0			
				84.2			
13				72.8			
14							
15		4.0/5.0		5.7	15.0-19.0' Moist, loose, gray brown, fine to coarse sand		
				6.1			
16				16.9			
				222.0			
17				159.4			
				264.3			
18				55.7			
				62.1			
19					19.0-20.0' No recovery		
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:** SB-187
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	
PROJECT LOCATION: Queens, New York	**WEATHER:** 39 degrees F with partly cloudy, wind 10mph NW	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2/8/22 12:00 AM	
WATER LEVEL: 14.00	**DATE/TIME FINISH:** 2/8/22 12:00 AM	
DATE: 2022/2/8	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 1225	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20		4.5/5.0		2.5	20.0-23.0' Moist, loose, gray brown, fine to coarse sand		
				3.0			
21				2.8			
				36.6			
22				65.9			
				11.3			
23				2.9	23.0-24.5' Wet, medium dense, light brown, gray, fine to coarse sand		
				4.7			
24				5.2			
					24.5-25.0' No recovery		
25					EOB @ 25' Temp well installed 2/8/2022 at 1205		
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	**SB-201**	
PROJECT LOCATION: Queens, New York	**WEATHER:**	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/4		
WATER LEVEL: 15.00	**DATE/TIME FINISH:** 2022/2/4		
DATE: 2/4/2022	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		0.0/2.0	0		5.0-7.0' No recovery		
			0				
6			0				
			4				
7		1.0/2.0	0	0.0	7.0'-8.0' Moist, medium dense, brown, fine to medium sand, little clay, trace subangular gravel		
			3	0.0			
8			4	0.0	8.0-9.0' No recovery		
			4	0.0			
9		1.5/2.0	16	0.0	9.0-10.0' Moist, medium dense, brown, fine to medium sand, little clay, trace subangular gravel		
				0.0			
10	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __1__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Chris Fodice	**SB-201**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 0	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:**		
WATER LEVEL: 15.00	**DATE/TIME FINISH:**		
DATE: 2/4/2022	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10				0.0	10.0-5.0' Moist, medium dense, brown gray, fine to coarse sand		
					10.5-11.0' No recovery		
11		2.0/2.0	13	0.0	11.0-13.0' Moist, medium dense, brown gray, fine to coarse sand		
			14	0.0			
12			13	0.0	12.0' Black banding		
			12	0.0			
13		1.5/2.0	6	0.0	13.0-13.5' Moist, medium dense, brown gray, fine to coarse sand, no banding		
				0.0	13.5-14.5' Moist, medium dense, gray, fine to medium sandy clay		
14				53.6			
					14.5-15.0' No recovery		
15		1.5/2.0	18	0.0	15.0-16.0' Wet, medium dense, brown, fine to coarse sand		
			14	0.0			
16			14	0.1	16.0-16.5' Wet, medium dense, black, fine to coarse sand		
			15		16.5-17.0' No recovery		
17	SB-201_20220204-17-22	1.0/2.0	18	0.5	17.0-18.0' Wet, medium dense, dark gray, fine to coarse sand, NAPL blebs		
			14	0.7			
18			14	3.2	18.0-19.0' No recovery		
			15				
19		1.5/2.0	11	4.3	19.0-20.5' Wet, medium dense, dark gray, sheen visible		
			11	4.5			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Chris Fodice	**SB-201**	
PROJECT LOCATION:	Queens, New York	**WEATHER:**	0	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**			
WATER LEVEL:	15.00	**DATE/TIME FINISH:**			
DATE:	2/4/2022	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20				4.9	20.5-21.0' No recovery		
21		1.0/2.0	8	3.8	21.0-22.0' Wet, medium dense, dark gray, fine to coarse sand, sheen visible		
			16	3.5			
22			9		22.0-23.0' No recovery		
			11				
23				1.2	23.0-25.0' Wet, medium dense, gray, fine to coarse sand		
				2.8			
24				4.1			
				3.6			
25					EOB @ 25'		
26							
27							
28							
29							

Notes:

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-202**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 45 degrees F with light rain, wind 7mph SSW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/3 1350		
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2022/2/4		
DATE: 2/4/2022	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		2.0/2.0	2		5.0-6.5' Moist, medium stiff, brown, sandy clay		
			2				
6			2				
			4		6.5-7.0' Moist, loose, gray to brown, fine to medium sand, trace silt		
7		1.5/2.0	4	0.0	7.0-8.5' Moist, loose, gray, fine to medium sand, trace silt		
			5	0.0			
8			4	7.1	8.0' Black staining		
			7	1.9	8.5-9.0' No recovery		
9		1.5/2.0	9	0.0	9.0-10.5' Moist, loose, gray, fine to medium sand, trace silt		
			11	6.7			
10	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __1__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-202**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 45 degrees F with light rain, wind 7mph SSW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/3 1350		
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2022/2/4		
DATE: 2/4/2022	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			12	6.7			
			13	10.0	10.5-11.0' No recovery		
11		2.0/2.0	16	1.5	11.0-12.0' Moist, medium dense, gray, fine to medium sand, little silt		
			13	76.5			
12			12	58.8	12.0-13.0' Moist, medium dense, light brown, fine to medium sand, little silt		
			14	16.4			
13		1.5/2.0	12	31.9	13.0-14.5' Moist, medium dense, light brown, fine to coarse sand, little silt		
			15	44.2			
14			14	72.3			
			12	178.9	14.5-15.0' No recovery		
15		2.0/2.0	10	0.0	15.0-17.0' Wet, medium dense, gray dark brown, fine to medium sand		
			8	1.8	15.5' SAA, NAPL saturated		
16			6	15.9			
			7	30.5			
17		2.0/2.0	4	1.4	17.0' SAA, NAPL saturated		
			4	42.3	17.0-19.0' Wet, medium dense, gray, fine to medium sand		
18			4	40.1			
			4	8.9			
19	SB-202_20220204-19-23	1.5/2.0	6	0.0	19.0-20.5' Wet, medium dense, gray, fine to medium sand		
			5	19.4			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:** SB-202
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 45 degrees F with light rain, wind 7mph SSW	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/3 1350	
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2022/2/4	
DATE: 2/4/2022	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			4	5.2	20.5-21.0' No recovery		
			16				
21		1.5/2.0	11	0.0	21.0-22..5' Wet, medium dense, brown and gray, fine to coarse sand		
			26	0.0			
22			13	0.0			
			30		22.5-23.0' No recovery		
23				0.0	23.0-25.0' Wet, medium dense, brown and gray, fine to coarse sand		
				0.0			
24				0.0			
				0.0			
25					EOB @ 25'		
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-203**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/7 0800		
WATER LEVEL: 17.5'	**DATE/TIME FINISH:** 2022/2/7 1030		
DATE: 2/7/2022	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatice Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5	SB-203_20220310-5.0-10.0	0.5/2.0	2	0.0	5.0-5.5' Dry, loose, black, fine to coarse sand, and subangular gravel		
			1		5.5-7.0' No recovery		
6			2				
			3				
7		1.5/2.0	3	0.1	7.0-8.0' Moist, medium dense, light brown to brown, fine to coarse sand, little clay		
			4	12.9			
8			16	2.1	8.0' Black staining		
			12		8.5-9.0' No recovery		
9		2.0/2.0	17	0.3	9.0-9.5' Moist, dense, brown to dark brown, fine to coarse sand, little clay		
			19	0.4			
10	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __1__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-203**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/7 0800		
WATER LEVEL: 17.5'	**DATE/TIME FINISH:** 2022/2/7 1030		
DATE: 2/7/2022	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatice Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			12	50.9	9.5-11.0' Moist, loose, black, fine to coarse sand, traces of silt		
			13	17.9			
11		2.0/2.0	9	4.5	11.0-12.0' Moist, medium dense, dark brown, fine to coarse sand, little clay and silt		
			12	16.1			
12			14	3.0	12.0-13.0' Moist, loose, black, fine sand, traces of silt		
			11	1.7			
13		2.0/2.0	12	2.0	13.0-15.0' Moist, loose, black, fine sand, traces of silt		
			12	15.8			
14			11	20.3			
			12	33.8			
15	SB-203_20220207-15.0-19.0	1.5/2.0	12	9.7	15.0-15.5' Moist, loose, black, fine sand, traces of silt		
			12	27.8	15.5-16.0' Moist, medium dense, dark brown, fine to coarse sand		
16			11	34.4	16.0-16.5' Moist, medium dense, black, fine to coarse sand		
			12	74.9	16.5-17.0' No recovery		
17		1.5/2.0	6	19.2	17.0-17.5' SAA, NAPL blebs		
			10	2.1	17.5-18.5' Wet, dense, black, fine to coarse sand		
18			11	25.5			
			6	6.5	18.5-19.0' No recovery		
19		1.5/2.0	10	25.6	19.0-20.0' Wet, dense, black, fine to coarse sand		
			10	62.9			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:** SB-203
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/7 0800	
WATER LEVEL: 17.5'	**DATE/TIME FINISH:** 2022/2/7 1030	
DATE: 2/7/2022	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatice Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			8	106.6	20.0-20.3' Wet, dense, fine to coarse sand 20.3-20.5' Wet, medium dense, dark brown to black, fine to coarse sand		
			7	17.9	20.5-21.0' No recovery		
21		0.5/2.0	0	6.4	21.0-21.5' Wet, dense, dark brown, coarse sand		
			2	2.3	21.5-25.0' Wet dense, dark brown, coarse sand		
22							
23							
24							
25					EOB @ 25'		
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-204**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/7 1300		
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2022/2/7 1500		
DATE: 2/7/2022	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		2.0/2.0	2	0.1	5.0-7.0' Moist, dense, dark brown, fine to medium sand, little silt, traces of clay and gravel		
			1	0.1			
6			7	0.1			
			14	0.2			
7		1.5/2.0	7	0.1	7.0-7.5' Moist, medium dense, brown, fine to medium sand		
			10	7.1	7.5-8.5' Dry, loose, black, fine to coarse sand		
8			11	4.9			
			14	2.7	8.5-9.0' No recovery		
9		2.0/2.0	6	4.1	9.0-9.5' Dry, loose, black, fine to coarse sand		
			7	3.9			
10	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __1__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-204**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/7 0800		
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2022/2/7 1500		
DATE: 2/7/2022	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			10	7.8	9.5-11.0' Moist, dense, dark brown, fine to medium sand, little silt		
			13	5.5			
11		2.0/2.0	17	6.7	11.0-12.0' Moist, dense, dark brown, fine to medium sand, little silt		
			10	3.5			
12			9	9.6	12.0-13.0' Moist, dense, brown, fine to sand and silt, traces of clay		
			10	12.6			
13		1.5/2.0	9	8.0	13.0-13.5' Moist, medium dense, black, fine to coarse sand		
			10	5.6	13.5-15.0' Moist, medium dense, brown, fine to coarse sand, some silt		
14			10	11.7			
			6	49.7			
15		1.0/2.0	3	10.2	15.0-16.0' Wet, medium dense, brown, fine to coarse sand		
			3	26.6			
16			5		16.0-17.0' No recovery		
			6				
17	SB-204_20220207-17.0-21.0	2.0/2.0	3	27.2	17.0-17.5' SAA, NAPL blebs		
			3	9.9	17.5-18.5' Wet, medium dense, brown, fine to coarse sand, traces of silt		
18			4	12.4			
			6	4.2	18.5-19.0' Wet, medium dense, black, fine to coarse sand		
19		2.0/2.0	4	0.9	19.0-21.0' Wet,medium dense, brown, fine to coarse sand, some silt		
			4	1.0			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:** SB-204
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 35 degrees F with wintry mix, wind 8mph NE	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/7 0800	
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2022/2/7 1030	
DATE: 2/7/2022	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			8	0.6			
			9	1.0			
21		1.0/1.0	4	4.3	21.0-21.7' Wet, medium dense, dark brown, fine to coarse sand		
			12	9.0	21.7-22.0' Wet, dense, dark brown, fine to coarse sand, traces of silt		
22					22.0-25.0' Wet,, medium dense, dark brown to black, fine to coarse sand		
23							
24							
25					EOB @ 25'		
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han and AFM	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Brian Kershick		**SB-205**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	42 degrees F with partly cloudy, wind 9mph SSW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/21 1230		
WATER LEVEL:	17.00	**DATE/TIME FINISH:**	2022/2/21 1440		
DATE:	2022/2/21	**WEIGHT OF HAMMER:**	140 lb.		
TIME:	1400	**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		1.5/2.0		17.7	5.0-5.5' Dry, medium dense, dark brown, fine to coarse sand		
				150.3	5.5-6.5' Dry, dense, yellow brown, fine to medium sand, traces of silt, strong odor		
6				366.6			
				301.9	6.5-7.0' No recovery		
7		1.5/2.0		110.3	7.0-7.5' Dry, loose, black, fine to coarse sand, little subangular gravel, strong odor		
				447.1	7.5-8.5' Dry, dense, light brown, fine to medium sand, traces of silt		
8				336.3			
					8.5-9.0' No recovery		
9		1.0/2.0		233.6	9.0-10.0' Dry, medium dense, light brown, fine to medium sand, traces of subangular gravel		
				348.6			
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han and AFM	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-205**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 42 degrees F with partly cloudy, wind 9mph SSW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/21 1230		
WATER LEVEL: 17.00	**DATE/TIME FINISH:** 2022/2/21 1440		
DATE: 2022/2/21	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1400	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10							
11	SB-205_20220221-11.0-17.0	2.0/2.0		282.2	11.0-11.5' Moist, dense, light brown, fine to medium sand, traces of silt		
				82.2	11.5-12.0' Moist, dense, black, fine to medium sand, traces of silt		
12				144.9	12.0-12.5' Moist, medium dense, brown, fine to coarse sand		
				231.8	12.5-13.5' Moist, medium dense, black, fine to coarse sand		
13		1.0/2.0		11.4			
				49.6	13.5-14.0' Moist, medium dense, dark brown to brown, fine to medium sand		
14					14.0-15.0' No recovery		
15		2.0/2.0		33.8	15.0-16.0' Moist, medium dense, black, fine to coarse sand		
				25.9			
16				2.0	16.0-17.0' Moist, dense, gray, fine to medium sand		
				0.9			
17		1.5/2.0		108.6	17.0-18.0' Wet, medium dense, black, fine to coarse sand		
				40.5			
18				11.7	18.0-19.0' No recovery		
				81.3			
19		2.0/2.0		38.6	19.0-21.0' Wet, medium dense, gray, fine to coarse sand		
				151.4			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han and AFM	**BORING/WELL NO.:** SB-205
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 42 degrees F with partly cloudy, wind 9mph SSW	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/21 1230	
WATER LEVEL: 17.00	**DATE/TIME FINISH:** 2022/2/21 1440	
DATE: 2022/2/21	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 1400	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20				93.9			
				82.5			
21		0.5/1.0		69.4	21.0-21.5' Wet, dense, gray, fine to medium sand		
					21.5-22.0' No recovery		
22					22.0-23.0' Wet, medium dense, black, fine sand		
23					23.0-25.0' Wet, medium dense, brown, fine to coarse sand		
24							
25		1.5/2.0		0.0	25.0-26.5' Wet, dense, brown, fine to medium sand		
				1.9			
26				1.4			
					26.5-27.0' No recovery		
27					27.0-28.0' Wet, dense, brown, fine to medium sand		
28					EOB @ 28.0'		
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han and AFM	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Daniel		**SB-206**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	32 degrees F with light snow, wind 9mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/13 0800		
WATER LEVEL:	NA	**DATE/TIME FINISH:**	2022/2/13 0900 (INC)		
DATE:	2/13/2022	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	NA	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		0.5/2.0		0.0	5.0-5.5' Dry, loose, brown, fine to coarse sand, little fragments of bricks and concrete		
					5.5-7.0' No recovery		
6							
7					Boring abandoned after 7' bgs due to safety concerns		
8							
9							
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __1__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Brian Kershick		**SB-207**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	25 degrees F with fair, wind 10mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/15 0900		
WATER LEVEL:	15.00	**DATE/TIME FINISH:**	2022/2/15 1055		
DATE:	2022/2/15	**WEIGHT OF HAMMER:**	140 lb.		
TIME:	1000	**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		0.0/2.0	1		5.0-7.0' No recovery		
			1				
6			2				
			2				
7		0.0/2.0	3		7.0-9.0' No recovery		
			2				
8			1				
			1	2.7			
9		0.5/2.0		4.1	9.0-9.3' Dry, loose, brown, fragments of concrete and fine to coarse sand, little subangular gravel		
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-207**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 25 degrees F with fair, wind 10mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2/15/2022 0900		
WATER LEVEL: 15.00	**DATE/TIME FINISH:** 2/15/2022 1055		
DATE: 2022/2/15	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1000	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10					9.3-9.5' Dry, loose, brown, fine to coarse sand, traces of angular gravel		
11		1.5/2.0	3	3.7	11.0-11.5' Moist, loose, brown, fine to coarse sand		
			2	5.1	11.5-12.5' Moist, loose, gray, fine to coarse sand		
12			2	6.0	12.0-13.0' Moist, dense, brown, fine to sand and silt, traces of clay		
			2				
13		1.0/2.0		2.3	13.0-13.7' Moist, medium dense, gray, fine to medium sand		
				20.2	13.7-14.0' Moist, medium dense, gray, fine to coarse sand, some silt		
14					14.0-15.0' No recovery		
15		2.0/2.0	1	2.0	15.0-17.0' Wet, dense, gray, fine to medium sand, odor		
			2	28.8			
16			4	8.5			
			7	9.0			
17	SB-207_20220215-17.0-21.0	1.0/2.0		32.2	17.0-18.0' Wet, dense, brown, fine to medium sand		
				3.3	17.5-18.5' Wet, medium dense, brown, fine to medium sand		
18					18.0-19' No recovery		
19		1.5.2.0	3	3.3	19.0-20.5' Wet, dense, brown, fine to medium sand		
			3	13.0			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:** SB-207
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 25 degrees F with fair, wind 10mph NW	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/15 0900	
WATER LEVEL: 15.00	**DATE/TIME FINISH:** 2022/2/15 1055	
DATE: 2022/2/15	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 1000	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			3	1.7			
			4		20.5-21.0' No recovery		
21		1.0/1.0	1	6.7	21.0-22.0' Wet, dense, brown, fine to medium sand		
			5	7.7			
22					22.0-24.0' Wet, dense, brown, fine to medium sand		
23							
24					EOB @ 24.0'		
25							
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Brian Kershick		**SB-208**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	39 degrees F with partly cloudy, wind 10mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/11 0800		
WATER LEVEL:	15.0'	**DATE/TIME FINISH:**	2022/2/11 1000		
DATE:	2/11/2022	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
		5.0/5.0					
5		1.5/2.0	3	1.3	5.0-5.5' Moist, medium dense, brown, fine to medium sand		
			9	1.3	5.5-7.0' Moist, dense, brow-gray, fine to medium sand and traces of silt		
6			4	1.3			
			6	2.4			
7		2.0/2.0	12	0.0	7.0-8.0' Moist, dense, brown-gray, fine to medium sand, traces of silt		
			14	0.0			
8			20	0.0	8.0-9.0' Moist, dense, brown-gray, fine to medium sand		
			16	0.0			
9	SB-208_20220211-9.0-13.0	1.5/2.0	17	0.0	9.0-10.0' Moist, dense, brown-gray, fine to medium sand		
			15	0.0			
10	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __1__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-208**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 39 degrees F with partly cloudy, wind 10mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2/11/2022 0800		
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2/11/2022 1000		
DATE: 2/11/2022	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			17	0.0	10.0-11.0' Moist, loose, brown, fine to medium sand, traces of round gravel		
			16	0.0			
11		2.0/2.0	9	3.0	11.0-12.0' Moist, medium coarse, fine to medium sand, odor		
			10	0.1			
12			10	17.4	12.0-13.0' Moist, loose, brown, fine to medium sand		
			12	1.4			
13			11	7.5	13.0-14.0' Moist, loose, brown, fine to coarse sand, odor		
			11	9.7			
14			11	3.9	14.0-15.0' Moist, dense, fine to coarse sand, traces of silt		
			14				
15		1.5/2.0	5	39.4	15.0-15.5' Wet, dense, dark brown to black, fine to medium sand, little silt, odor		
			6	23.7			
16			7	75.5			
			7	34.3			
17		2.0/2.0	5	15.0	17.0-18.5' Wet, black, medium dense, NAPL saturated, fine to medium sand, odor		
			5	99.7	17.5-18.5' Wet, medium dense, brown, fine to medium sand		
18			9	133.2			
			10	20.2	18.5-19.0' Wet, brown, medium dense, fine to medium sand, sheen, odor		
19		2.0/2.0	9	47.3	19.0-21.0' Wet, black to dark brown, medium dense, sheen, odor		
			10	36.1			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:** SB-208
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 39 degrees F with partly cloudy, wind 10mph NW	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/15 0900	
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2022/2/15 1055	
DATE: 2/11/2022	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20							
					20.5-20.8' Sheen		
21		1.0/1.0	4	1.2	21.0-25' Wet, medium, dense, brown to dark brown, fine to coarse sand		
			6	1.9			
22							
23							
24							
25					EOB @ 25.0'		
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Daniel		**SB-209**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	45 degrees F with partly cloudy, wind 9mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/3/2 1015		
WATER LEVEL:	13.00	**DATE/TIME FINISH:**	2022/3/2 1600		
DATE:	2022/3/2	**WEIGHT OF HAMMER:**	140 lb.		
TIME:	1055	**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		1.0/2.0	1	0.0	5.0-6.0' Dry, loose, dark brown, fine to coarse sand, traces of gravel		
			1	0.0			
6			1	0.0	6.0-7.0' No recovery		
			1				
7		0.0/2.0	1	0.0	7.0-9.0' No recovery		
			1		7.5'-7.5' Dry, loose, dark brown, fine to coarse sand, traces of gravel 7.5-9.0' No recovery		
8			1				
			1				
9		0.5/2.0	15	0.0	9.0-9.5' Moist, medium dense, brown, fine to coarse sand		
			22		9.5-11.0' No recovery		
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __5__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel	**SB-209**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 45 degrees F with partly cloudy, wind 9mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/3/2 1015		
WATER LEVEL: 13.00	**DATE/TIME FINISH:** 2022/3/2 1600		
DATE: 2022/3/2	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 1055	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			18				
			15				
11		1.0/2.0	3	0.8	11.0-12.0' Moist, medium dense, dark brown to black, fine to coarse sand, odor		
			12	9.9			
12			18		12.0-13.0' No recovery		
			20				
13		2.0/2.0	7	0.0	13.0-14.5' Wet, medium dense, dark brown, fine to coarse sand		
			11	0.0			
14			26	0.0			
			20	45.7	14.5-15.0' Wet, medium dense, light brown, fine to medium sand, odor		
15		1.0/2.0	4	3.3	15.0-16.0' Wet, medium dense, light brown, fine to medium sand, odor		
			8	2.2			
16			9		16.0-17.0' No recovery		
			12				
17	SB-209_20220302-17.0-23.0	1.0/2.0	4	0.5	17.0-18.5' Wet, medium dense, grayish brown, fine to coarse sand		
			8	4.9			
18			9	0.0			
			12	0.0	18.5-19.0' Wet, dense, grayish brown, fine to medium sand, traces of silt		
19		1.0/2.0	5	18.6	19.0-19.5' Wet, medium dense, grayish brown, fine to coarse sand		
			5	7.0	19.5-20.0' Wet, dense, grayish brown, fine to medium sand, traces of silt		
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __5__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel	**SB-209**
PROJECT LOCATION: Queens, New York	**WEATHER:** 45 degrees F with partly cloudy, wind 9mph NW	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	0
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/3/2 1015	
WATER LEVEL: 13.00	**DATE/TIME FINISH:** 2022/3/2 1600	
DATE: 2022/3/2	**WEIGHT OF HAMMER:** 140 lb.	0
TIME: 1055	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			10	0.0			
			13				
21		1.0/1.0	1	0.0	21.0-22.0' Wet, medium dense, grayish brown, fine to coarse sand		
			5	0.0			
22					22.0-25.0' Wet, medium dense, grayish brown, fine to coarse sand		
23							
24							
25		2.0/2.0	4	0.0	25.0-27.0' Wet, medium dense, grayish brown, fine to coarse sand		
			8	0.0			
26			10	0.0			
			13	0.0			
27					27.0-30.0' Wet, medium dense, black, fine to coarse sand, odor, sheen		
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __5__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:** SB-209
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel	
PROJECT LOCATION: Queens, New York	**WEATHER:** 45 degrees F with partly cloudy, wind 9mph NW	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/3/2 1015	
WATER LEVEL: 13.00	**DATE/TIME FINISH:** 2022/3/2 1600	
DATE: 2022/3/2	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 1055	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: 1055	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
30		2.0/2.0	5	0.0			
			11	0.0			
31			21	0.0	31.0-31.5' Wet, medium dense, grayish brown, fine to coarse sand		
			22	0.0	31.5-32.0' Wet, dense, reddish brown, fine to medium sand, little silt, Odor non-NAPL		
32					32.0-33.0' Wet, medium dense, brown, fine to coarse sand		
33					33.0-35.0' Wet, dense, redddish-brown, fine to medium sand, traces of silt and clay, rounded gravel		
34							
35		0.5/1.0	30	0.0	35.0-35.5' Wet, dense, brown, fine to medium sand, trace gravel		
			50				
36							
37					37.0-40.0' Wet, dense, gray, fine to coarse sand, some sub rounded gravel		
38							
39							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __4__ of __5__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Daniel		**SB-209**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	45 degrees F with partly cloudy, wind 9mph NW	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/3/2 1015		
WATER LEVEL:	13.00	**DATE/TIME FINISH:**	2022/3/2 1600		
DATE:	2022/3/2	**WEIGHT OF HAMMER:**	140 lb.		
TIME:	1055	**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	1055	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
40		1.0/2.0	56	0.0	40.0-41.0' Wet, dense, reddish brown, fine to medium sand, traces of gravel		
			32	0.0			
41			27		41.0-42.0' No recovery		
			26				
42					42.0-42.5' NAPL NAPL saturated layer, NAPL odor		
					42.5-45.0' No recovery		
43							
44							
45		2.0/2.0	15	22.9	45.0-47.0' Wet, dense, brown, fine to coarse sand, traces of rounded gravel		
			22	30.3			
46			44	32.6			
			55	17.4			
47					47.0-49.0' Wet, dense, reddish orange to brown, fine to medium sand, little rounded gravel		
48							
					EOB @ 49.0'		
49							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __5__ of __5__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Brian Kershick		**SB-210**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	38 degrees F with partly cloudy, wind 9mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/9 1000		
WATER LEVEL:	15.0'	**DATE/TIME FINISH:**	2022/2/9 1450		
DATE:	2/9/2022	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
		5.0/5.0					
5		1.0/2.0	1	0.5	5.0-5.5' Moist, loose, brown, fine to coarse sand, some subangular gravel		
			1	0.6	5.5-6.0' Moist, dense, brown, fine to medium sand and silt		
6			2		6.0-7.0' No recovery		
			1				
7		1.5/2.0	7	4.7	7.0-8.0' Moist, dense, brown, fine to coarse sand and silt		
			8	18.7			
8			17	64.2	8.0-8.5' Concrete		
			23	96.3	8.5-9.0' No recovery		
9		1.5/2.0	20	58.4	9.0-10.5' Moist, medium dense, dark brown, fine to coarse sand, and some angular, subangular gravel, some concrete fragments		
			25	49.2			
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-210**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 38 degrees F with partly cloudy, wind 9mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2/9/2022 1000		
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2/9/2022 1450		
DATE: 2/9/2022	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			33	49.2	10.5-11.0' No recovery		
			37	36.8			
11		2.0/2.0	9	3.0	11.0-11.5' Wet, loose, dark brown, fine to medium sand		
			29	0.5	11.5-12.5' Moist, dense, brown, fine to medium sand, little silt		
12			91	9.4			
			84	9.5	12.5-13.0' No recovery		
13		2.0/2.0	57	1.0	13.0-15.0' Moist, dense, brown, fine to coarse sand		
			11	1.8			
14			11	1.9			
			14	4.0			
15	SB-210_20220209-15.0-19.0	2.0/2.0	5	1.7	15.0-17.0' Wet, medium dense, black, fine to medium sand, odor		
			7	1.3			
16			12	22.3			
			19	25.0			
17		2.0/2.0	9	17.1	17.0-19.0' Wet, medium dense, black, fine to medium sand, odor		
			13	99.7			
18			13	9.6			
			17	20.2			
19		2.0/2.0	11	4.3	19.0-20.0' SAA, NAPL blebs 19.0-20.5' Wet, medium dense, dark brown, fine to coarse sand		
			14	8.6			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:** SB-210
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 38 degrees F with partly cloudy, wind 9mph S	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/9 1000	
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2022/2/9 1415	
DATE: 2/9/2022	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			17	80.5			
			17	11.6	20.5-21.0' Wet, dense, brown, fine to medium sand, traces of silt		
21		1.0/1.0	5	1.7	21.0-22.0' Wet, medium dense, brown, fine to coarse sand, NAPL blebs		
			7	3.2			
22			11		22.0-25.0' Moist, dense, light brown, fine to medium sand, little silt		
			13				
23							
24							
25			10	2.7	25.0-25.5' Moist, dense, light brown, fine to medium sand, little silt, NAPL blebs		
			15	1.6	25.5-27.0' Moist, medium dense, brown, fine to coarse sand		
26			16	1.2			
			19	1.2			
27					27.0-30.0' Wet, medium dense, grayinsh brown, fine to coarse sand		
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-210**
PROJECT LOCATION: Queens, New York	**WEATHER:** 38 degrees F with partly cloudy, wind 9mph S	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/9 1000	
WATER LEVEL: 15.0'	**DATE/TIME FINISH:** 2022/2/9 1450	
DATE: 2/9/2022	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
30		2.0/2.0	8	2.2	30.0-31.5' Wet, medium dense, brown		
			16	1.1			
31			15	1.0			
			15	1.8	31.5-32.0' Wet, dense, fine to medium sand, light brown, traces of silt		
32					32.0-34.0' Wet, medium dense, fine to medium sand		
33							
					33.5' SAA, NAPL blebs		
34					34.0-35.0' Wet, dense, brown, fine to medium sand, traces of silt		
35		2.0/2.0	5	1.2	35.0-36.0' Wet, dense, fine to medium sand, traces of silt, brown		
			7	1.2			
36			13	1.0	36.0-37.0' Wet, dense, light brown, clay, some silt		
			13	1.0			
37					EOB @ 37.0'		
38							
39							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __4__ of __4__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Brian Karshick	**SB-211**	
PROJECT LOCATION:	Queens, New York	**WEATHER:**		**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/15		
WATER LEVEL:	15.0'	**DATE/TIME FINISH:**	2022/2/15		
DATE:	2/15/2022	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5	SB-211_20220310-5.0-10.0 SB-211_20220310-5.0-10.0-D	1.0/2.0	3	0.0	5.0-6.0' Dry, medium dense, brown, fine to medium sand, traces of tile fragments		
			3	0.1	5.5-7.0' Moist, dense, brow-gray, fine to medium sand and traces of silt		
6			3		6.0-7.0' No recovery		
			3				
7		1.0/2.0	6	0.0	7.0-8.0' Dry, medium dense, brown, fine to medium sand, traces of tile fragments, little subangular gravel		
			7	5.2			
8			13		8.0-9.0' No recovery		
			11				
9		2.0/2.0	11	0.1	9.0-10.0' Dry, medium dense, brown, fine to medium sand, traces of tile fragments, little subangular gravel		
			12	4.6	9.10-10.3' Void space		
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Karshick	**SB-211**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 0	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:**		
WATER LEVEL: 15.0'	**DATE/TIME FINISH:**		
DATE: 2/15/2022	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			11	1.7	10.3-11.0' Dry, medium dense, dark brown, fine to coarse sand		
			10	33.3			
11		1.5/2.0	7	28.6	11.0-11.5' Dry, medium dense, dark brown, fine to medium sand		
			8	50.4	11.5-12.6' Dry, loose, light brown, fine to medium sand, odor		
12			7	349.1			
			6				
13		1.0/2.0	6	1.7	13.0-13.5' Dry, medium dense, brown, fine to medium sand		
			6	8.3	13.5-14.5' Moist, medium dense, fine to medium sand, dark brown		
14			4	46.9			
			5		14.5-15.0' No recovery		
15	SB-211_20220215-15.0-21.0	1.5/2.0	WH	56.4	15.0-15.5' Wet, dense, dark brown to black, fine to medium sand, little silt, odor		
			WH	62.0			
16			WH		16.0'-17.0' No recovery		
			WH				
17		1.5/2.0	4		17.0-18.0' Wet, dense, dark brown, fine to medium sand, traces of silt		
			3				
18			6		18.0-18.5' Wet, dense, dark brown, fine to medium sand		
			7		18.5-19.0' No recovery		
19		2.0/2.0	1	22.5	19.0-21.0' Wet, dense, brown, fine to medium sand		
			3	25.0			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Brian Karshick		**SB-211**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	0	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		0
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**			
WATER LEVEL:	15.0'	**DATE/TIME FINISH:**			
DATE:	2/15/2022	**WEIGHT OF HAMMER:**	140 lb.		0
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			5	317.9			
			8	56.6			
21		1.5/2.0	5	7.5	21.0-22.0' Wet, dense, brown, fine to medium sand		
			8	1.8			
22			7	4.1	22.0-24.0' Wet, dense, dark gray, fine to medium sand, light staining		
			7	11.7			
23							
24					EOB @ 24.0'		
25							
26							
27							
28							
29							

Notes:

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-212**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 38 degrees F with mostly cloudy, wind 15mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2022/2/16 1300		
WATER LEVEL: 12.43	**DATE/TIME FINISH:** 2022/2/17		
DATE: 2022/2/18	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 0745	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		1.5/2.0	6	0.2	5.0-5.5' Dry, loose, brown, fine to coarse sand, little gravel		
			11	0.3	5.5-6.5' Dry, loose, red brown, fine to medium sand, little subangular gravel		
6			20	0.3			
			14		6.5-7.0' No recovery		
7		0.5/2.0	15	1.1	7.0-7.5' Dry, loose, brown, fine to coarse sand, little gravel, trace concrete fragments		
			23		7.5-9.0' No recovery		
8			25				
			17				
9		1.5/2.0	16	0.9	9.0-10.5' Moist, medium dense, brown, fine to medium sand and silt		
			12	2.6			
10	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __1__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-212**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 38 degrees F with mostly cloudy, wind 15mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2022/2/16 1300		
WATER LEVEL: 12.43	**DATE/TIME FINISH:** 2022/2/17 0920		
DATE: 2022/2/18	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 0745	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			8	1.9			
			9		10.5-11.0' No recovery		
11		2.0/2.0	6	0.4	11.0-13.0' Dry, medium dense, brown, fine to medium sand, traces of silt		
			6	0.4			
12			6	0.4			
			5	0.4			
13		1.5/2.0	5	0.8	13.0-14.0' Moist, medium dense, brownish red, fine to medium sand, trace silt		
			6	0.8			
14			7	7.5	14.0-14.5' Wet, medium dense, dark gray, fine to medium sand		
			6				
15	SB-212_20220217-15.0-19.0	2.0/2.0	3	8.8	15.0-15.3' Wet, dense, brown, fine to medium sand and traces of silt		
			5	23.4	15.3-15.7' Wet, medium dense, black, fine to coarse sand, 15.7-16.5' Wet, medium dense, gray, fine to coarse sand		
16			6	15.5			
			8	9.8			
17		2.0/2.0	11	1.2	17.0-18.0' Wet, medium dense, light brown, fine to medium sand		
			9	4.1			
18			10	15.2	18.0-19.0' Wet, medium dense, dark gray brown, fine to medium sand		
			12	2.8			
19		2.0/2.0	12	1.2	19.0-19.5' Wet, medium dense, black, fine to coarse sand		
			13	3.3	19.5-21.0' Wet, medium dense, brown, fine to coarse sand		
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __4__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:** SB-212
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 38 degrees F with mostly cloudy, wind 15mph S	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2022/2/16 1300	
WATER LEVEL: 12.43	**DATE/TIME FINISH:** 2022/2/17 0920	
DATE: 2022/2/18	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 0745	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			14	4.0			
			16	1.6			
21		2.0/2.0	6	1.7	21.0-22.0' Wet, medium dense, brown, fine to medium sand		
			11	1.2			
22			16	0.0	22.0-25.0' Wet, medium dense, brown, fine to medium sand		
			13	0.0			
23				0.0			
				0.1			
24				0.0			
				0.0			
25		5.0/5.0		0.2	25.0-28.0' Wet, medium dense, brown, fine to coarse sand		
				0.0			
26				0.0			
				0.0			
27				0.0			
				0.0			
28				0.0	28.0-29.0' Wet, dednse, gray-brown, fine to medium sand, little silt		
				0.0			
29				0.0	29.0-30.0' Wet, medium dense, brown, fine to coarse sand		
				0.0			

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:** SB-212
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 38 degrees F with mostly cloudy, wind 15mph S	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: ND	**DATE/TIME START:** 2022/2/16 1300	
WATER LEVEL: 12.43	**DATE/TIME FINISH:** 2022/2/17 0920	
DATE: 2022/2/18	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 0745	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: Temporary monitoring well	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
30		3.0/5.0		0.0	30.0-32.0' Wet, medium dense, brown, fine to coarse sand		
				0.0			
31				0.0			
				0.0			
32				o.0	32.0-33.0' Wet, dense, brown, fine to medium sand, trace silt		
				0.0			
33					33.0-35.0' No recovery		
34							
35					EOB @ 35.0' Temp well installed 2/17/2022 at 0940		
36							
37							
38							
39							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __4__ of __4__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han and AFM	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Brian Kershick		**SB-213**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	43 degrees F with fog and light rain, wind 9mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/22 0815		
WATER LEVEL:	16.00'	**DATE/TIME FINISH:**	2/22/2022 1000		
DATE:	2022/2/22	**WEIGHT OF HAMMER:**	140 lb.		
TIME:	0920	**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		1.5/2.0		12.8	5.0-6.5' Dry, loose, brown, fine to coarse sand		
				1.5			
6				0.1			
				0.2	6.5-7.0' No recovery		
7		1.5/2.0		0.1	7.0-8.5' Dry, medium dense, brown, fine to coarse sand, little subangular and rounded gravel		
				0.1			
8				0.1			
9		1.5/2.0		3.3	9.0-9.5' Dry, loose, brown, fine to medium sand		
				0.8	9.5-10.5' Moist, dense, brown, fine to medium sand		
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han and AFM	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-213**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 43 degrees F with fog and light rain, wind 9mph NE	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/22 0815		
WATER LEVEL: 16.00	**DATE/TIME FINISH:** 2022/2/22 1000		
DATE: 2022/2/22	**WEIGHT OF HAMMER:** 140 lb.		
TIME: 0920	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10				1.2			
				2.3			
11		1.5/2.0		14.9	11.0-11.5' Moist, medium dense, brown, fine to coarse sand		
				51.2	11.5-12.5' Moist, medium dense, beige, fine to medium sand		
12				41.1			
					12.5-13.0' No recovery		
13	SB-213_20220222-13.0-21.0	1.5/2.02.0/2.0		30.3	13.0-13.5' Moist, medium dense, brown, fine to coarse sand		
				3.9	13.5-15.0' Moist, medium dense, black, fine to medium sand, NAPL blebs, odor		
14				77.5			
				59.7			
15		1.5/2.0		88.0	15.0-15.3' Moist, dense, brown, fine to medium sand		
				97.0	15.5-16.0' Moist, medium dense, black, fine to medium sand		
16				151.5	16.0-16.5' Wet, medium dense, black, fine to medium sand		
				17.7	16.5-17.0' No recovery		
17				7.7	17.0-18.0' Wet, medium dense, light brown, fine to medium sand		
				57.8			
18				51.3	18.0-19.0' Wet, medium dense, brown, fine to medium sand		
				4.3			
19				58.9	19.0-20.0' Wet, medium dense, black, fine to medium sand, odor		
				10.3			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han and AFM	**BORING/WELL NO.:** SB-213
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 43 degrees F with fog and light rain, wind 9mph NE	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/22 0815	
WATER LEVEL: 16.00	**DATE/TIME FINISH:** 2022/2/22 1000	
DATE: 2022/2/22	**WEIGHT OF HAMMER:** 140 lb.	
TIME: 0920	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20				9.6			
				8.8			
21		0.5/2.0		2.2	21.0-21.3' Wet, medium dense, brown, fine to medium sand 21.4-24.0' Wet, medium dense, orang brow, fine to medium sand		
22							
23							
24					EOB @ 24.0'		
25							
26							
27							
28							
29							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han and AFM	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-214**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 55 degrees F with mostly cloudy, wind 12mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/17 1000		
WATER LEVEL: 16.00'	**DATE/TIME FINISH:** 2/17/2022 1430		
DATE: 2022/2/22	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		0.5/2.0	9	0.0	5.0-5.5' Dry, loose, brown, fine to coarse sand and subangular gravels		
			15		5.5-7.0' No recovery		
6			17				
			19				
7		2.0/2.0	16	0.0	7.0-7.5' Moist, medium dense, brown, fine to coarse sand, little subangular gravel		
			17	0.0	7.5-7.9' Dry, loose, dark brown, fine to coarse sand, little subangular gravel 7.9-9.0' Dense, brown, fine to coarse sand, traces of gravel and concrete fragments		
8			21	0.0			
			18	0.0			
9		1.5/2.0	20	0.0	9.0-9.7' Dry, loose, dense brown, fine to coarse sand, traces of gravel, and concrete fragments		
			14	0.0	9.7-10.5' Dry, dense, brown, fine to medium sand, little silt and gravels		
10	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __1__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han and AFM	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-214**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 55 degrees F with mostly cloudy, wind 12mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/17 1000		
WATER LEVEL: 16.00	**DATE/TIME FINISH:** 2022/2/17 1430		
DATE: 2022/2/17	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			11	0.0			
			12		10.5-11.0' No recovery		
11		2.0/2.0	8	0.0	11.0-11.5' Dry, loose, brown, fine to coarse sand, traces of gravel		
			6	0.0	11.5-12.0' Moist, dense, grayish brown, fine to medium sand		
12			6	9.8	12.0-13.0' Moist, medium dense, dark brown to black, fine to coarse sand		
			6	10.6			
13		1.5//2.0	8	3.7	13.0-14.5' Moist, medium dense, dark brown to black, fine to coarse sand, odor		
			6	25.0			
14			8	13.6	14.3' Clay layer 0.1" thick		
			8		14.5-15.0' No recovery		
15		2.0/2.0	10	3.6	15.0-15.5' Moist, medium dense, dark brown to black, fine to coarse sand, strong odor		
			7	12.5	15.5-16.0' Moist, medium dense, gray, fine to coarse sand, little silt, odor		
16			6	33.8	16.0-17.0' Wet, medium dense, dark gray, fine to medium, strong odor, staining		
			7	21.9			
17	SB-214_20220217-17.0-27.0	2.0/2.0	9	1.1	17.0-17.5' Wet, medium dense, brown, fine to medium sand, light odor		
			11	1.6	17.5-18.0' Wet, medium dense, gray, fine to medium sand, light odor		
18			8	1.0	18.0-19.0' Wet, medium dense, light brown, fine to medium sand. Light odor		
			10	0.6			
19				28.4	19.0-20.0' Wet, medium dense, light brown, fine to medium sand, odor		
				42.9			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han and AFM	**BORING/WELL NO.:** SB-214
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 55 degrees F with mostly cloudy, wind 12mph S	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/17 1000	
WATER LEVEL: 16.00	**DATE/TIME FINISH:** 2022/2/17 1430	
DATE: 2022/2/17	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			8	16.8	20.0-21.0' Wet, medium dense, gray, fine to medium sand, light odor		
			11	2.9			
21		1.0/2.0	3	0.4	21.0-21.5' Wet, medium dense, gray, fine to medium sand		
			5	0.2	21.5-22.0' Wet, medium dense, light brown, fine to medium sand		
22			12	0.0	22.0-25.0' Wet, medium dense, light brown, fine to medium sand		
				0.0			
23				0.0			
				0.0			
24				0.0			
				0.0			
25		1.5/2.0	3	0.9	25.0-26.0' Wet, medium dense, fine to medium sand		
			5	0.2			
26			14	0.3	26.0-26.5' Wet, medium dense, brown and black banding, fine to medium sand		
			10	0.3	26.5-27.0 No recovery		
27				0.0	27.0-30.0' Wet, medium dense, brown, fine to medium sand		
				0.0			
28				0.0			
				0.0			
29				0.0			
				0.0			

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han and AFM	**BORING/WELL NO.:** SB-214
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 55 degrees F with mostly cloudy, wind 12mph S	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/17 1000	
WATER LEVEL: 16.00	**DATE/TIME FINISH:** 2022/2/17 1430	
DATE: 2022/2/17	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
30		0.5/2.0	6	0.0	30.0-30.5' Wet, loose, light btrown, fine to coarse sand		
			10	0.0	30.5-32.0' No recovery		
31			28	0.0			
			21	0.0			
32				0.0	32.0-35.0' Wet, loose, light btrown, fine to coarse sand		
				0.0			
33				0.0			
				0.0			
34				0.0			
				0.0			
35		2.0/2.0	5	0.0	35.0-36.5' Wet, medium dense, light brown, fine to medium sand		
			9	0.0			
36			17	0.0			
			15	0.0	36.5-37.0' Wet, medium dense, light brown, fine to medium sand, some silt		
37					EOB @ 37.0'		
38							
39							

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __4__ of __4__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han and AFM	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Brian Kershick		**SB-215**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	38 degrees F with mostly cloudy, wind 13mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/16 0900		
WATER LEVEL:	16.00'	**DATE/TIME FINISH:**			
DATE:	2022/2/16	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	In boring	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		2.0/2.0	5	0.0	5.0-7.0' Dry, medium dense, red brown, fine to medium sand, trace silt		
			6	0.0			
6			9	0.0			
			9	0.0			
7		0.0/0.0	7	3.2	7.0-9.0' No recovery		
			6				
8			5				
			6				
9		1.5/2.0	5	0.3	9.0-9.5' Dry, medium dense, brown, fine to medium sand, trace silt		
			4	0.3	9.5-10.5' Dry, medium dense, red brown, fine to medium sand		
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han and AFM	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**SB-215**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 38 degrees F with mostly cloudy, wind 13mph S	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/16 0900		
WATER LEVEL: 16.00	**DATE/TIME FINISH:**		
DATE: 2022/2/16	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			6	0.4			
			7		10.5-11.0' No recovery		
11	SB-215_20220216-11.0-22.0	1.5/2.0	8	0.3			
			4	0.4	11.0-12.0' Dry, medium dense, red brown, fine to medium sand		
12			5	8.3	12.0-12.5' Dry, medium dense, red brown with black staining, fine to medium sand		
			5		12.5-13.0' No recovery		
13		1.5/2.0	3	22.4	13.0-14.5' Moist, medium dense, brown, fine to coarse sand, staining, medium odor		
			4	9.5			
14			4	25.3			
			6		14.5-15.0' No Recovery		
15		2.0/2.0	2	0.8	15.0-16.0' Moist, medium dense, brown, fine to coarse sand, medium odor		
			5	5.0			
16			4	14.3	16.0-17.0' Wet, medium dense, dark gray, fine to medium sand, little silt, NAPL blebs, light odor		
			4	3.7			
17		2.0/2.0	5	15.0	17.0-19.0' Wet, medium dense, dark gray, fine to medium sand, trace silt, NAPL blebs		
			5	18.6			
18			8	15.0			
			8	6.6			
19		2.0/2.0	9	1.4	19.0-20.5' Wet, medium dense, dark gray, fine to medium sand, trace silt, NAPL blebs		
			10	8.4			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __3__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han and AFM	**BORING/WELL NO.:** SB-215
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	
PROJECT LOCATION: Queens, New York	**WEATHER:** 38 degrees F with mostly cloudy, wind 13mph S	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** GeoProbe	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/16 0900	
WATER LEVEL: 16.00	**DATE/TIME FINISH:**	
DATE: 2022/2/16	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20			12	12.4			
			13	5.3	20.5-21.0' Wet, medium dense, dark brown, fine to medium sand, trace silt		
21		2.0/2.0	4	2.0	21.0-22.0' Wet, medium dense, gray brown, fine to medium sand, trace silt, NAPL blebs		
			6	15.8			
22			8				
			9				
23							
24							
25		2.0/2.0	4	0.9	25.0-27.0' Wet, medium dark, brown, fine to coarse sand, light odor		
			7	3.1			
26			12	7.1			
			13	1.9			
27				0.0	27.0-29.0' Wet, medium dense, brown, fine to coarse sand		
				1.1			
28				2.8			
				1.0			
29					EOB @ 29.0'		

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __3__	trace - <10%

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Brian Kershick		**MW-31**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	60 degrees F	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	Sonic Drill Rig	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/23		
WATER LEVEL:	12.00'	**DATE/TIME FINISH:**	2022/2/23		
DATE:	2/23/22	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	TOC	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		5.0/5.0		0.3	5.0' - 6.5' moist, dense, brown, fine to medium sand, little silt		
				0.1			
6				0.0			
				3.7	6.5 - 10.0' SAA, dark brown to black, NAPL saturated at 9.5 - 10.0'		
7				11.8			
				20.6			
8				18.1			
				15.1			
9				7.8			
				21.7			
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __2__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Brian Kershick	**MW-31**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 60 degrees F	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** Sonic Drill Rig	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/23		
WATER LEVEL: 16.00	**DATE/TIME FINISH:** 2022/2/23		
DATE: 2022/2/16	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: In boring	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10		5.0/5.0		56.5	10.0 - 12.0' moist, dense, black, fine to medium sand, NAPL saturated, strong NAPL odor		
				61.2			
11				52.5			
				41.9			
12				95.8	12.0 - 15.5' wet, dense, black, fine to medium sand, NAPL saturated, strong NAPL odor		
				109.8			
13				73.3			
				56.0			
14				79.3			
				146.2			
15				92.4			
				18.3	15.5 - 16.0' peat, fine brown sand, strong NAPL odor		
16				73.5	16.0 - 17.0' wet, dense, clay, some organics, strong NAPL odor		
				6.0			
17					EOB @ 17.0 feet bgs		
18							
19							
20	Notes:						

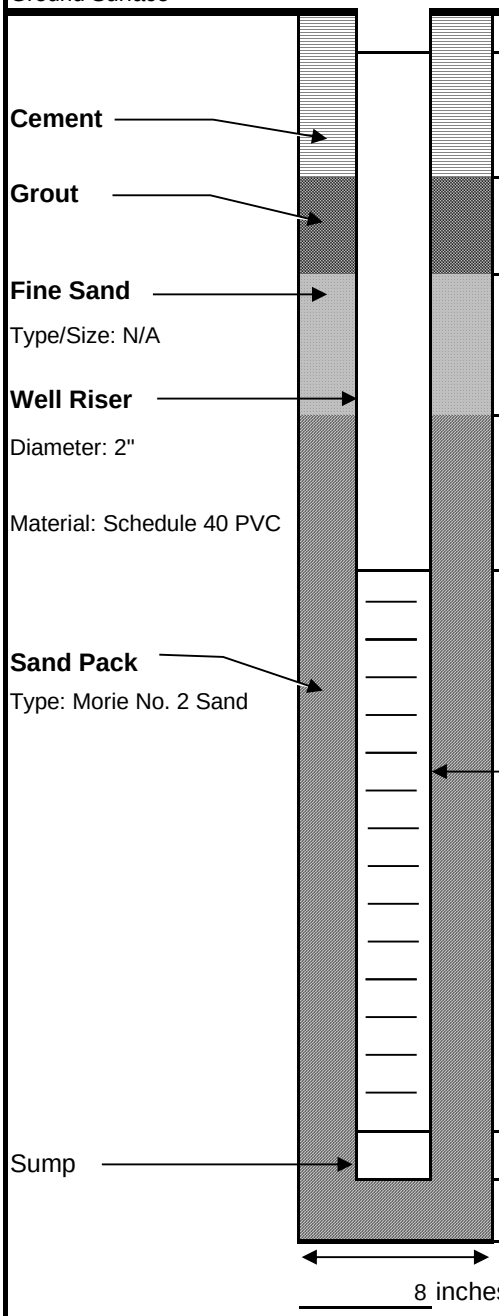
Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __2__	trace - <10%

Well Construction Detail (Single Cased - Road Box)

Client: Con Edison

Well ID: MW-31

Date Well Installed: 2/23/22 Location: Farrington Street MGP



	Depth Below Ground Surface (ft)
Ground Surface	0.0
Top of Well Casing 0 ft	Flush mount
Top of Grout	1.0
Top of Fine Sand	N/A
Top of Sand Pack	2.0
Top of Screen	7.0
Well Screen Diameter: 2" Slot Size: 0.02" Material: Schedule 40 PVC	
Bottom of Screen	17.0
Bottom of Sump	NA
Bottom of Borehole	18.0

Top of Confining Unit (if present): NA

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Daniel Johnson	**MW-33**	
PROJECT LOCATION:	Queens, New York	**WEATHER:**	28 degrees F	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	Sonic Drill Rig	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/28		
WATER LEVEL:	15.00'	**DATE/TIME FINISH:**	2022/2/28		
DATE:	2/28/22	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	TOC	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		5.0/5.0		0.0	5.0 - 9.5' dry, medium dense, dark brown, fine to coarse sand, little subangular gravel, trace silt		
				0.0			
6				0.1			
				0.1			
7				0.0			
				0.0			
8				0.1			
				0.1			
9				0.0			
				0.0	9.5 - 10.0' dry, dense, dark brown, fine to medium sand, little silt and gravel		
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	**MW-33**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 28 degrees F	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** Sonic Drill Rig	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/28		
WATER LEVEL: 15.00'	**DATE/TIME FINISH:** 2022/2/28		
DATE: 2/28/22	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: TOC	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10		5.0/5.0		0.0	10.0 - 10.5' moist, medium dense, drark brown, fine to coarse sand, trace subangular gravel		
				0.1	10.5 - 15.0' moist, dense, grey to dark brown, fine to medium sand, little clay and silt		
11				0.3			
				1.6			
12				0.5			
				1.9			
13				3.4			
				2.7			
14				3.9			
				4.0			
15				7.8			
		5.0/5.0		7.0	15.0 - 18.0' wet, dense, grey to dark brown, fine to medium sand, little clay and silt		
16				4.3			
				11.3			
17				9.7			
				30.2			
18				8.8	18.0 - 19.0' wet, medium dense, black, fine to coarse sand, traces of gravel, NAPL sheen, NAPL odor		
				13.2			
19				2.8			
				2.9	19.0 -20.0' wet, dense, gray to brown, fine to medium sand		
20	Notes:						

Sample Types
S -- Split Spoon A -- Auger Cuttings
U -- Undisturbed Tube
C -- Rock Core

Field Identification Notes:
moisture, density, color, Gradation, observations (USCS symbol) (Strata)

Gradation Percentages:
and - 35 -50%
some - 20-35%
little - 10-20%
trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	**MW-33**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 28 degrees F	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** Sonic Drill Rig	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/28		
WATER LEVEL: 15.00'	**DATE/TIME FINISH:** 2022/2/28		
DATE: 2/28/22	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: TOC	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20		5.0/5.0		0.0	20.0 - 25.0' wet, dense, gray to brown, fine to medium sand		
				0.0			
21				0.2			
				0.3			
22				0.1			
				0.4			
23				0.0			
				0.2			
24				0.1			
				0.1			
25				0.1	25.0 - 30.0' wet, dense, light brown, fine to coarse sand		
				0.1			
26				0.0			
				0.0			
27				0.1			
				0.3			
28				0.1			
				0.0			
29				0.3			
				0.1			

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Yunmee Han	**BORING/WELL NO.:**
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	**MW-33**
PROJECT LOCATION: Queens, New York	**WEATHER:** 28 degrees F	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	0
GROUNDWATER OBSERVATIONS	**RIG TYPE:** Sonic Drill Rig	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/28	
WATER LEVEL: 15.00'	**DATE/TIME FINISH:** 2022/2/28	0
DATE: 2/28/22	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: TOC	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
30		5.0/5.0		0.2	30.0 - 32.0' wet, dense, light brown, fine to coarse sand		
				0.6			
31				0.2			
				0.3			
32				0.0	32.0 - 34.0' wet, dense, light brown, fine to coarse sand, trace silt		
				0.1			
33				0.0			
				0.0			
34				0.1	34.0 - 35.0' wet, dense, organge to brown, fine to medium sand, trace silt, trace gravel		
				0.0			
35					EOB @ 35.0 feet bgs		
36							
37							
38							
39							

Notes:

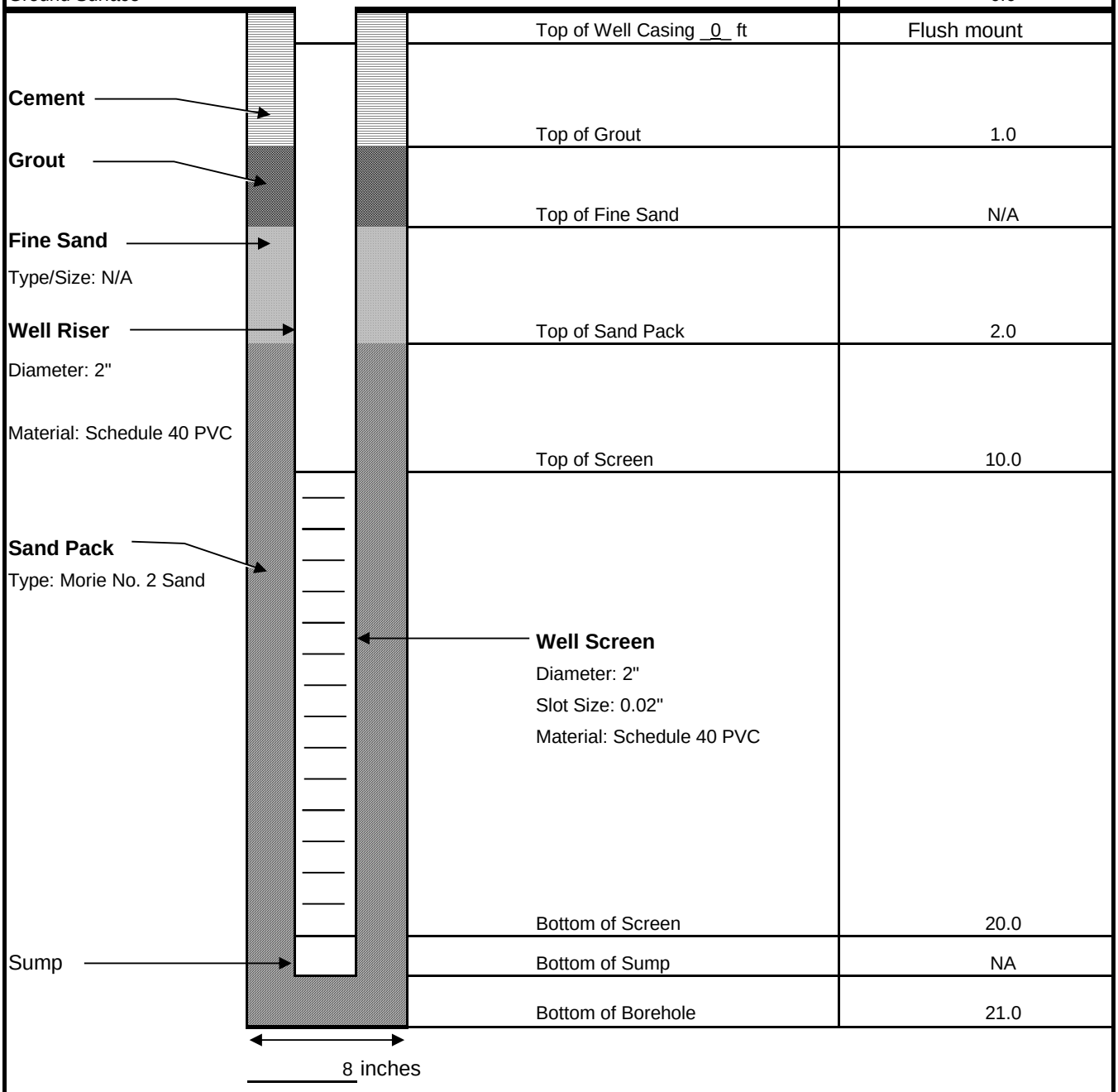
Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __4__ of __4__	trace - <10%

Well Construction Detail (Single Cased - Road Box)

Client: Con Edison

Well ID: MW-33

Date Well Installed: 2/28/22 Location: Farrington Street MGP



Top of Confining Unit (if present): NA

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	**MW-34**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 30 degrees F	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** Sonic Drill Rig	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/24		
WATER LEVEL: 15.00'	**DATE/TIME FINISH:** 2022/2/24		
DATE: 2/24	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: TOC	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		5.0/5.0		0.1	5.0 - 5.5' moist, medium dense, brown, fine to medium sand		
				0.0	5.5 - 10.0' moist, medium dense, light brown, fine to medium sand, some silt		
6				0.0			
				0.1			
7				0.2			
				0.0			
8				0.0			
				0.1			
9				0.0			
				0.0			
10	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __1__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	**MW-34**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 30 degrees F	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** Sonic Drill Rig	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/24		
WATER LEVEL: 15.00'	**DATE/TIME FINISH:** 2022/2/24		
DATE: 2/24	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: TOC	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10		5.0/5.0		0.0	10.0 - 15.0' moist, medium dense, light brown, fine to medium sand, some silt		
				0.0			
11				0.0			
				0.0			
12				0.0			
				0.1			
13				0.1			
				0.1			
14				0.0			
				0.1			
15				0.0			
		5.0/5.0		0.0	15.5 - 16.5' wet, medium dense, light brown, fine to coarse sand, some silt		
16				0.0			
				0.0	16.5 - 18.5' wet, medium dense, dark brown to gray, fine to coarse sand, some silt		
17				0.0			
				0.1			
18				0.0			
				0.1	18.5 - 20.0' wet, dense, dark grey, fine to medium sand, trace silt		
19				0.0			
				0.0			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:** MW-34
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	
PROJECT LOCATION: Queens, New York	**WEATHER:** 30 degrees F	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** Sonic Drill Rig	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/24	
WATER LEVEL: 15.00'	**DATE/TIME FINISH:** 2022/2/24	
DATE: 2/24	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: TOC	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20		5.0/5.0		0.0	20.0 - 30.0' wet, dense, gray to brown, fine to coarse sand, little angular subrounded gravel		
				0.0			
21				0.0			
				0.0			
22				0.1			
				0.0			
23				0.0			
				0.0			
24				0.0			
				0.0			
25		5.0/5.0		0.0			
				0.0			
26				0.2			
				0.0			
27				0.0			
				0.0			
28				0.0			
				0.1			
29				0.0			
				0.0			

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:** MW-34
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	
PROJECT LOCATION: Queens, New York	**WEATHER:** 30 degrees F	**LOCATION DESCRIPTION:** 0
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** Sonic Drill Rig	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/24	
WATER LEVEL: 15.00'	**DATE/TIME FINISH:** 2022/2/24	0
DATE: 2/24	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: TOC	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
30		4.0/5.0		0.0	30.0 - 34.0' wet, dense, grey to brown, fine to coarse sand		
				0.0			
31				0.0			
				0.1			
32				0.0			
				0.0			
33				0.0			
				0.0			
34				0.1			
				0.0			
35					EOB @ 35.0 feet bgs		
36							
37							
38							
39							

Notes:

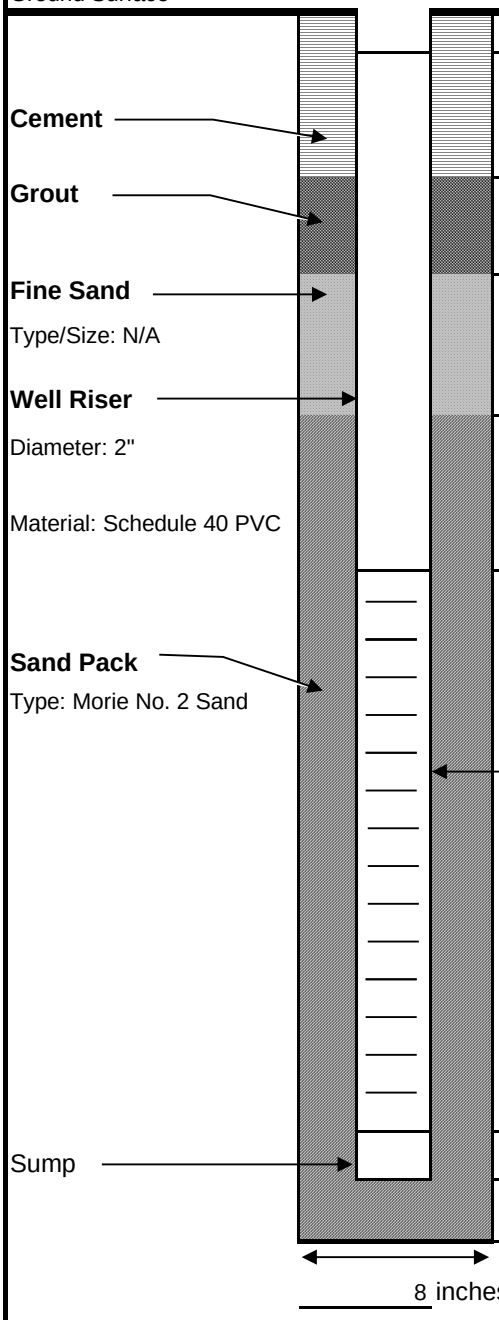
Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __4__ of __4__	trace - <10%

Well Construction Detail (Single Cased - Road Box)

Client: Con Edison

Well ID: MW-34

Date Well Installed: 2/24/22 Location: Farrington Street MGP



	Depth Below Ground Surface (ft)
Ground Surface	0.0
Top of Well Casing 0 ft	Flush mount
Top of Grout	1.0
Top of Fine Sand	N/A
Top of Sand Pack	2.0
Top of Screen	10.0
Well Screen Diameter: 2" Slot Size: 0.02" Material: Schedule 40 PVC	
Bottom of Screen	20.0
Bottom of Sump	NA
Bottom of Borehole	21.0

Top of Confining Unit (if present): NA

Soil Boring Log

CLIENT:	Con Edison	**INSPECTOR:**	Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME:	Farrington MGP SRI	**DRILLER:**	Daniel Johnson		**MW-35**
PROJECT LOCATION:	Queens, New York	**WEATHER:**	30 degrees F	**LOCATION DESCRIPTION:**	
PROJECT NUMBER:	452758	**CONTRACTOR:**	ADT		
GROUNDWATER OBSERVATIONS		**RIG TYPE:**	Sonic Drill Rig	**LOCATION PLAN**	
DEPTH TO PRODUCT:	N/A	**DATE/TIME START:**	2022/2/24		
WATER LEVEL:	14.00'	**DATE/TIME FINISH:**	2022/2/24		
DATE:	2/24	**WEIGHT OF HAMMER:**	140 lb.		
TIME:		**DROP OF HAMMER:**	30 in.		
MEASURED FROM:	TOC	**TYPE OF HAMMER:**	Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0					0 - 5.0' Hand cleared, fill material		HC to 5' bgs
1							
2							
3							
4							
5		5.0/5.0		0.0	5.0 - 7.0' moist, dense, brown with light brown striations, fine to medium sand, little silt		
				0.0			
6				0.0			
				0.0			
7				0.0	7.0 - 10.0' moist, dense, grey to brown, fine to medium sand		
				0.0			
8				0.1			
				0.0			
9				0.0			
				0.0			
10	Notes:						

Sample Types		Field Identification Notes:	Gradation Percentages:
S -- Split Spoon	A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube			some - 20-35%
C -- Rock Core			little - 10-20%
		Page __1__ of __4__	trace - <10%

PARSONS

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:**	
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	**MW-35**	
PROJECT LOCATION: Queens, New York	**WEATHER:** 30 degrees F	**LOCATION DESCRIPTION:**	
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT		
GROUNDWATER OBSERVATIONS	**RIG TYPE:** Sonic Drill Rig	**LOCATION PLAN**	
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/24		
WATER LEVEL: 14.00'	**DATE/TIME FINISH:** 2022/2/24		
DATE: 2/24	**WEIGHT OF HAMMER:** 140 lb.		
TIME:	**DROP OF HAMMER:** 30 in.		
MEASURED FROM: TOC	**TYPE OF HAMMER:** Automatic Safety Hammer		

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10		5.0/5.0		0.0	10.0 - 14.0' moist, dense, grey to brown, fine to medium sand		
				0.0			
11				0.0			
				0.0			
12				0.0			
				0.0			
13				0.0			
				0.0			
14				0.0	14 - 16.5 ' wet, dense, grey to brown, fine to medium sand		
				0.0			
15				0.0			
		5.0/5.0		0.0			
16				0.1			
				0.2	16.5 - 20.0' wet, medium dense, light red to brown, fine to coarse sand		
17				0.0			
				0.0			
18				0.0			
				0.0			
19				0.0			
				0.0			
20	Notes:						

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __2__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:** MW-35
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	
PROJECT LOCATION: Queens, New York	**WEATHER:** 30 degrees F	**LOCATION DESCRIPTION:**
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** Sonic Drill Rig	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/24	
WATER LEVEL: 14.00'	**DATE/TIME FINISH:** 2022/2/24	
DATE: 2/24	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: TOC	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
20		5.0/5.0		0.0	20.0 - 30.0' wet, medium dense, light red to brown, fine to coarse sand		
				0.0			
21				0.0			
				0.0			
22				0.0			
				0.0			
23				0.0			
				0.0			
24				0.0			
				0.0			
25		5.0/5.0		0.0			
				0.0			
26				0.0			
				0.0			
27				0.0			
				0.0			
28				0.0			
				0.0			
29				0.0			
				0.0			

Notes:

Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __3__ of __4__	trace - <10%

Soil Boring Log

CLIENT: Con Edison	**INSPECTOR:** Aaron Feshbach-Meriney	**BORING/WELL NO.:** MW-35
PROJECT NAME: Farrington MGP SRI	**DRILLER:** Daniel Johnson	
PROJECT LOCATION: Queens, New York	**WEATHER:** 30 degrees F	**LOCATION DESCRIPTION:** 0
PROJECT NUMBER: 452758	**CONTRACTOR:** ADT	
GROUNDWATER OBSERVATIONS	**RIG TYPE:** Sonic Drill Rig	**LOCATION PLAN**
DEPTH TO PRODUCT: N/A	**DATE/TIME START:** 2022/2/24	
WATER LEVEL: 14.00'	**DATE/TIME FINISH:** 2022/2/24	0
DATE: 2/24	**WEIGHT OF HAMMER:** 140 lb.	
TIME:	**DROP OF HAMMER:** 30 in.	
MEASURED FROM: TOC	**TYPE OF HAMMER:** Automatic Safety Hammer	

SAMPLE DEPTH	SAMPLE I.D.	ADV/ REC.	BLOW COUNTS	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
30		5.0/5.0		0.2	30.0 - 32.0' wet, medium dense, light red to brown, fine to coarse sand		
				0.0			
31				0.0			
				0.1			
32				0.0	32.0 - 35.0' wet, medium dense, light brown, fine to coarse sand		
				0.0			
33				0.0			
				0.0			
34				0.0			
				0.0			
35					EOB @ 35.0 feet bgs		
36							
37							
38							
39							

Notes:

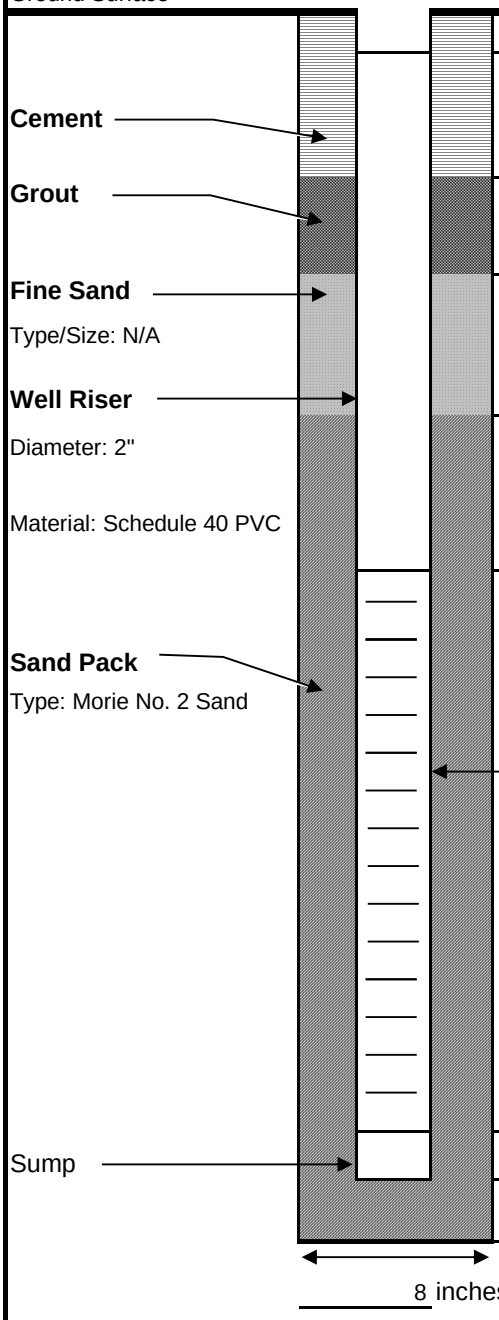
Sample Types	Field Identification Notes:	Gradation Percentages:
S -- Split Spoon A -- Auger Cuttings	moisture, density, color, Gradation, observations (USCS symbol) (Strata)	and - 35 -50%
U -- Undisturbed Tube		some - 20-35%
C -- Rock Core		little - 10-20%
	Page __4__ of __4__	trace - <10%

Well Construction Detail (Single Cased - Road Box)

Client: Con Edison

Well ID: MW-35

Date Well Installed: 2/24/22 Location: Farrington Street MGP



	Depth Below Ground Surface (ft)
Ground Surface	0.0
Top of Well Casing 0 ft	Flush mount
Top of Grout	1.0
Top of Fine Sand	N/A
Top of Sand Pack	2.0
Top of Screen	10.0
Well Screen Diameter: 2" Slot Size: 0.02" Material: Schedule 40 PVC	
Bottom of Screen	20.0
Bottom of Sump	NA
Bottom of Borehole	21.0

Top of Confining Unit (if present): NA

APPENDIX C

GROUNDWATER MODELING REPORT

GROUNDWATER MODELING REPORT

FARRINGTON STREET FORMER MANUFACTURED GAS PLANT SITE SUPPLEMENTAL REMEDIAL INVESTIGATION

CONSTRUCTION, CALIBRATION, AND DESIGN SCENARIOS

Prepared for:

ConEdison

Prepared by:

PARSONS

April 2019

TABLE OF CONTENTS

1.0 INTRODUCTION..... 1

1.1 Purpose..... 1

1.2 Approach 1

2.0 MODEL DESIGN 1

2.1 Model Code..... 1

2.2 Model Domain, Grid and Boundary Conditions..... 2

2.3 Boundary Conditions 2

2.4 Initial Hydraulic Parameters..... 2

2.5 Model Calibration Procedure and Objectives..... 3

2.5.1 Calibrated Parameters 3

3.0 RESULTS……4

4.0 ASSUMPTIONS..……5

5.0 REFERENCES..... 5

LIST OF TABLES

Table 1 Groundwater Model Specifications

Table 2 Calibrated Precipitation and Recharge Values – Initial (Pre-PEST) and Post-PEST

LIST OF FIGURES

Figure 1 Modeling Process Diagram

Figure 2 Groundwater Contour Map

Figure 3 Groundwater Model Finite Difference Grid

Figure 4 Model Cross Section

Figure 5 Groundwater Model Layer 1 – Hydraulic Conductivity Zones

Figure 6 Groundwater Model Layer 2 – Hydraulic Conductivity Zones

Figure 7 Groundwater Model Layer 3 – Hydraulic Conductivity Zones

Figure 8 Groundwater Model Layers 4 and 5 – Hydraulic Conductivity Zones

Figure 9 Groundwater Model Layers 6 and 7 – Hydraulic Conductivity Zones

Figure 10 Model Calibration Progression

Figure 11 Calibration Plot of Simulated versus Observed

Figure 12 Model Parameter Sensitivity

Figure 13 Groundwater Model – Existing Conditions

Figure 14 Groundwater Model – Barrier Wall

Figure 15 Groundwater Model – ISS and Barrier Wall

Figure 16 Comparison of Groundwater Velocity for Each Scenario

1.0 INTRODUCTION

1.1 Purpose

This report summarizes the groundwater modeling that was conducted as part of the Supplemental Remedial Investigation (SRI) activities outlined in the *Former Farrington Street Manufactured Gas Plant Site (Site No. V00560) Supplemental Remedial Investigation Work Plan* (SRIWP) (Parsons, 2018) approved by the New York State Department of Environmental Conservation (NYSDEC) on September 12, 2018. The purpose of the model was to qualitatively and quantitatively evaluate groundwater flow at the former Farrington Street Gas Works Site (the "Site") located in Queens, New York with specific relevance to the remedial scenarios of *In-Situ* Stabilization (ISS) and barrier wall containment. This document describes groundwater flow modeling to provide hydrogeologic support for remedial improvement scenarios for the Consolidated Edison Company of New York, Inc. (Con Edison) for the former Farrington Street Gas Works Site (the "Site") located in Queens, New York

Utilizing data collected during the SRI activities, a numerical finite difference groundwater model was developed, constructed, and calibrated (with sensitivity testing) to simulate groundwater flow conditions, and identify groundwater particle paths and associated velocities for the Site. The steady state model was calibrated to one set of synoptic water levels using existing and new groundwater hydraulic information (transmissivity, regional gradients, aquifer architecture, potential for tidal influences, etc. collected during SRI field activities).

The preliminary groundwater modeling addressed three scenarios for the Site:

- Scenario 1 – simulate existing subsurface conditions at the Site;
- Scenario 2 – simulate subsurface conditions at the Site should the remedy include perimeter containment barriers at Parcels 1 and 2 and in vicinity of the Market Area of Parcel 1 ("Market Area"); and
- Scenario 3 – simulate subsurface conditions at the Site should the remedy include in-situ soil stabilization/solidification (ISS) at Parcels 1 and 2 and a perimeter containment barrier in vicinity of the Market Area.

1.2 Approach

This report provides the documentation for the groundwater modeling so that the team can review the model with stakeholders and revise as necessary. **Figure 1** provides a process diagram of model construction, calibration, and predictive scenarios.

2.0 MODEL DESIGN

2.1 Model Code

MODFLOW-2005 (Harbaugh 2005) and MODPATH Version 5 (Pollock 1994) were used for this groundwater modeling effort. MODFLOW-2005 is being used for flow only

simulations and groundwater flow paths are delineated using MODPATH Version 5. Both models are well-known, well-documented, and in the public domain. Environmental Simulations Incorporated (ESI) Ground Water Vistas (Version 2) was used as the graphic user interface (GUI) to manage pre- and post-process data. For flow-only testing, the MODFLOW-2005 model used the Layer Property Flow package solved by the Preconditioned Conjugate-Gradient Package (PCG2). The model was steady state and since the model was built to simulate flow only there are no solvers included for advection, dispersion, retardation, or degradation. To improve the calibration process and complete sensitivity testing the well-known and documented Parameter ESTimation tool (PEST) was used (Doherty, 2010).

All final MODFLOW model runs exhibited 0.0 percent (%) water balance error, indicating that a sufficiently accurate solution of the flow problem was achieved. This is a check on the internal numerical solution and differs from model calibration processes and accuracy of the model relative to real world conditions; see calibration section of detail on model comparison to measured values. Water balance error less than 1% is considered acceptable for this type model (Anderson and Woessner, 1992).

2.2 Model Domain, Grid and Boundary Conditions

A finite difference grid telescoped from 10-foot x 10-foot cells in the area of interest to a maximum size of 100 feet x 100 feet. The area covered 116,000,000 square feet (ft^2) of active area with 188,566 active cells. The vertical domain was discretized in seven layers to a depth of -40 ft AMSL. **Figure 3** provides a map of the cell grid, and **Figure 4** provides the vertical grid in the area of interest. The layer elevations were determined from boring logs. Using spatial interpolative techniques (kriging) all available data were integrated to create the model structure.

2.3 Boundary Conditions

Multiple MODFLOW packages were included in the model to create boundary conditions and simulate groundwater flow. These include: Recharge Package, Drain Package, River Package, and General Head Package. The River Package was used to simulate Flushing Bay. The General Head Package simulated recharge areas northwest of the Site and also identified on aerial photography. The Drain Package simulated surface water features identified on aerial photography as well as groundwater sink southeast of the Site. Pre- and post-calibration parameters are provided in **Table 2**.

The Recharge Package simulated vertical recharge to the water table as a means of precipitation as well as evapotranspiration in regions of shallow water table conditions and heavy vegetation. **Table 2** provides the pre- and post-calibration values for recharge.

2.4 Initial Hydraulic Parameters

Initial hydraulic parameters such as hydraulic conductivity (K_h and K_v), porosity, dispersivity are provided in **Table 1** while **Table 2** provides the pre- and post-calibration values. The initial hydraulic conductivity values are based on slug tests, during initial calibration, these values are adjusted within the observed/literature range as part of the

inversion process (incrementally adjusting the values to reduce residuals), see below (section 2.6.1) for more details.

2.5 Model Calibration Procedure and Objectives

Water level calibration targets and associated groundwater contour maps are provided in **Figure 2**. A total of 19 monitoring well measurements were used as targets in the static condition calibration. No weighting of calibration targets was used in the calibration. The initial model was calibrated through trial and error techniques to lower the residual error (target water level elevation minus that simulated) both statistically and qualitatively in the areas of interest. The calibration goals for the groundwater model are scaled root mean squared error of hydraulic head less than 0.1 (dimensionless) and reduced sum of squared residuals (head) to the extent practical.

Initially manual calibration techniques were used along with Site specific observations regarding hydraulic conductivity zones based on drilling observations and aquifer pumping tests. After the initial manual calibration, the well-known and documented Parameter Estimation Tool (PEST) was used to further refine the calculated parameters and test sensitivities for hydraulic conductivity, recharge, and evapotranspiration. **Figure 10** demonstrates the overall model progression and the change from manual calibration to PEST. **Figure 11** provides a plot of simulated versus observed for each model layer (with calibration targets). **Figure 12** provides the relative sensitivities.

2.5.1 Calibrated Parameters

After the initial calibration, PEST was run in parameter estimation mode, and provided a revised set of hydraulic conductivities, recharge, and evapotranspiration. Subsequently, these values were slightly altered from the PEST runs to remove non-sensitive discrepancies and remove exaggerated values created by the PEST auto-calibration.

Table 2 provides the PEST calibrated parameter values as well as the initial manual calibration parameters, for comparison. **Figures 5** through **8** provide the hydraulic conductivity zones in each layer.

The model was calibrated using regional information (surface water bodies), field data (hydraulic head measurements), and inverse modeling processes (software algorithms). Once calibrated objectives were met and the model produced agreeable results, predictive scenarios were developed. Regional recharge to the aquifer was estimated at a low value of 1.16 inches per year, but slightly above published value of 0.89 inches per year. Due to the localized Market Area retail building the recharge under this building was reduced to 0.22 inches per year to support calibration. It was observed that because of the steady state simulation, and the idealized nature of the model, elevated water mounding occurred in the Parcel 1. Therefore, predictive model runs were established with calibrated recharge and zero recharge for the three parcels. While surface improvements and engineering design can further reduce recharge in parcels, it remains unknown if recharge could be reduced to zero. As such, for the varying recharge predictive scenarios, the calibrated recharge and zero recharge simulations provide a range of groundwater velocities and it is likely the actual velocity would be near the mean.

3.0 RESULTS

Figures 13 through **15** demonstrate the results from each scenario and are summarized here. **Figure 16** provides a comparison of groundwater velocities.

Existing Conditions:

- The groundwater flow under existing conditions travels to the southeast off of a slightly elevated groundwater mound, on top of the clay observed under the parking lot area and northwest of the Site; and
- Based on the calibrated model, the existing groundwater velocity through the Site is low to moderate varying from approximately 10 to 54 feet per year.

Subsurface Barrier Wall:

- In the parking lot area of Parcel 1, the simulated particle velocities decreased to negligible rates of approximately 3 feet per year using calibrated recharge, and 0.06 feet per year assuming no recharge to the water table. This is due to the result of the low permeability underlying clay and the typical conductivity of subsurface barrier walls (e.g., 10^{-7} centimeters per second);
- In the Market Area, the simulated particle velocities decreased due to groundwater being diverted around this area. On the western side of the Market Area, the simulated average particle velocity is reduced to 6 feet per year due to the decrease in head that would be caused by the subsurface barrier walls nearly surrounding the parcel. Near the east side of the Site, the average linear velocity would be approximately 28 feet per year; and
- In the southern area (Parcel 2) of the Site, simulated particle velocities decreased to approximately 3 feet per year due to the lower recharge and low vertical hydraulic conductivity of the sand in this unit (0.32 feet per day to 2 feet per day).

ISS:

- Under this remedial scenario, ISS would be performed in the parking lot area of Parcel 1, and within Parcel 2, as noted on **Figure 15**. No particles were tracked from within the ISS areas, as it was assumed the ISS would eliminate flux; and
- In the Market Area, the groundwater flow was reduced to similar rates as the subsurface barrier wall alternative. On the western side of the Market Area, the average linear velocity was reduced to 7 feet per year. Closer to the east side of the Site the average linear velocity was approximately 28 feet per year.

Overall, the results of the groundwater modeling indicate that there is minimal difference between a subsurface barrier wall remedy compared to an ISS remedy for the Site in terms of overall effectiveness in reducing the potential for contaminant migration off-site. In both scenarios, groundwater flow in the parking lot area of Parcel 1 is fully contained, and groundwater flow in the majority of the Market Area and Parcel 2 is reduced to less than 10 feet per year. Furthermore, groundwater flowing from each parcel follows a path onto the adjacent Holder site which is currently under natural attenuation monitoring and will continue to be monitored for impacts from the Site. Lastly, groundwater flow in the

eastern portion of the Market Area can be further reduced should a subsurface barrier wall be extended or added in this area of the Site.

4.0 ASSUMPTIONS

The following assumptions were made for the model:

- It was assumed that the barrier walls can be installed as established in the groundwater model and there is no leakage through weaknesses or imperfections in the design or construction.
- Recharge can be further reduced to eliminate any mounding and ponding of water within the parking lot barrier walls.
- There is no anthropogenic input of water such as leaking piping or sewers.
- Recharge in the region is low at approximately 1-2 inches per year.

5.0 REFERENCES

Anderson, M.P. and W.W. Woessner, 1992. *Applied Groundwater Modeling - Simulation of Flow and Advective Transport*. Academic Press, Inc., San Diego, California

"Bedekar, V., E.D. Morway, C.D. Langevin, and M. Tonkin. 2016. MT3D-USGS version 1: A U.S. Geological Survey release of MT3DMS updated with new and expanded transport capabilities for use with MODFLOW: U.S. Geological Survey Techniques and Methods 6-A53, 69 p., http://dx.doi.org/10.3133/tm6A53

Bridget R. Scanlon, Robert Reedy, Gil Strassberg, Yun Huang, and Gabriel Senay. Estimation of Groundwater Recharge to the Gulf Coast Aquifer in Texas, USA, Bureau of Economic Geology, Jackson School of Geosciences, University of Texas at Austin US Geological Survey, Sioux Falls, South Dakota (this report has no date but can be accessed here: http://www.twdb.texas.gov/groundwater/docs/studies/TWDB%20Gulf%20Coast%20Recharge.pdf

Cook, Marlon R., Jennings, Stephen P. and Moss, Neil E (2007). Assessment of Aquifer Recharge, Ground-Water Impacts, and Future Ground-Water Development in Southeastern Alabama.

Doherty, John E. and Hunt, Randall J. (2010) Approaches to Highly Parameterized Inversion: A Guide to Using PEST for Groundwater-Model Calibration, Scientific Investigations Report 2010–5169, U.S. Department of the Interior U.S. Geological Survey.

Groundwater Services Inc. (GSI) 2005 Groundwater-Surface Water Interaction Investigation Report, Morton International, Inc., Moss Point Facility, Moss Point Mississippi.

Harbaugh, Arlen W. 2005. MODFLOW-2005, The U.S. Geological Survey Modular Ground-Water Model – the Ground-Water Flow Process. Chapter 16 of Book 6. Modeling techniques, Section A. Ground Water.

Langevin, C.D., Thorne, D.T., Jr., Dausman, A.M., Sukop, M.C., and Guo, Weixing, 2007, SEAWAT Version 4: A Computer Program for Simulation of Multi-Species Solute and Heat Transport: U.S. Geological Survey Techniques and Methods Book 6, Chapter A22, 39 p.

Pollock, David W. 1994. User's guide for MODPATH/MODPATH-PLOT, Version 3; a particle tracking post-processing package for MODFLOW, the U.S. Geological Survey finite-difference ground-water flow model. Open-File Report 94-464.

Sanford, Ward E. and David L. Selnick (2012). Estimation of Evapotranspiration Across the Conterminous Uni-ted States Using a Regression with Climate and Land-Cover Data. Journal of the American Water Resources Association (JAWRA) 49(1): 217-230. DOI: 10.1111/jawr.12010

Williamson, Alex K. (1998) Ground-Water Flow in the Gulf Coast Aquifer Systems, South-Central United States, Regional Aquifer-System Analysis Gulf Coast Plain, USGS professional Paper 1416-F

TABLES

TABLE 1
Groundwater Model Specifications
Groundwater Modeling Report
ConEd Farrington

	Input Parameter	Value		Unit	Comments
Grid Properties	Number of Columns (NCOL)	151		-	
	Number of Rows (NROW)	180		-	
	Number of Layers (NLAY)	7		-	
	Total Active Cells	188566		-	
	Total Model Area	4.16		sq mi	
	deltaX (DELR)	25-100		ft	
	deltay (DELC)	25-100		ft	
	deltaz (DZ)	Variable		ft	
		Kx	Kv		
Physical Propoerties	Horizontal hydraulic conductivity Zone 1	1.6	0.32	ft/day	Low K Sand
	Horizontal hydraulic conductivity Zone 2	0.0028	0.000056	ft/day	Clay
	Horizontal hydraulic conductivity Zone 3	68.5	2	ft/day	High K Sand
	Horizontal hydraulic conductivity Zone 4	10	0.1	ft/day	Fill
	Horizontal hydraulic conductivity Zone 5	115	0.5	ft/day	Very High K Sand
	Recharge regional	1.16	NA	in/year	
	Recharge under market parcel	0.22	NA	in/year	
	porosity (Ø)	0.30	NA	unitless	
MODFLOW PARAMETERS	Stress Period	Steady State			
	Solver	PCG2		-	
	Flow Package				
	Head Change Criteria	0.001		-	
	Residual Criteria for convergence	1		-	
	Volumetric Water Balance from MODFLOW	0.00	%		

Table 2
Calibrated Precipitation and Recharge Values - Initial (pre-PEST) and Post-PEST
Groundwater Modeling Report
ConEd Farrington

	Hydraulic Condutivity Zones						
	Model		Initial Model Calibration		Post PEST Model Calibration		Area
Hydraulic Conductivity	Zone ID	Layer(s)	K_h (ft/day)	K_v (ft/day)	K_h (ft/day)	K_v (ft/day)	
	1	1	1.6E+01	3.2E-01	1.6E+00	3.2E-01	Low K Sand
	2	2,3	2.8E-03	5.6E-05	2.8E-03	5.6E-05	Clay
	3	4	1.0E+02	2.0E+00	6.9E+01	2.0E+00	High K Sand
	4	5	1.0E+00	2.0E-02	1.0E+01	1.0E-01	Fill
	5	6,7	1.0E+02	2.0E+00	1.2E+02	1.0E+00	Very High K Sand
Recharge	Recharge Zones						
	Model		Initial Model Calibration		Post PEST Model Calibration		
	Zone ID	Layer(s)	ft/day	inches/year	ft/day	inches/year	Area
	r1	1	5.0E-04	2.2	1.92E-03	8.4	General
General Head and Drains	General Head and Drains						
	Model		Initial Model Calibration		Post PEST Model Calibration		
	Zone ID	Layer(s)	ft		ft/day	inches/year	Area
	gh10	1.00	6.0E+00		1.00E+00		Drainage ditches to the north
	dh3	2	-3.0E+00		-1.00E+00		Anthropogenic Sink

FIGURES

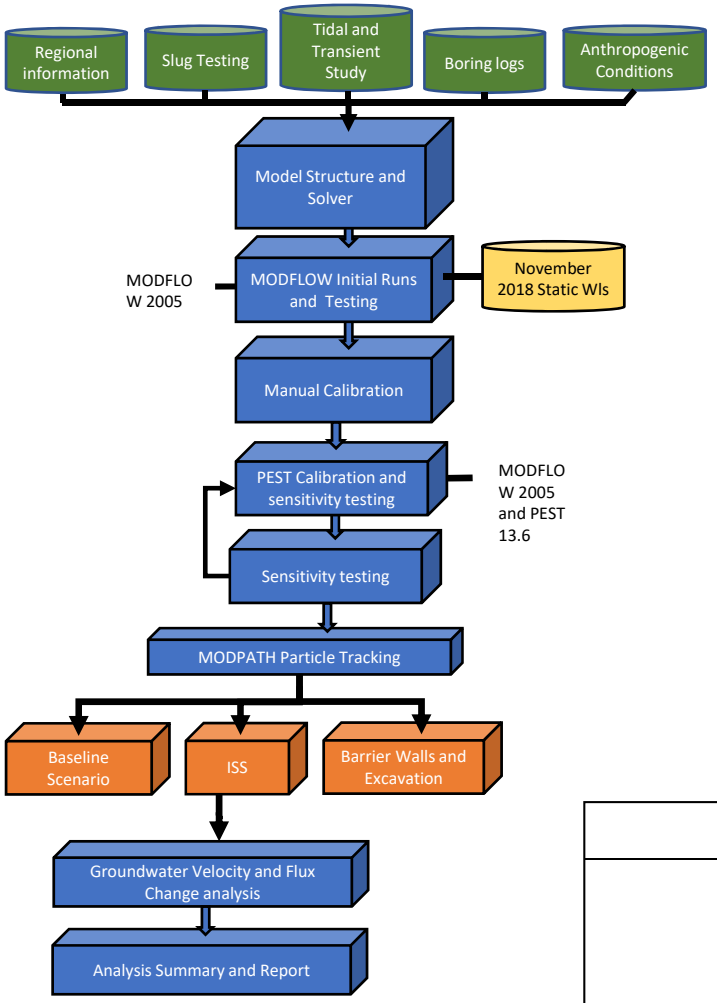


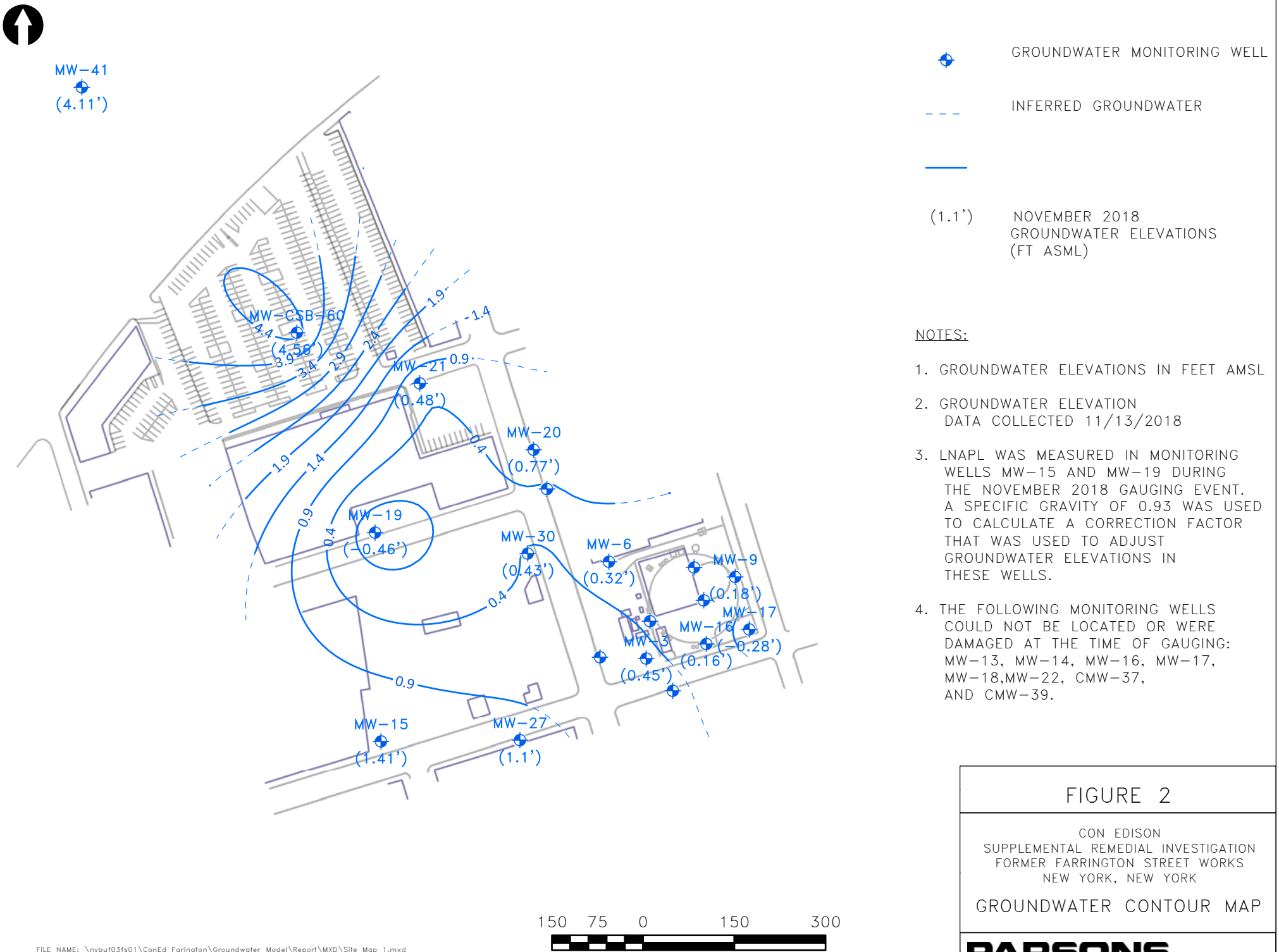
FIGURE 1

CON EDISON
FORMER FARRINGTION STREET WORKS
SUPPLEMENTAL INVESTIGATION
QUEENS, NEW YORK

MODELING PROCESS DIAGRAM

PARSONS

301 PLAINFIELD ROAD, SUITE 350 SYRACUSE, NEW YORK 13212
PHONE: 315-451-9560



NOTES:

1. GROUNDWATER ELEVATIONS IN FEET AMSL
2. GROUNDWATER ELEVATION DATA COLLECTED 11/13/2018
3. LNAPL WAS MEASURED IN MONITORING WELLS MW-15 AND MW-19 DURING THE NOVEMBER 2018 GAUGING EVENT. A SPECIFIC GRAVITY OF 0.93 WAS USED TO CALCULATE A CORRECTION FACTOR THAT WAS USED TO ADJUST GROUNDWATER ELEVATIONS IN THESE WELLS.
4. THE FOLLOWING MONITORING WELLS COULD NOT BE LOCATED OR WERE DAMAGED AT THE TIME OF GAUGING: MW-13, MW-14, MW-16, MW-17, MW-18,MW-22, CMW-37, AND CMW-39.

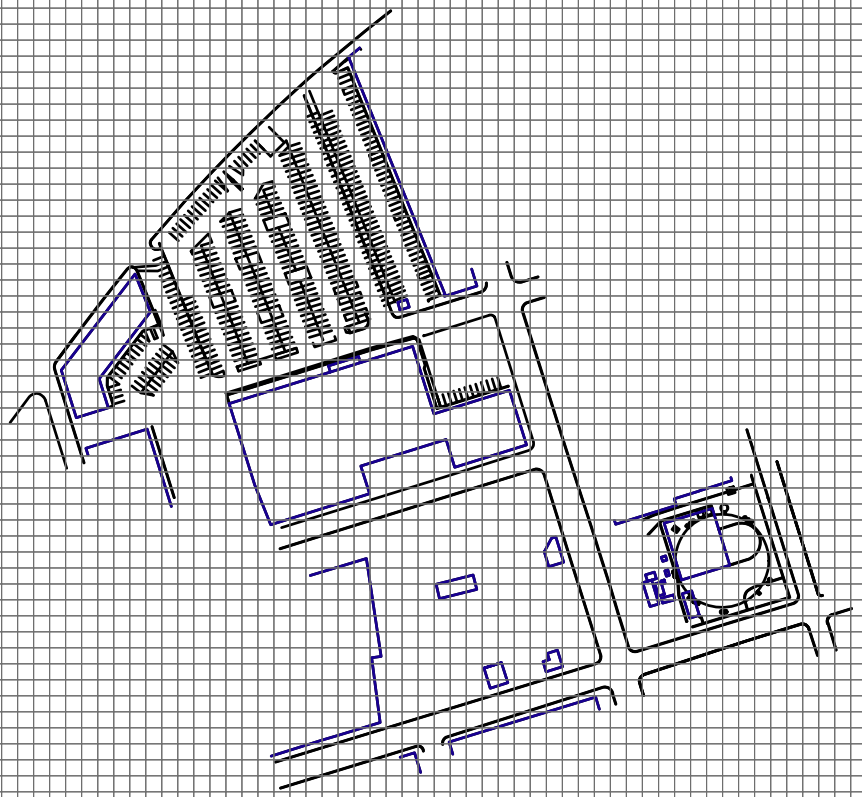
FILE NAME: \nybuf03fs01\ConEd Farington\Groundwater_Model\Report\MXD\Site Map 1.mxd
PLOT DATE: 3/21/2019 PLOTTED BY: BECK, MELANIE

FIGURE 2

CON EDISON
SUPPLEMENTAL REMEDIAL INVESTIGATION
FORMER FARRINGTON STREET WORKS
NEW YORK, NEW YORK

GROUNDWATER CONTOUR MAP

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560



150 75 0 150 300

NOTES:

1. FINITE DIFFERENCE GRID WITH CELL DIMENSIONS 100' X 100' TELESCOPED IN PROJECT AREA TO 10' X 10'

FILE NAME: \nybuf03fs01\ConEd Farington\Groundwater_Model\Report\MXD\Grid.mxd
PLOT DATE: 3/21/2019 PLOTTED BY: BECK, MELANIE

FIGURE 3

CON EDISON
SUPPLEMENTAL REMEDIAL INVESTIGATION
FORMER FARRINGTON STREET WORKS
NEW YORK, NEW YORK

GROUNDWATER MODEL
FINITE DIFFERENCE GRID

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560

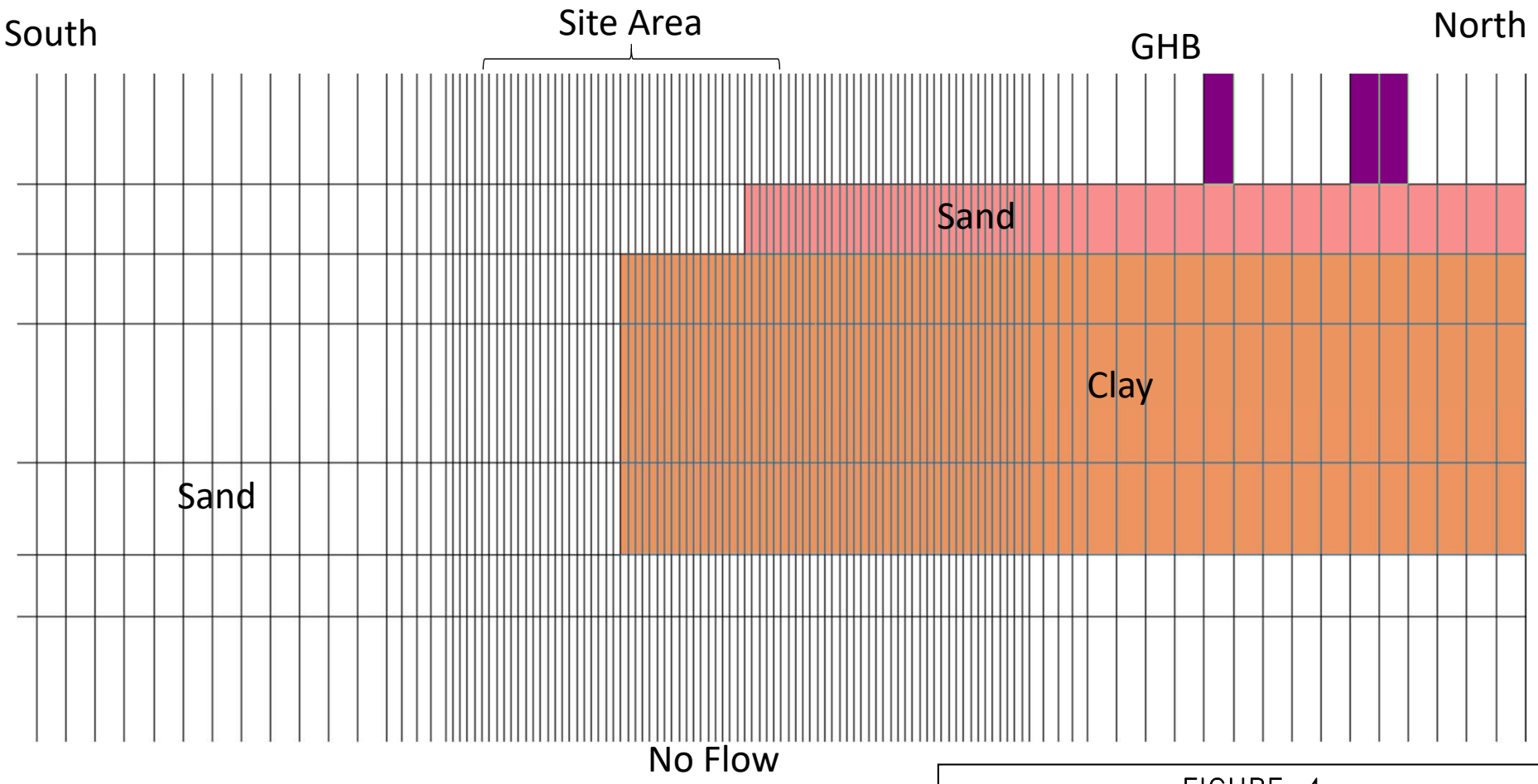


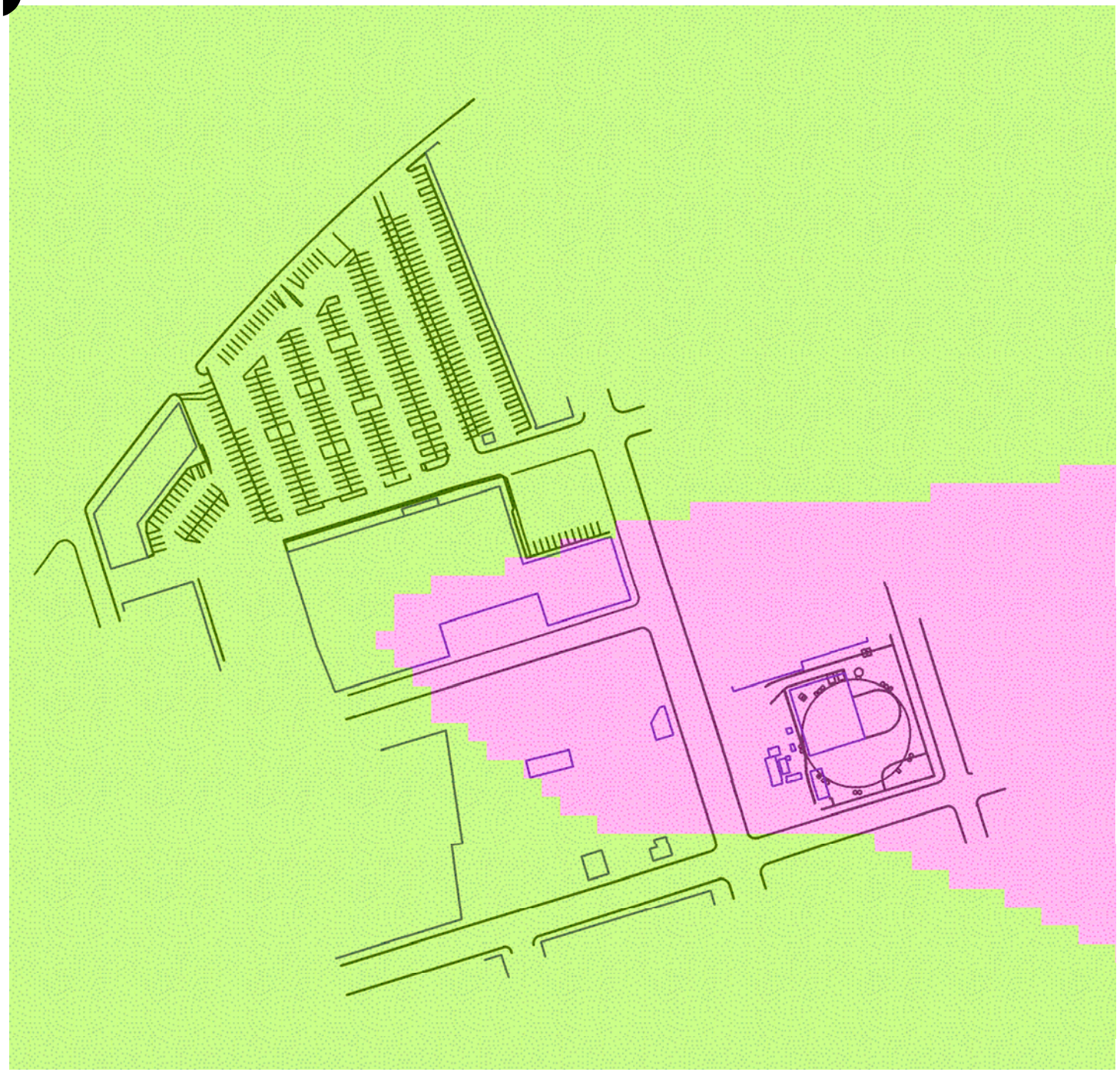
FIGURE 4

CON EDISON
FORMER FARRINGTION STREET WORKS
SUPPLEMENTAL INVESTIGATION
QUEENS, NEW YORK

MODEL CROSS SECTION

PARSONS

301 PLAINFIELD ROAD, SUITE 350 SYRACUSE, NEW YORK 13212
PHONE: 315-451-9560



LEGEND:

ZONE 1: Kx=1.6/Kz=0.32 [ft/day]

ZONE 3: Kx=68.5/Kz=2 [ft/day]

150 75 0 150 300

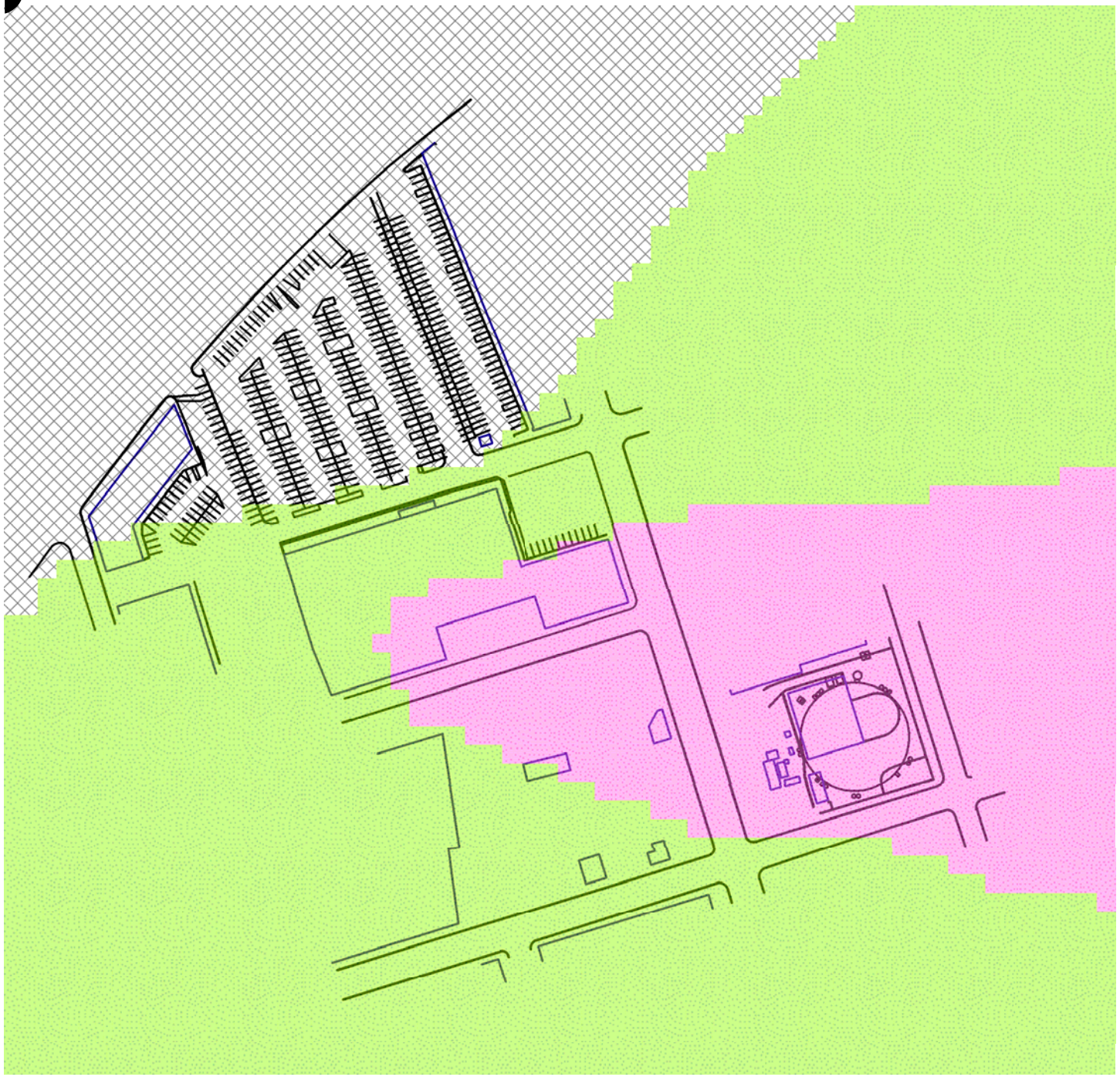
FILE NAME: \nybuf03fs01\ConEd Farington\Groundwater_Model\Report\MXD\K Fields Layer 1.mxd
PLOT DATE: 3/21/2019 PLOTTED BY: BECK, MELANIE

FIGURE 5

CON EDISON
SUPPLEMENTAL REMEDIAL INVESTIGATION
FORMER FARRINGTON STREET WORKS
NEW YORK, NEW YORK

GROUNDWATER MODEL LAYER 1 HYDRAULIC CONDUCTIVITY ZONES

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560



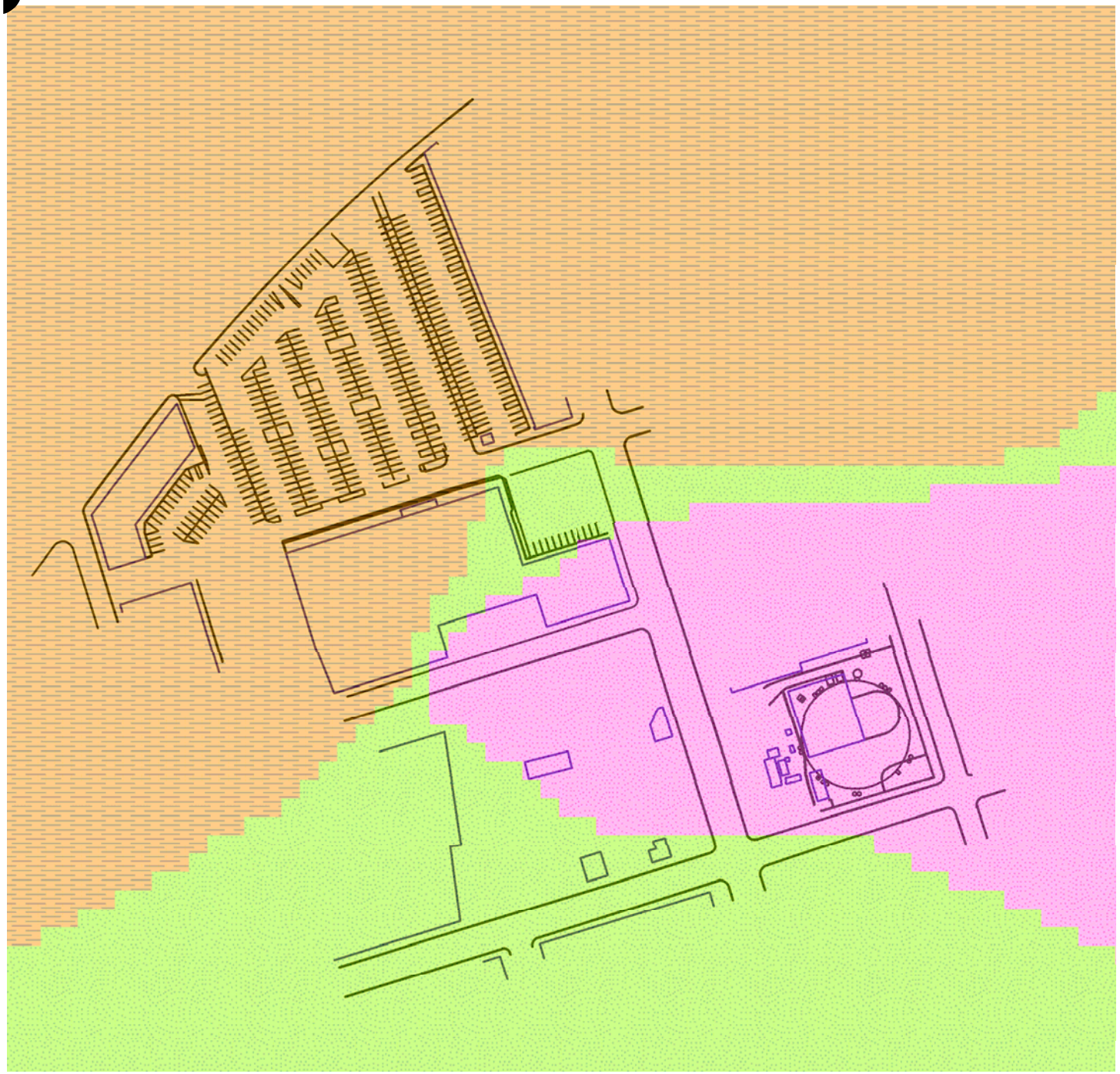
FILE NAME: \nybuf03fs01\ConEd Farington\Groundwater_Model\Report\MXD\K Fields Layer 2
PLOT DATE: 3/21/2019 PLOTTED BY: BECK, MELANIE

FIGURE 6

CON EDISON
SUPPLEMENTAL REMEDIAL INVESTIGATION
FORMER FARRINGTON STREET WORKS
NEW YORK, NEW YORK

GROUNDWATER MODEL LAYER 2 HYDRAULIC CONDUCTIVITY ZONES

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560



LEGEND:

ZONE 1: Kx=1.6/Kz=0.32 [ft/day]

ZONE 2: Kx=0.0028/Kz=0.000056 [ft/day]

ZONE 3: Kx=68.5/Kz=2

150 75 0 150 300

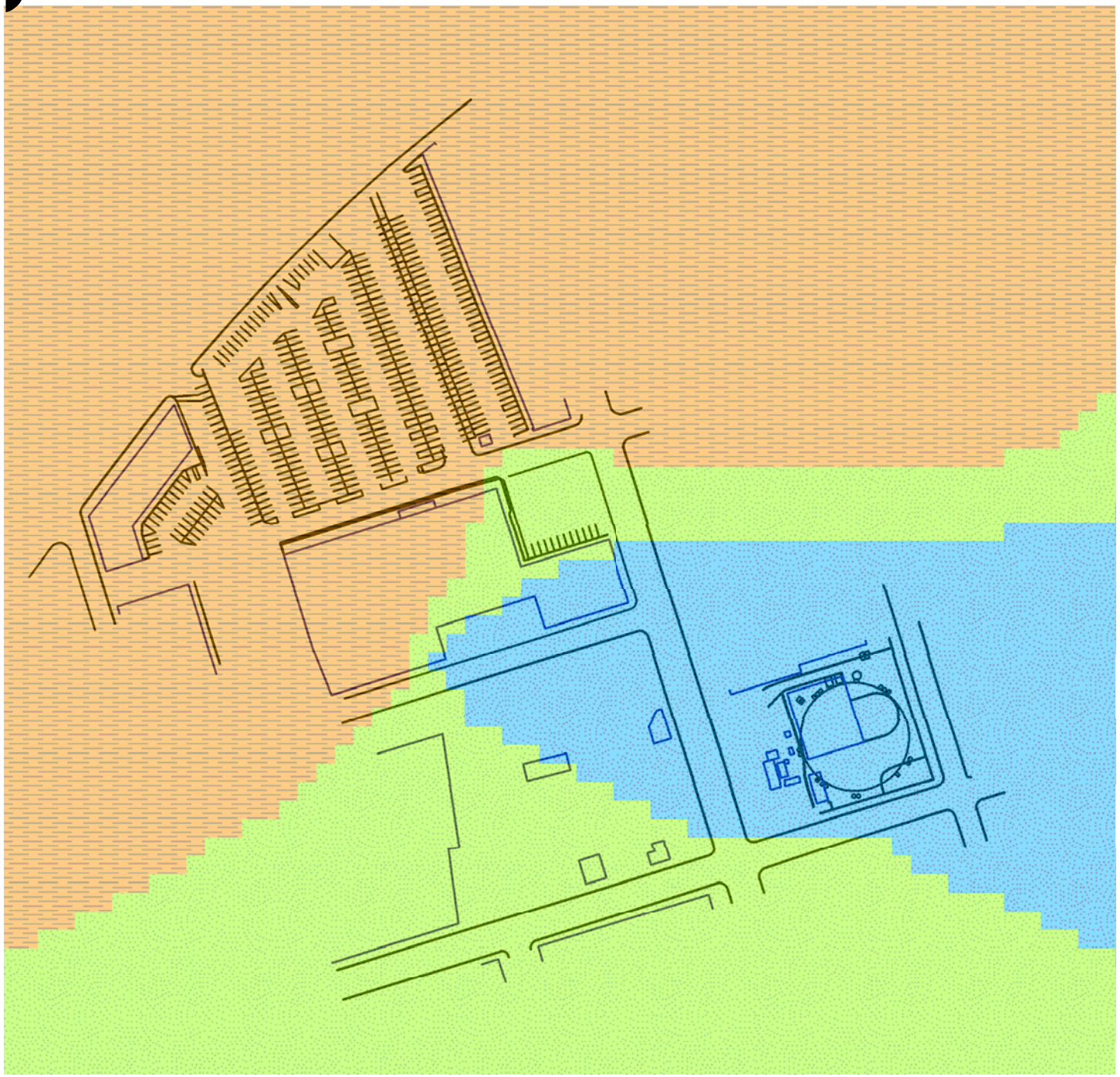
FILE NAME: \nybuf03fs01\ConEd Farington\Groundwater_Model\Report\MXD\K Fields Layer 2.mxd
PLOT DATE: 3/21/2019 PLOTTED BY: BECK, MELANIE

FIGURE 7

CON EDISON
FORMER FARRINGTON STREET WORKS
NEW YORK, NEW YORK

GROUNDWATER MODEL LAYER 3 HYDRAULIC CONDUCTIVITY ZONES

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560



LEGEND:

- ZONE 1: Kx=1.6/Kz=0.32 [ft/day]
- ZONE 2: Kx=0.0028/Kz=0.000056 [ft/day]
- ZONE 5: Kx=115/Kz=0.5 [ft/day]

150 75 0 150 300

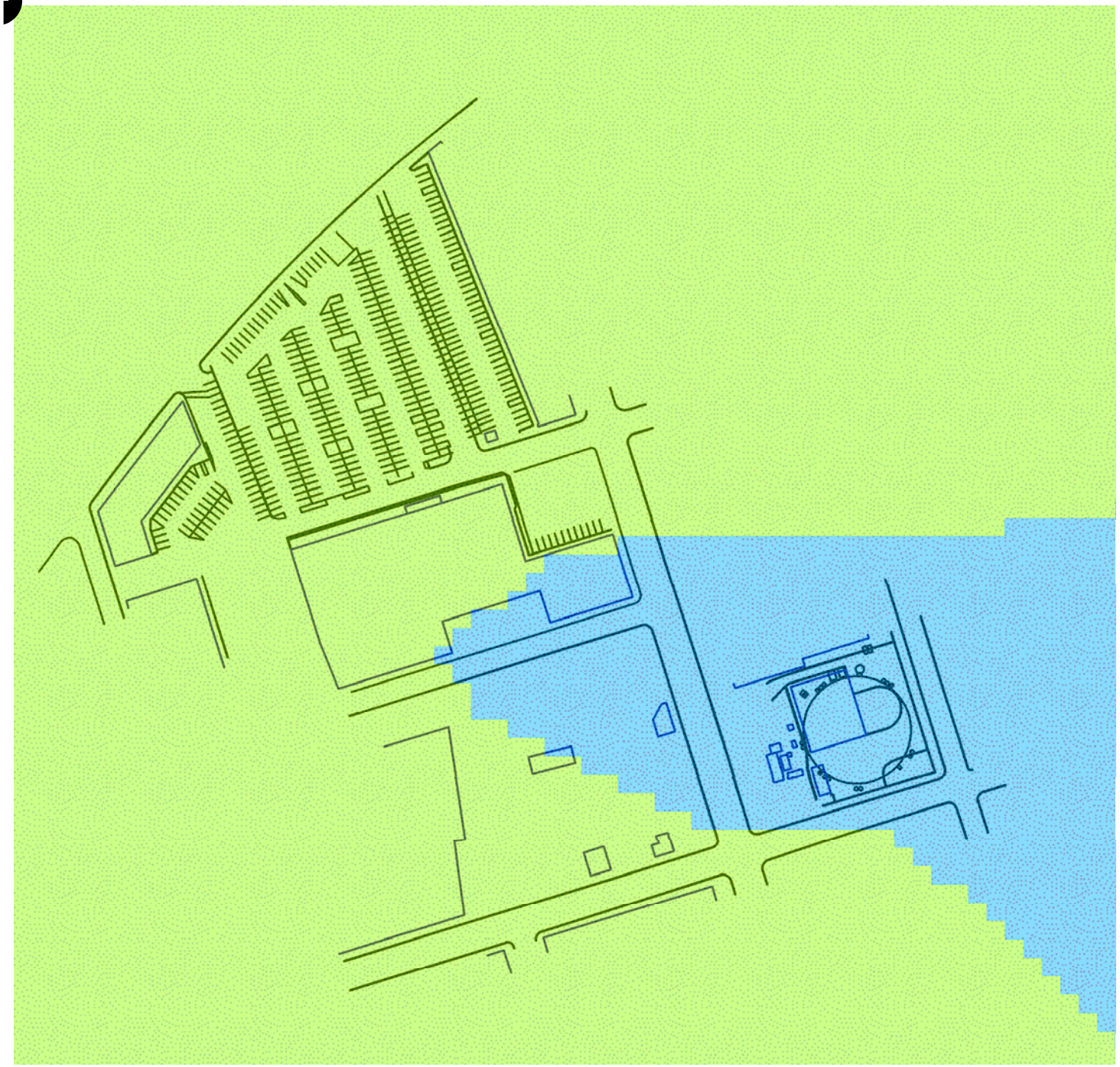
FILE NAME: \nybuf03fs01\ConEd Farington\Groundwater_Model\Report\MXD\K Fields Layer 4 n 5.mxd
PLOT DATE: 3/21/2019 PLOTTED BY: BECK, MELANIE

FIGURE 8

CON EDISON
SUPPLEMENTAL REMEDIAL INVESTIGATION
FORMER FARRINGTON STREET WORKS
NEW YORK, NEW YORK

GROUNDWATER MODEL LAYERS 4 AND 5 HYDRAULIC CONDUCTIVITY ZONES

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560



FILE NAME: \nybuf03fs01\ConEd Farington\Groundwater_Model\Report\MXD\K Fields Layer 6 n 7.mxd
PLOT DATE: 3/21/2019 PLOTTED BY: BECK, MELANIE

FIGURE 9

CON EDISON
FORMER FARRINGTON STREET WORKS
NEW YORK, NEW YORK

GROUNDWATER MODEL LAYERS 6 AND 7 HYDRAULIC CONDUCTIVITY ZONES

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560

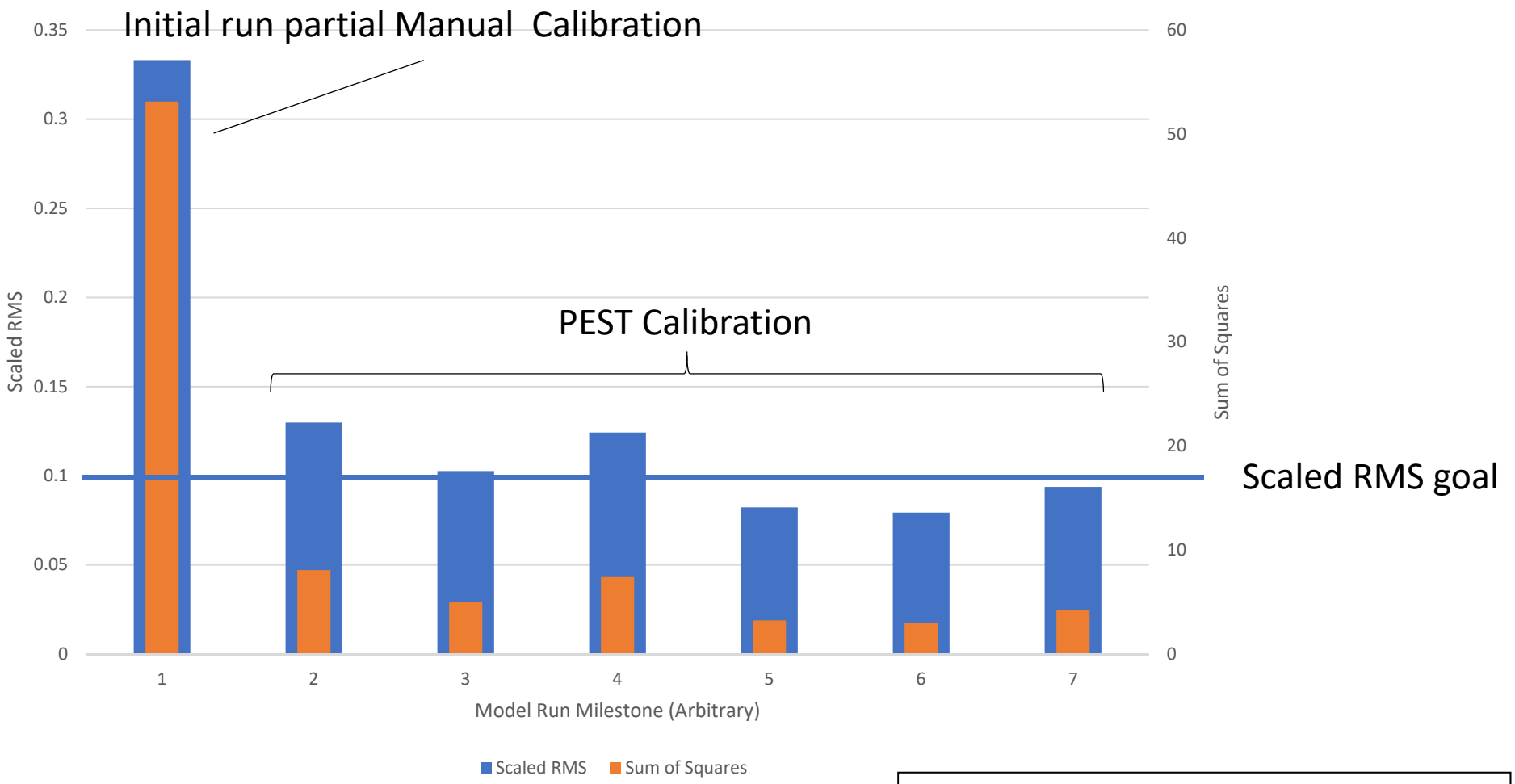


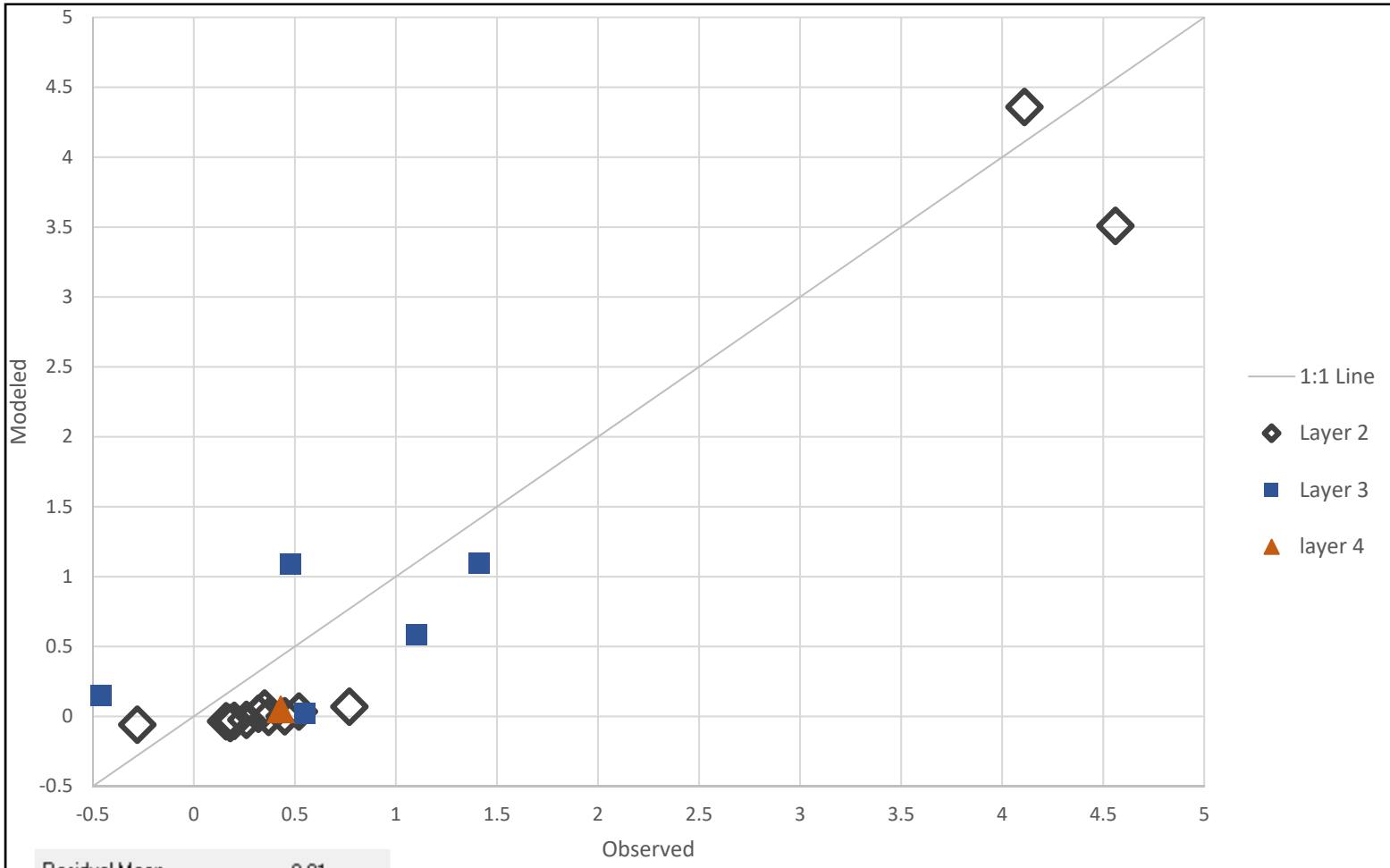
FIGURE 10

CON EDISON
FORMER FARRINGTION STREET WORKS
SUPPLEMENTAL INVESTIGATION
QUEENS, NEW YORK

MODEL CALIBRATION PROGRESSION

PARSONS

301 PLAINFIELD ROAD, SUITE 350 SYRACUSE, NEW YORK 13212
PHONE: 315-451-9560



Residual Mean	= -0.01
Residual Standard Dev.	= 0.39
Absolute Residual Mean	= 0.28
Residual Sum of Squares	=2.92e+000
RMS Error	=0.39
Minimum Residual	= -0.85
Maximum Residual	= 0.73
Range of Observations	= 5.02
Scaled Res. Std. Dev.	= 0.078
Scaled Abs. Mean	= 0.055
Scaled RMS	= 0.078
Number of Observations	= 19

NYBUF03FS01\ConEd Farington\Groundwater_Model\Report\Figures_landscape

FIGURE 11

CON EDISON
FORMER FARRINGTION STREET WORKS
SUPPLEMENTAL INVESTIGATION
QUEENS, NEW YORK

CALIBRATION PLOT SIMULATED VS OBSERVED

PARSONS

301 PLAINFIELD ROAD, SUITE 350 SYRACUSE, NEW YORK 13212
PHONE: 315-451-9560

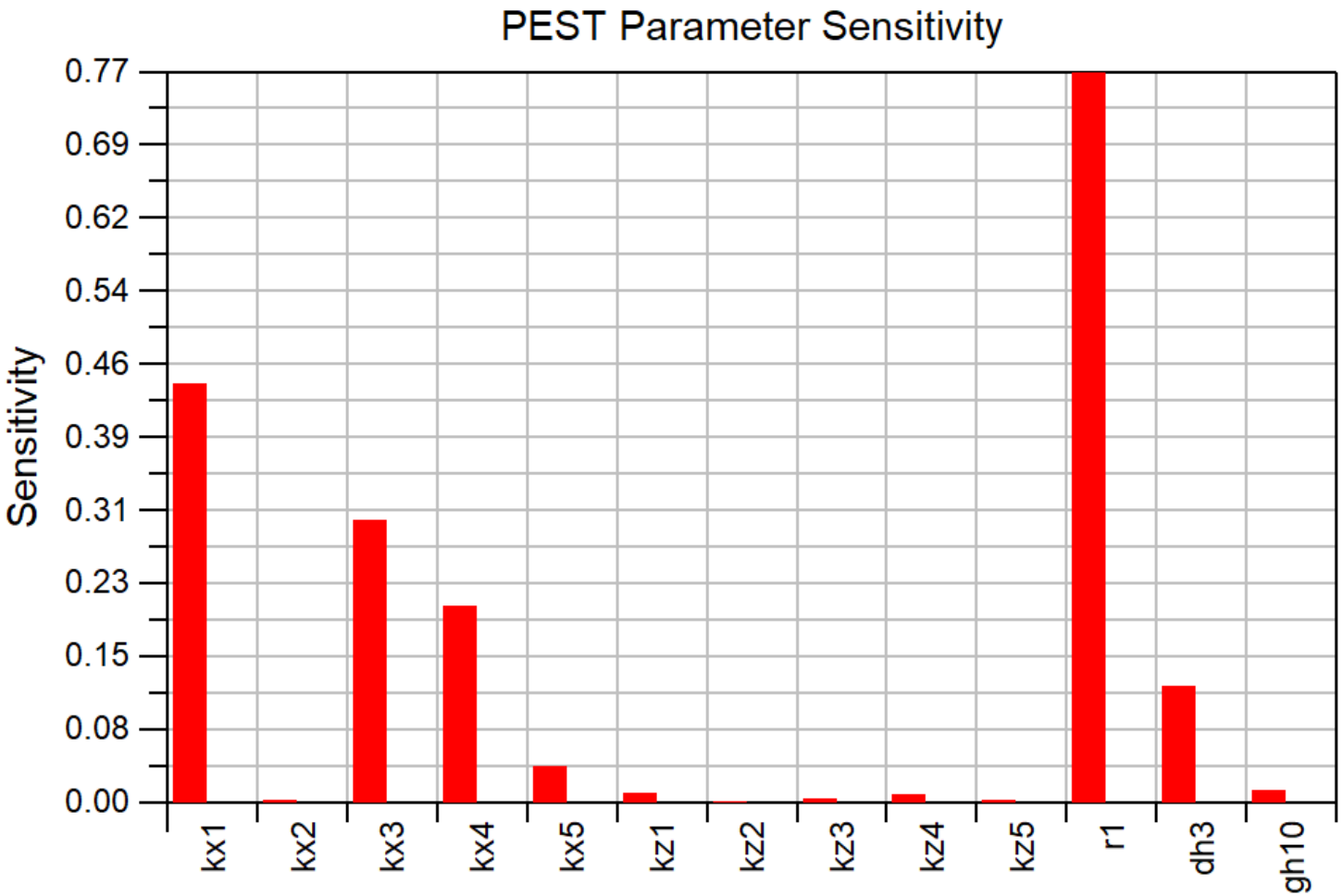


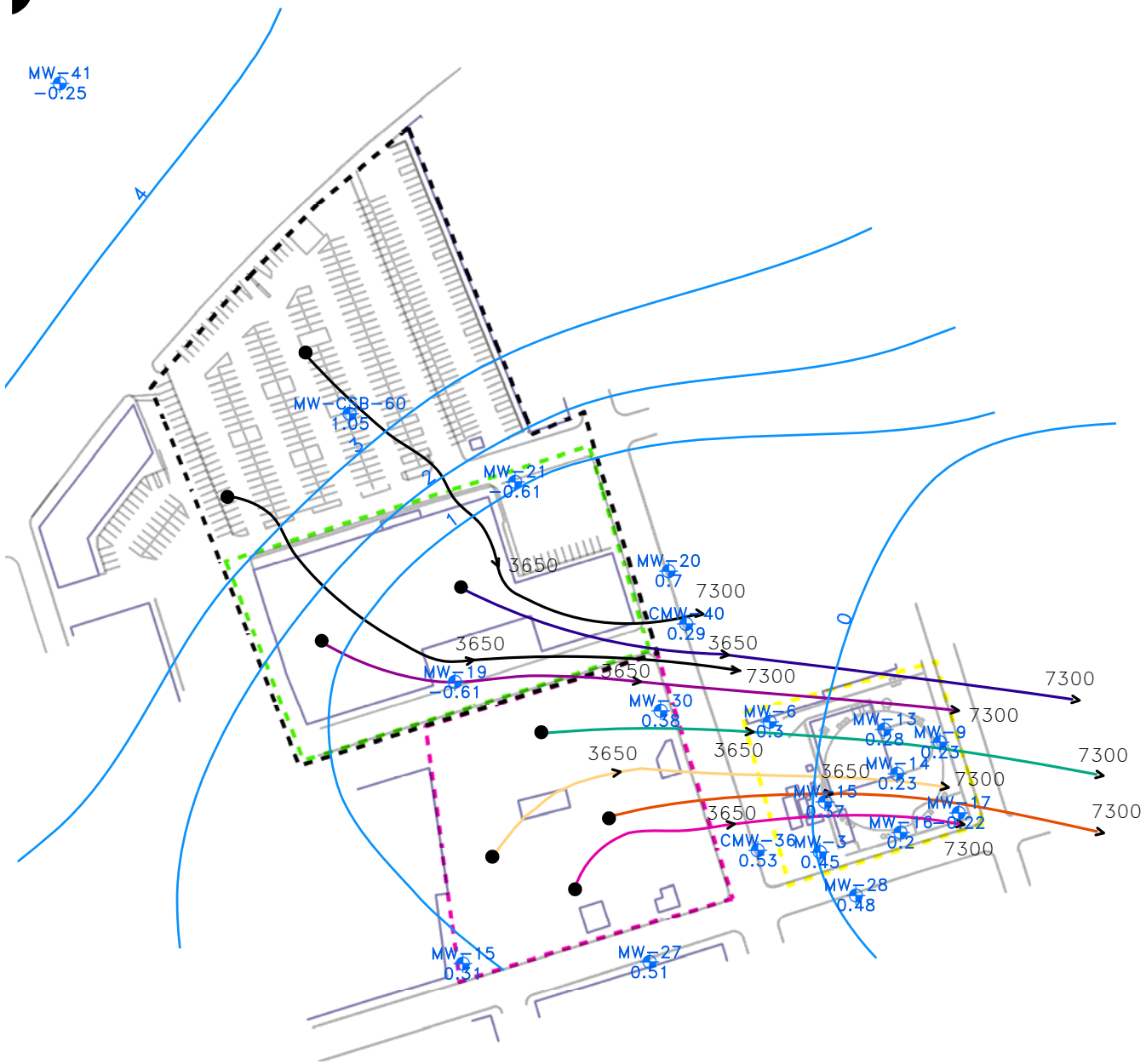
FIGURE 12

CON EDISON
FORMER FARRINGTON STREET WORKS
SUPPLEMENTAL INVESTIGATION
QUEENS, NEW YORK

MODEL PARAMETER SENSITIVITY

PARSONS

301 PLAINFIELD ROAD, SUITE 350 SYRACUSE, NEW YORK 13212
PHONE: 315-451-9560



LEGEND:

- PARCEL 1
- PARCEL 2
- PARCEL 3
- MARKET AREA
- CALIBRATION TARGETS
- GROUNDWATER CONTOURS
- NORTHERN BARRIER WALL PARTICLES
- PARTICLE 1
- PARTICLE 2
- PARTICLE 3
- PARTICLE 4
- PARTICLE 5
- PARTICLE 6
- PARTICLE STARTING LOCATIONS

NOTES:

1. EACH ARROW REPRESENTS A TIME STAMP IN DAYS. PARTICLES END AT 20 YRS.
2. EACH TARGET IS DISPLAYED WITH THE HYDRAULIC HEAD RESIDUAL. SIMULATED – OBSERVED.
3. CONTOUR INTERVAL = 1 FOOT
4. ELEVATIONS IN FEET AMSL

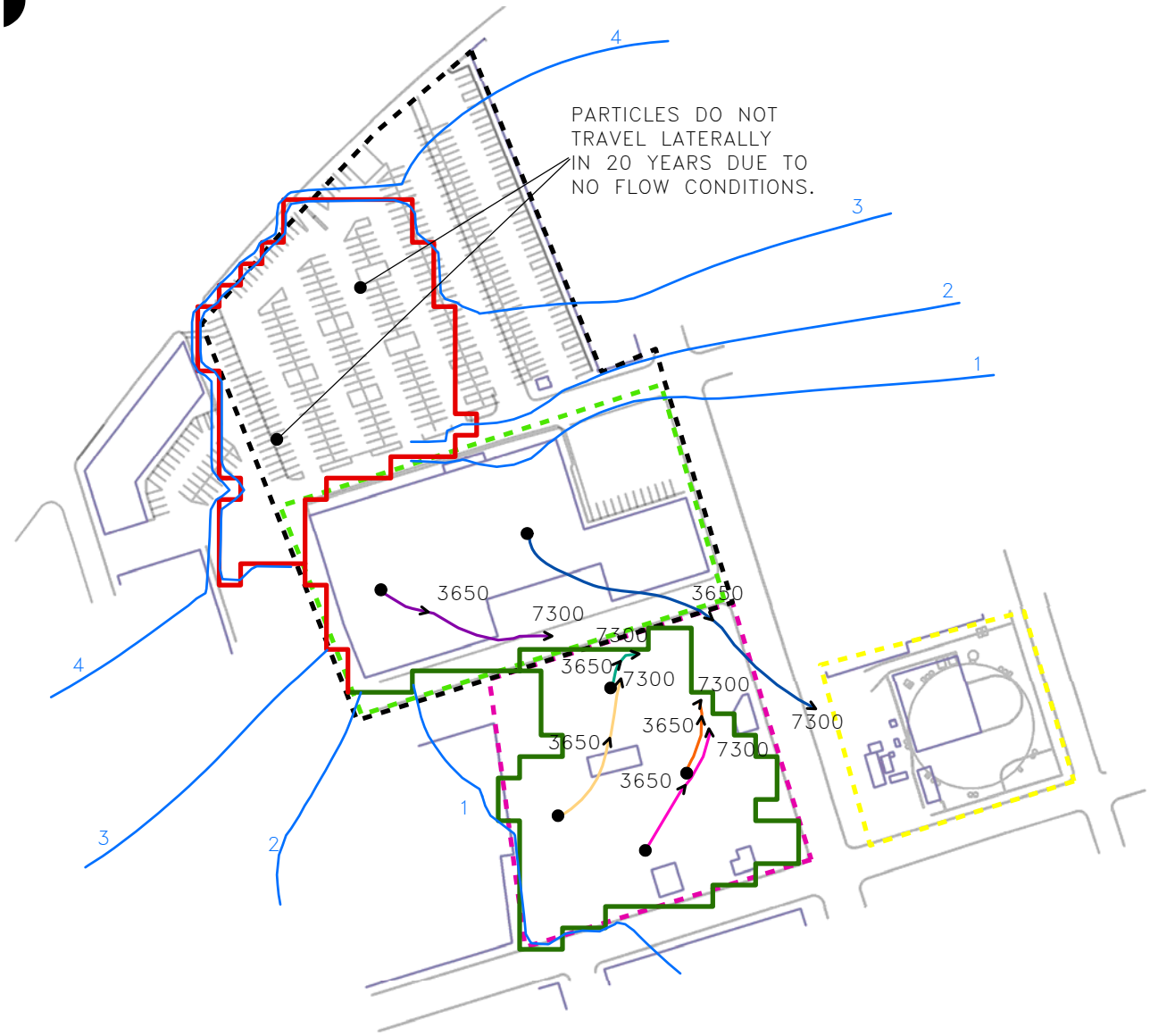
FILE NAME: \nybuf03fs01\ConEd Farington\Groundwater_Model\Report\MXD\Existing Conditions.mxd
PLOT DATE: 3/21/2019 PLOTTED BY: BECK, MELANIE

FIGURE 13

CON EDISON
SUPPLEMENTAL REMEDIAL INVESTIGATION
FORMER FARRINGTON STREET WORKS
NEW YORK, NEW YORK

GROUNDWATER MODEL EXISTING CONDITIONS

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560



LEGEND:

- PARCEL 1
- PARCEL 2
- PARCEL 3
- MARKET AREA
- GROUNDWATER CONTOURS
- BARRIER WALL 18 FEET BGS
- BARRIER WALL 40 FEET BGS
- PARTICLE 1
- PARTICLE 2
- PARTICLE 3
- PARTICLE 4
- PARTICLE 5
- PARTICLE 6
- PARTICLE STARTING LOCATIONS

NOTES:

1. EACH ARROW REPRESENTS A TIME STAMP IN DAYS. PARTICLES END AT 20 YEARS
2. CONTOUR INTERVAL = 1 FOOT
3. ELEVATIONS IN FEET AMSL

150 75 0 150 300

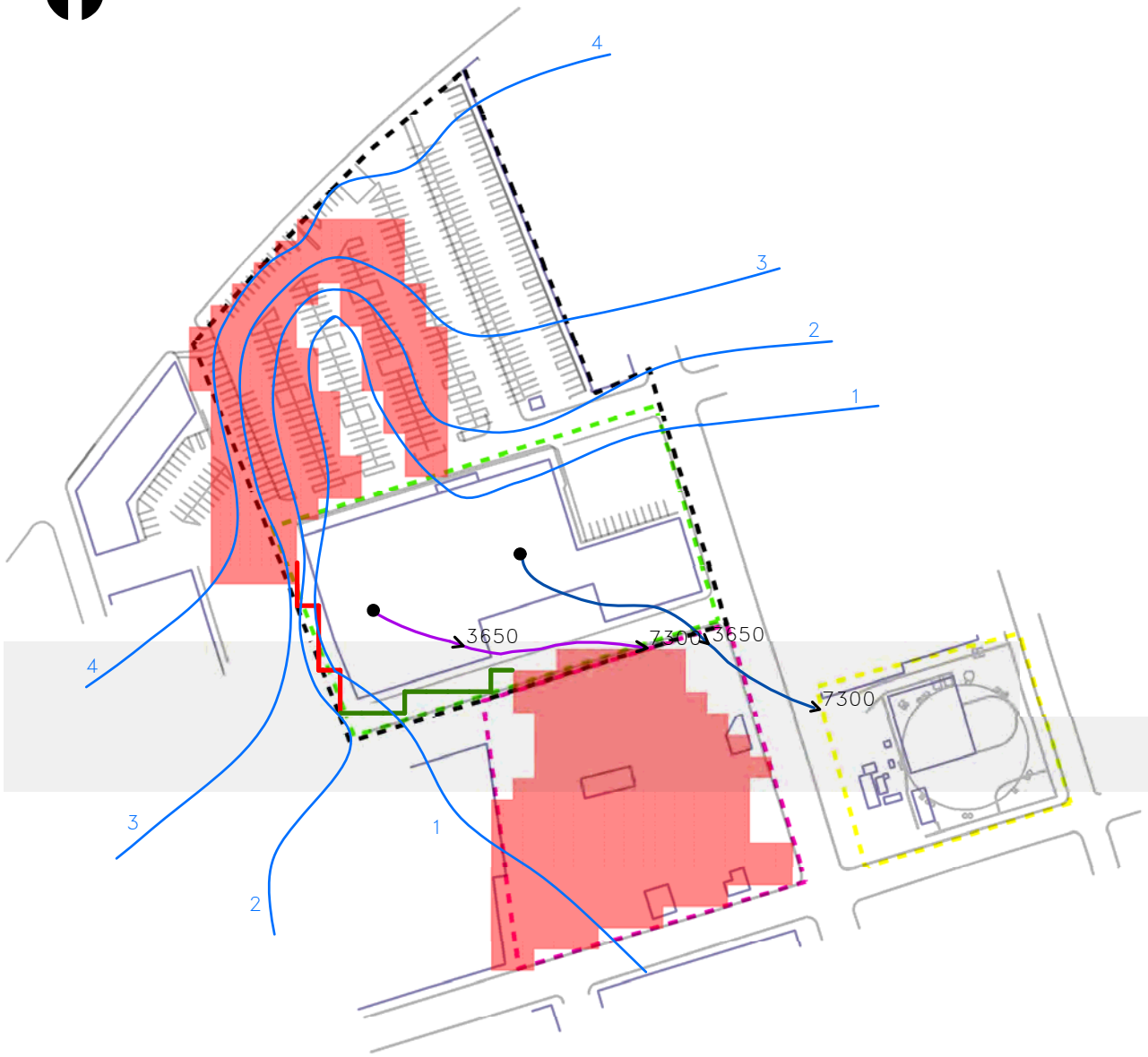
FILE NAME: \nybuf03fs01\ConEd Farington\Groundwater_Model\Report\MXD\Barrier Wall.mxd
PLOT DATE: 3/21/2019 PLOTTED BY: BECK, MELANIE

FIGURE 14

CON EDISON
SUPPLEMENTAL REMEDIAL INVESTIGATION
FORMER FARRINGTON STREET WORKS
NEW YORK, NEW YORK

GROUNDWATER MODEL
BARRIER WALL

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560



LEGEND:

- PARCEL 1
- PARCEL 2
- PARCEL 3
- MARKET AREA
- GROUNDWATER CONTOURS
- PARTICLE 1
- PARTICLE 2
- BARRIER WALL 40 FEET BGS
- BARRIER WALL 18 FEET BGS
- ISS
- PARTICLE STARTING LOCATIONS

NOTES:

1. EACH ARROW REPRESENTS A TIME STAMP IN DAYS. PARTICLES END AT 20 YEARS
2. CONTOUR INTERVAL = 1 FOOT
3. ELEVATIONS IN FEET AMSL

150 75 0 150 300

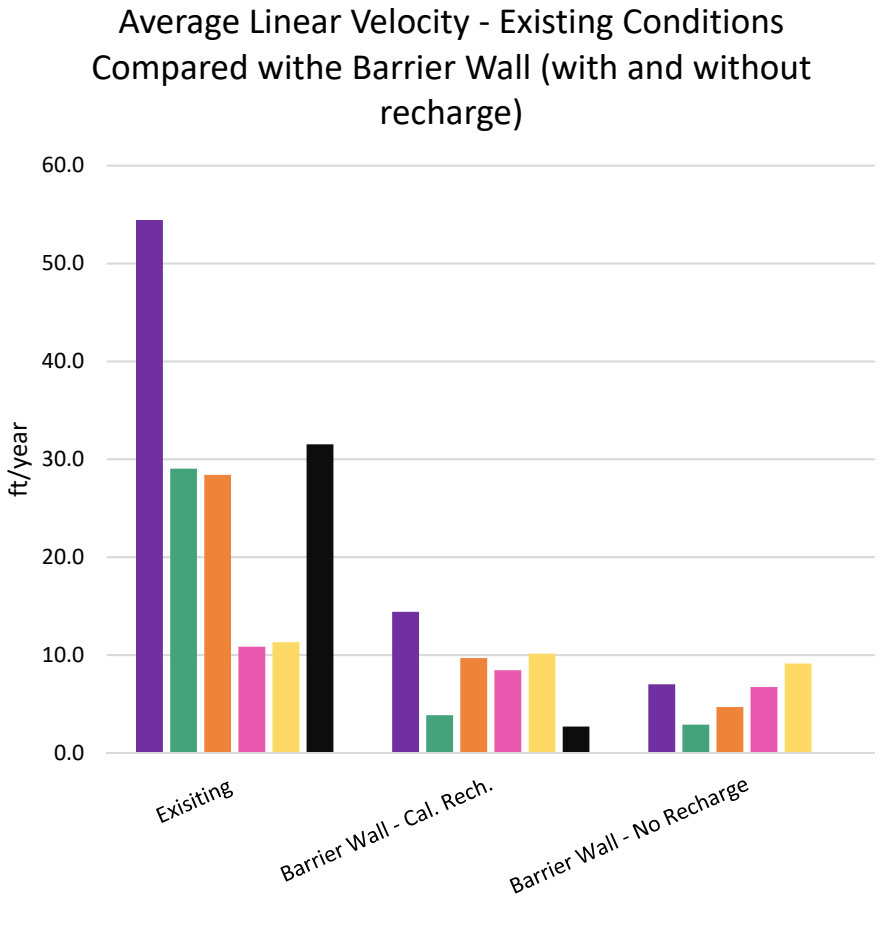
FILE NAME: \nybuf03fs01\ConEd Farington\Groundwater_Model\Report\MXD\ISS
PLOT DATE: 3/21/2019 PLOTTED BY: BECK, MELANIE

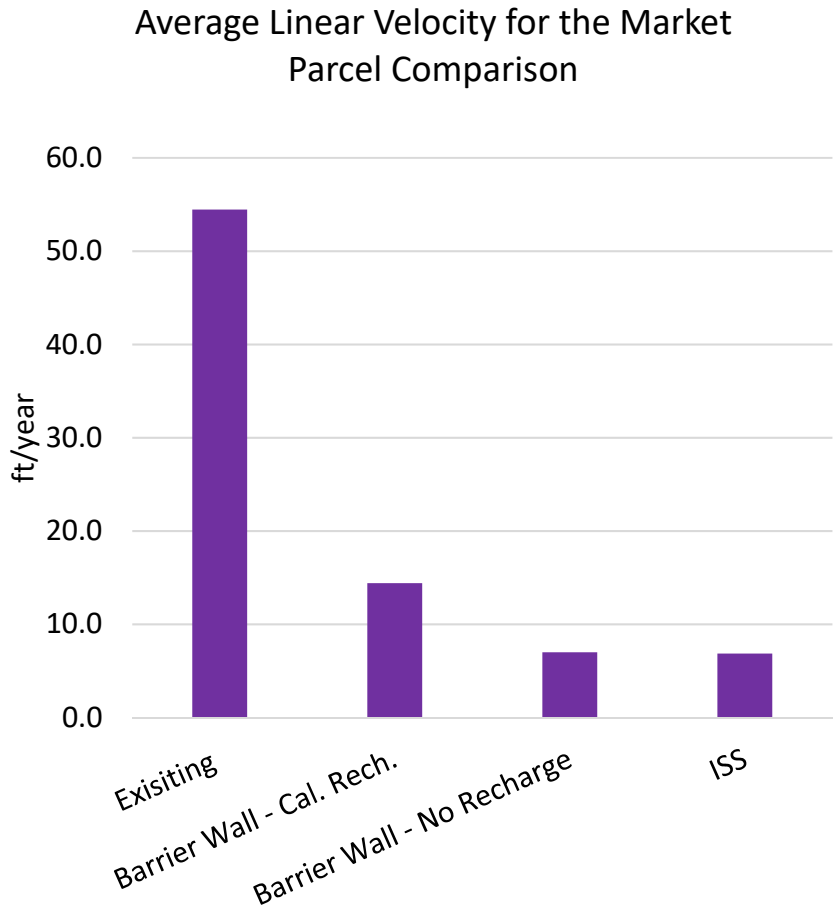
FIGURE 15

CON EDISON
SUPPLEMENTAL REMEDIAL INVESTIGATION
FORMER FARRINGTON STREET WORKS
NEW YORK, NEW YORK

GROUNDWATER MODEL
ISS AND BARRIER WALL

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560





NYBUF03FS01\ConEd Farington\Groundwater_Model\Report\Figures_landscape

FIGURE 16

CON EDISON
FORMER FARRINGTON STREET WORKS
SUPPLEMENTAL INVESTIGATION
QUEENS, NEW YORK

COMPARISON OF GROUNDWATER VELOCITIES FOR EACH SCENARIO

PARSONS

301 PLAINFIELD ROAD, SUITE 350 SYRACUSE, NEW YORK 13212
PHONE: 315-451-9560

100 W Walnut Street, Pasadena, California 91124
Office: +1 626.440.2000 / parsons.com

Technical Memorandum

To: ConEdison Farrington Design Team

From: Parsons – Groundwater Modeling Team

Date: 8/11/2022

Subject: Farrington Remedial Design Report – Scenario Modeling

The following document details the additional groundwater modeling analyses performed to support the design team for the final remedial design for the former Farrington Street Gas Works Site (Site) in Queens, NY.

PURPOSE AND OBJECTIVES

To evaluate the effectiveness of the proposed remedial design for the Site, the calibrated Site groundwater flow model was used to simulate a predictive scenario of post construction, steady state groundwater flow conditions. The analysis and results of this evaluation are described below. For a full description of the Site groundwater model build and calibration please refer to the Groundwater Modeling Report in Appendix F of the Supplemental Remedial Investigation Report (Parsons, 2019).

METHODS

The proposed design includes the implementation of in situ soil stabilization (ISS) within Parcel 2 to depths prescribed by the remedial design (Figure 1). The ISS areas were simulated with low hydraulic conductivity zones representative of a clay material (0.0028 feet per day [ft/day] or 1 x 10^{-6} centimeters per second [cm/s]). The hydraulic conductivity zones were emplaced within the model to the reflect the eventual as-built construction conditions. For a full description of the remedial design please refer to the Final Remedial Design Report (Parsons, 2022).

To evaluate the effects of the remedial design on the groundwater flow at the Site, particle tracking was performed for both existing conditions (Figure 2) and post construction conditions to compare differences in the average linear velocity. For existing conditions, two particles were tracked within Parcel 1 and the Market parcel, while four particles were tracked within Parcel 2. For the post construction conditions model, the same particles were tracked within Parcel 1 and the Market Parcel. However, the four particles within Parcel 2 were not simulated since it is expected that there will be negligible flow within this region because of the ISS.

RESULTS

The average linear velocities for the 10 years following construction for the four particles tracked in both the existing conditions and the construction conditions are presented Table 1. Northern particles within Parcel 1 had similar average linear velocities between existing and post construction conditions. The particles within the Market Parcel demonstrated a slight increase in flow velocity as a result of particle migrating around the ISS body in Parcel 2, causing a convergence of flow patterns. However, baseline and post-ISS groundwater velocities are generally low, relative to COC transport due the low

hydraulic gradient. Therefore, the construction of the ISS should create a small and unmeasurable change in plume hydrodynamics.

Average Linear (ft/yr) Velocity Over 10 Years			
	Particle #	Existing Conditions	Post Construction Conditions
Market Parcel	1	39.60	49.30
	2	34.21	43.20
Northern Parcel	7	37.93	41.22
	8	34.08	33.99

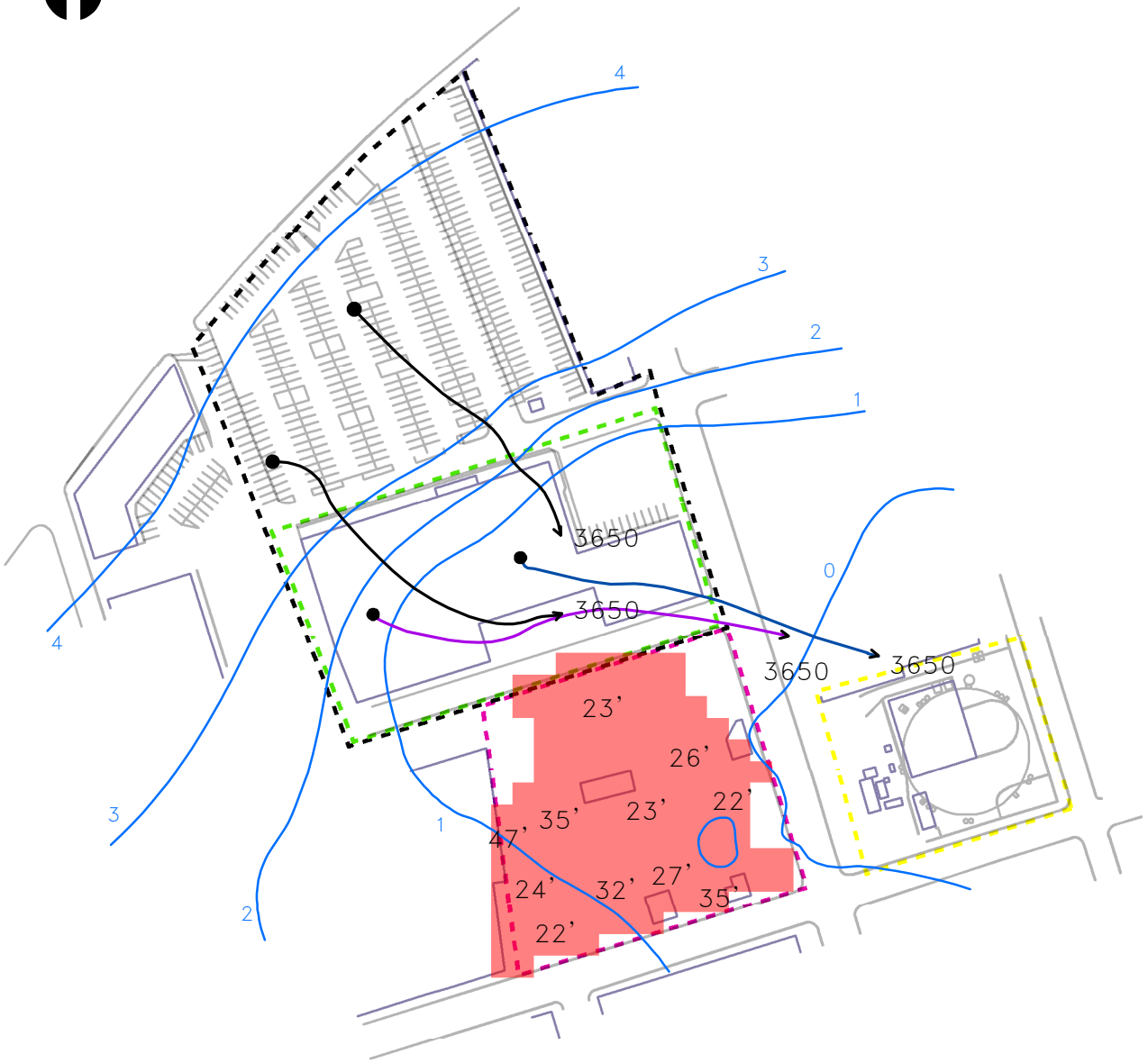
Table 1. Particle Average Linear Velocities

REFERENCES

Parsons 2019, *Supplemental Remedial Investigation Report for the Former Farrington Street Gas Works Site – Queens, New York*, Parsons, June 2019.

Parsons 2022, *Draft Remedial Design Report for the Former Farrington Street Gas Works Site – Queens, New York*, Parsons, September2022.

FIGURES



LEGEND:

- PARCEL 1
- PARCEL 2
- PARCEL 3
- MARKET AREA OF PARCEL 1
- GROUNDWATER CONTOURS
- NORTHERN BARRIER WALL PARTICLES
- PARTICLE 1
- PARTICLE 2
- ISS MODEL
- PARTICLE STARTING LOCATIONS

NOTES:

1. PARTICLES END AT 10 YEARS
2. CONTOUR INTERVAL = 1 FOOT
3. ELEVATIONS IN FEET AMSL

150 75 0 150 300

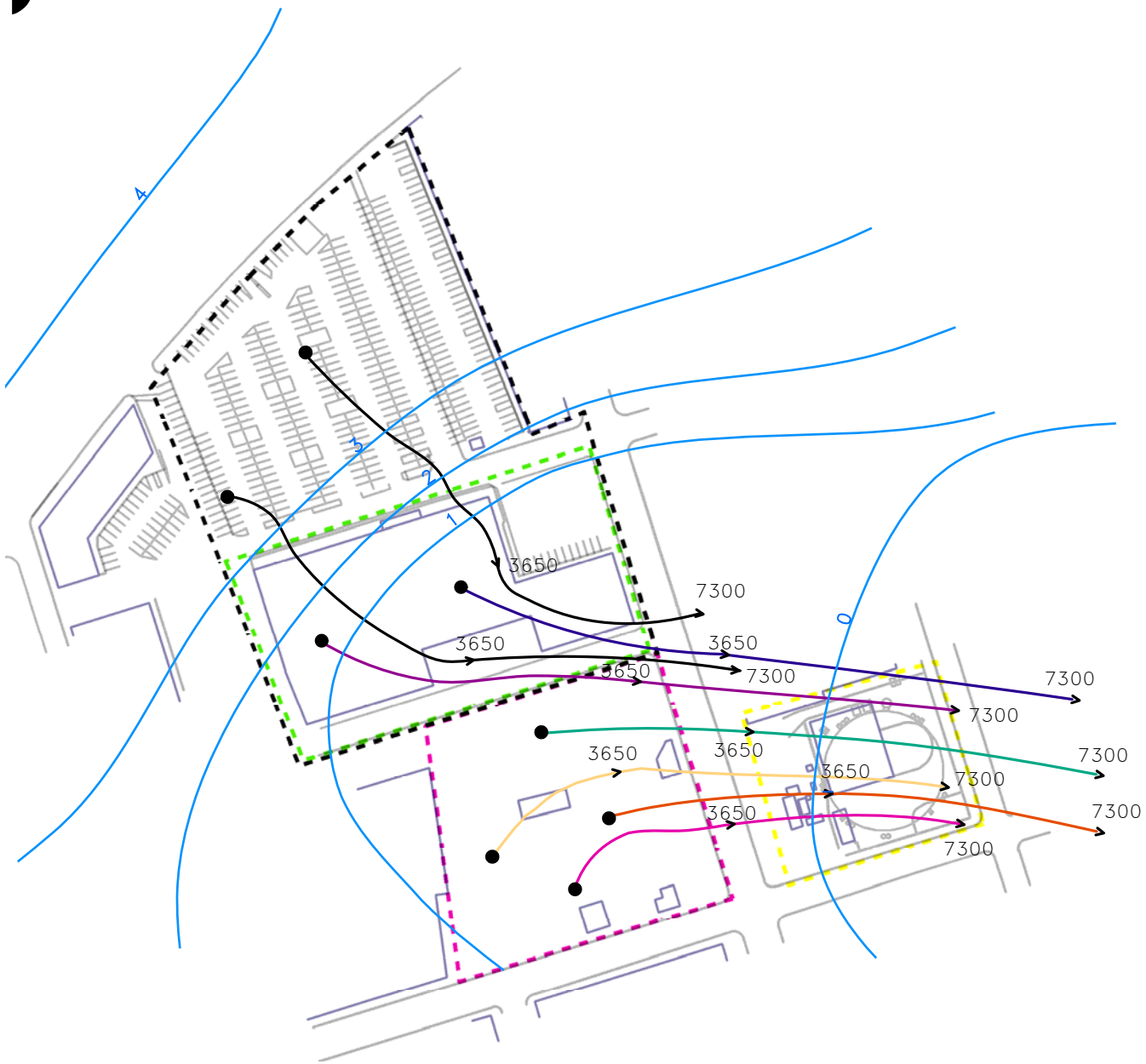
FILE NAME: \nybuf03fs01\ConEd Farington\Groundwater_Model\Report\MXD\ISS
PLOT DATE: 3/21/2019 PLOTTED BY: BECK, MELANIE

FIGURE 1

CON EDISON
REMEDIAL DESIGN REPORT
FORMER FARRINGTON STREET WORKS
NEW YORK, NEW YORK

GROUNDWATER MODEL ISS IN PARCEL 2

301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560



LEGEND:

- PARCEL 1
- PARCEL 2
- PARCEL 3
- MARKET AREA
- CALIBRATION TARGETS
- GROUNDWATER CONTOURS
- NORTHERN BARRIER WALL PARTICLES
- PARTICLE 1
- PARTICLE 2
- PARTICLE 3
- PARTICLE 4
- PARTICLE 5
- PARTICLE 6
- PARTICLE STARTING LOCATIONS

NOTES:

1. EACH ARROW REPRESENTS A TIME STAMP IN DAYS. PARTICLES END AT 20 YRS.
2. EACH TARGET IS DISPLAYED WITH THE HYDRAULIC HEAD RESIDUAL. SIMULATED – OBSERVED.
3. CONTOUR INTERVAL = 1 FOOT
4. ELEVATIONS IN FEET AMSL

150 75 0 150 300

FILE NAME: \nybuf03fs01\ConEd Farington\Groundwater_Model\Report\MXD\Existing Conditions.mxd
PLOT DATE: 3/21/2019 PLOTTED BY: BECK, MELANIE

FIGURE 2

CON EDISON
REMEDIAL DESIGN REPORT
FORMER FARRINGTON STREET WORKS
NEW YORK, NEW YORK

GROUNDWATER MODEL
EXISTING CONDITIONS

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NEW YORK 13212 PHONE:315-451-9560

APPENDIX D

PCB SELF-IMPLEMENTING CLEANUP PLAN

(TO BE PROVIDED IN A SUBSEQUENT DESIGN SUBMITTAL)

APPENDIX E

DESIGN DRAWINGS

65% REMEDIAL DESIGN
FORMER FARRINGTON STREET GAS WORKS SITE
FLUSHING, NEW YORK

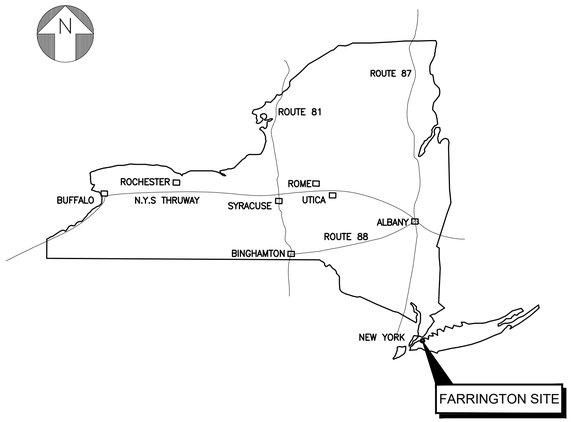
Prepared For:

CON EDISON

DRAWING INDEX

DOB DRAWING No.	REVISION	TITLE
453055-G-001	A	COVER SHEET
453055-G-002	A	GENERAL NOTES AND LEGEND
453055-C-001	A	EXISTING CONDITIONS PLAN
453055-C-002	A	SUBSURFACE OBSTRUCTION SUMMARY
453055-C-003	A	GROUNDWATER CONTOUR PLAN
453055-C-004	A	SITE PREPARATION AND DEMOLITION PLAN
453055-C-005	A	SOIL EROSION AND SEDIMENT CONTROL PLAN
453055-C-006	A	PHASE 1 PCB EXCAVATION PLAN
453055-C-007	A	PHASE 2 EXCAVATION PLAN
453055-C-008	A	ISS SITE PLAN
453055-C-009	A	REMEDIAL ACTION CROSS SECTIONS
453055-C-010	A	SITE RESTORATION PLAN
453055-D-001	A	DETAILS (SHEET 1 OF 2)
453055-D-002	A	DETAILS (SHEET 2 OF 2)

SITE LOCATION MAP
1" = 750'



SITE VICINITY MAP
N.T.S.

REVISION
USE .1 SIZE TEXT ONLY

65% DESIGN ISSUED FOR REVIEW AND COMMENT P.N. 453055 PARSONS 1/3/2025	A

PROJECT NUMBER
453055

DWG. NO. G-001 - A

DWG. SIZE D | DWG. TYPE COMPANY | SHT. 1

CON EDISON | LOCATION FLUSHING

TITLE
FARRINGTON REMEDIAL DESIGN

CURRENT ENGINEERING APPROVALS

ENGINEERING MANAGER	D. MARTOCCIA
ENGINEER	M. BROSCHART
DESIGNER	J. NASSIMOS
DESIGN CHECKER	S. LIBERATORE
SCALE	AS SHOWN
DISCIPLINE CODE	SA

PROJECT:
FORMER FARRINGTON STREET
GAS WORKS SITE REMEDIAL DESIGN
133-58 31ST DR FLUSHING, NY 11354

TITLE:
COVER SHEET

SEAL & SIGNATURE
NOT FOR BIDDING OR CONSTRUCTION

DATE: 1/3/2025
PROJECT No.: 453055-01000
DRAWING BY: JN
CHK BY: DM
DOB DWG No: 453055-G-001
SHEET No. 1 OF 14

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, FOR ANY PERSON, UNLESS UNDER THE DIRECTION OF A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DOCUMENT IN ANY WAY.

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

FILE: (\\nysyr04fs01) P:\CONED\453055 - FARRINGTON MGP SUCP RDR\11.0 TECHNICAL\11.1 CAD\65% DESIGN\GENERAL\453055-G-001 TITLE SHEET AND DRAWING INDEX.DWG, DATE: 02/05/2025 05:39:49PM, p0015477

GENERAL LEGEND:

- EXISTING EDGE OF PAVEMENT
- EXISTING CURB
- EXISTING DEPRESSED CURB
- EXISTING CHAIN LINK FENCE
- EXISTING GUIDERAIL
- EXISTING OVERHEAD WIRE
- EXISTING CONTOUR LINE
- EXISTING DRAINAGE INLET
- EXISTING SANITARY SEWER MANHOLE
- EXISTING TREES
- EXISTING WATER MARK-OUT
- EXISTING FIRE HYDRANT
- EXISTING GAS MARK-OUT
- EXISTING GAS MANHOLE
- EXISTING GAS VALVE
- EXISTING ELECTRIC MARK-OUT
- EXISTING UTILITY BOX
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MONITORING WELL
- EXISTING SIGN
- EXISTING BOLLARD
- EXISTING CONTROL POINT

ABBREVIATIONS AND ACRONYMNS:

APPROX.	APPROXIMATE
BGS	BELOW GROUND SURFACE
BLDG	BUILDING
CEP	CORPORATE ENVIRONMENTAL PROCEDURES
CFR	CODE OF FEDERAL REGULATIONS
CORS	CONTINUOUSLY OPERATING REFERENCE STATION
C&D	CONSTRUCTION AND DEMOLITION
CQAPP	CONSTRUCTION QUALITY ASSURANCE PROJECT PLAN
ELEV/EL	ELEVATION
FNC	FENCE
GEI	GENERAL ENVIRONMENTAL INSTRUCTIONS
GNSS	GLOBAL NAVIGATION SATELLITE SYSTEM
ISS	IN-SITU STABILIZATION
NA	NOT AVAILABLE
NAD 83	NORTH AMERICAN DATUM OF 1983
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
NGS	NATIONAL GEODETIC SURVEY
NYC	NEW YORK CITY
NYCDOB	NEW YORK CITY DEPARTMENT OF BUILDINGS
NYSDEC	NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PCBS	POLYCHLORINATED BIPHENYLS
PL	PROPERTY LINE
RCNY	RULES OF THE CITY OF NEW YORK
SICP	SELF IMPLEMENTING CLEANUP PLAN
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
USEPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

USE OF PLANS:

1. ONLY DESIGN DRAWINGS AND TECHNICAL SPECIFICATIONS INDICATING "ISSUED FOR CONSTRUCTION" SHALL BE USED FOR BIDDING AND/OR CONSTRUCTION PURPOSES. DESIGN DRAWINGS ARE INTENDED TO BE USED WITH THE TECHNICAL SPECIFICATIONS. UNLESS DESIGN DRAWINGS INDICATE "ISSUED FOR CONSTRUCTION", CON EDISON AND ITS ENGINEER NEITHER GUARANTEE THE ACCURACY OF THIS INFORMATION NOR CLAIM THIS INFORMATION IS NECESSARILY INDICATIVE OF CONDITIONS TO BE ENCOUNTERED.
2. THE CONTRACTOR SHALL SATISFY ALL CONDITIONS AFFECTING THE WORK BY PERSONAL INVESTIGATION, AND NEITHER THE INFORMATION PROVIDED, NOR THE INFORMATION DERIVED FROM MAPS OR DRAWINGS, NOR FROM THE ENGINEER, CON EDISON OR THEIR AGENTS OR EMPLOYEES, SHALL ACT TO RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY HEREUNDER FROM FULFILLING ALL OF THE TERMS AND REQUIREMENTS OF THE CONTRACT DOCUMENTS.
3. THE CONTRACTOR SHALL REVIEW ALL COORDINATES, DIMENSIONS, AND LOCATIONS IN THE FIELD. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY CON EDISON OR THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE FIELD CONDITIONS.

GENERAL:

1. CONTRACTOR SHALL PROVIDE TEMPORARY DRAINAGE, EROSION AND SEDIMENT CONTROL AND DUST CONTROL MEASURES AS DIRECTED BY THE OWNER OR ITS REPRESENTATIVE AND IN ACCORDANCE WITH THE SWPPP.
2. CONTRACTOR SHALL INSTALL ALL SOIL EROSION CONTROL MEASURES PRIOR TO THE START OF ANY WORK.
3. CONTRACTOR SHALL PERFORM ALL WORK INDICATED ON THE DESIGN DRAWINGS IN ACCORDANCE WITH THE NYC CONSTRUCTION CODE, RULES AND REGULATIONS OF NYSDEC AND USEPA, OR OTHER AUTHORITIES HAVING JURISDICTION, AS WELL AS IN ACCORDANCE WITH CON EDISON STANDARD SPECIFICATIONS AS APPLICABLE. IN CASE OF DIFFERENT REQUIREMENTS FOR THE SAME TYPE OF WORK OR TRADE, THE MORE STRINGENT REQUIREMENT GOVERNS.
4. BEFORE WORK MAY COMMENCE, CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF EXISTING INLETS, CATCH BASINS, MANHOLES, SIDEWALKS, CURBING, STAIRS, POLES, LANDSCAPED AREAS, AREAS TO BE REMEDIATED, ETC. ANY CONFLICTING INFORMATION SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER OR ITS REPRESENTATIVE.
5. CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS OTHER THAN THOSE ALREADY OBTAINED BY THE OWNER. PERMITS OBTAINED BY THE OWNER ARE INCLUDED WITH THE BID SPECIFICATION PACKAGE.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS AND PAYING ANY FEES NECESSARY FOR CONTRACTORS USE OF PUBLIC STREETS OR ROADS, INCLUDING VEHICLE SIZE OR WEIGHT LIMITS AND STREET-CROSSING PERMITS, AS REQUIRED BY THE CITY OF FLUSHING.
7. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL BY THE OWNER A CONSTRUCTION PLAN THAT SHALL OUTLINE (AT A MINIMUM) EXCAVATION, BACKFILL, EXCAVATION SUPPORT DESIGN, IN-SITU STABILIZATION, MATERIAL HANDLING AND MANAGEMENT, EXCAVATION DEWATERING, WATER TREATMENT, TRANSPORTATION/DISPOSAL AND DECONTAMINATION.
8. CONTRACTOR SHALL PROVIDE ALL SUBMITTALS AS IDENTIFIED IN THE TECHNICAL SPECIFICATIONS AND DESIGN DRAWINGS.
9. PRIOR TO COMMENCING EXCAVATION, CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A WASTE MANAGEMENT PLAN.
10. CONTRACTOR SHALL PROVIDE PORTABLE WHEELWASH/CONTAINMENT SYSTEM FOR DECONTAMINATION OF EQUIPMENT.
11. CONTRACTOR SHALL PROVIDE FRAC TANKS, SUMPS, PUMPS, AND OTHER PERTINENT EQUIPMENT NECESSARY TO MAINTAIN THE EXCAVATIONS FREE OF WATER DURING CONSTRUCTION.
12. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY FINES, PENALTIES, ETC. FOR FAILURE TO COMPLY.
13. THE CONTRACTOR SHALL COMPLY WITH THE NOISE MITIGATION PROVISIONS OF 15 RCNY CHAPTER 28.
14. ALL UNITS AND DIMENSIONS ARE IN FEET UNLESS NOTED OTHERWISE.
15. THE CONTRACTOR SHALL MAINTAIN FENCING AROUND ALL ACTIVE CONSTRUCTION AND STAGING AREAS.
16. ALL WORK SHALL COMPLY WITH THE CON EDISON SPECIFICATIONS LISTED BELOW AND ALL APPLICABLE SITE GUIDELINES:
    - CE-SS-3400-1892 PROJECT SURVEY REQUIREMENTS
    - CE-SS-3400-2060 DEMOLITION
    - CE-SS-3400-2100 BORINGS
    - CE-SS-3400-2200 EXCAVATION AND BACKFILLING
    - CE-SS-3400-2513 ASPHALT AND CONCRETE PAVEMENT, CURBS AND SIDEWALKS
    - CE-SS-3400-2831 CHAIN LINK FENCE
    - CE-SS-3400-3000 INSPECTION AND TESTING OF CONCRETE
    - CE-SS-3400-4500 MASONRY RESTORATION
    - CE-SS-3400-5500 MISCELLANEOUS STEEL
    - CE-SS-3400-13794 RIGGING
    - CE-SS-3400-30301 INSPECTION AND REPAIR OF CONCRETE
17. CONTRACTOR SHALL RESTORE ALL CONCRETE AND ASPHALT SURFACES OUTSIDE THE LIMITS OF WORK DAMAGED AS RESULT OF TEMPORARY STORAGE OF MATERIAL AND EQUIPMENT OR DUE TO CONSTRUCTION OPERATIONS.
18. CLOSING OR OBSTRUCTING OF ROADWAYS, SIDEWALKS, AND PASSAGEWAYS ADJACENT TO THE WORK BY THE PLACEMENT OR STORAGE OF MATERIALS SHALL NOT BE PERMITTED UNLESS APPROVED BY CON EDISON AND ALL OPERATIONS SHALL BE CONDUCTED WITH A MINIMUM INTERFERENCE TO ACCESS THESE WAYS.
19. THE CONTRACTOR SHALL REPAIR DAMAGE THAT MAY OCCUR AS A RESULT TO THEIR ACTIVITIES TO FACILITIES AND/OR STRUCTURES TO REMAIN, OR TO ANY PROPERTY BELONGING TO CON EDISON AT THE CONTRACTORS OWN EXPENSE.

SURVEY:

1. BASEMAP PROVIDED BY BORBAS SURVEYING AND MAPPING LLC, INC. DATED JULY 14, 2022.
2. HORIZONTAL DATUM IS NAD83 PROJECTION NEW YORK STATE PLANE (LONG ISLAND ZONE) COORDINATE SYSTEM.
3. VERTICAL DATUM IS NAVD 88.
4. HORIZONTAL AND VERTICAL DATUM BASED ON GNSS GPS OBSERVATIONS FROM NGS CORS NETWORK AT THE TIME OF FIELD SURVEY.
5. CONTRACTOR SHALL PERFORM BEFORE AND AFTER SURVEYS USING A NEW YORK STATE LICENSED PROFESSIONAL SURVEYOR.
6. CONTRACTOR SHALL SURVEY ALL EXPOSED UNDERGROUND UTILITIES AND STRUCTURES ENCOUNTERED DURING CONSTRUCTION.

UTILITIES:

1. THE APPROXIMATE LOCATION OF KNOWN UTILITY STRUCTURES ARE SHOWN ON THE DESIGN DRAWINGS. THE ACCURACY OF AND COMPLETENESS OF THIS INFORMATION IS NOT GUARANTEED. CONTRACTOR SHALL FIELD VERIFY THE UTILITY LOCATIONS AND OTHER CONSTRUCTION OBSTACLES PRIOR TO CONSTRUCTION.
2. ALL EXISTING UTILITY MANHOLE RIMS, VALVE BOXES, ETC., TO BE RESET BY THE CONTRACTOR OR APPLICABLE UTILITY COMPANY OR AUTHORITY.
3. CONTRACTOR SHALL NOTIFY "NEW YORK CITY – LONG ISLAND ONE CALL CENTER" (800-272-4480) PRIOR TO ANY INTRUSIVE WORK.
4. ANY UTILITY ENCOUNTERED DURING CONSTRUCTION SHALL BE ASSUMED TO BE ACTIVE AND SHALL NOT BE REMOVED, CUT OR OTHERWISE COMPROMISED IN ANY WAY UNLESS DIRECTED BY CON EDISON.

DEMOLITION:

1. DEMOLITION INCLUDES ABOVE AND BELOW GROUND STRUCTURAL CONCRETE, FOUNDATIONS, METALS, MASONRY ATTACHMENTS, APPURTENANCES, PIPING, ELECTRICAL AND MECHANICAL EQUIPMENT, PAVING, CURBS, SIDEWALKS, FENCING, PIPING AND SIMILAR EXISTING FACILITIES WITHIN REMEDIATION AREAS IN ACCORDANCE WITH CON EDISON SPECIFICATION CE-SS-3400-2060, DEMOLITION.
2. THE CONTRACTOR SHALL CONDUCT A PRE-DEMOLITION SURVEY AND VERIFICATION OF THE CONDITION OF EXISTING STRUCTURES AND FACILITIES TO BE MAINTAINED. THE PRE-DEMOLITION SURVEY SHALL CONSIST OF PHOTOGRAPHS, AND A BRIEF WRITTEN REPORT.
3. THE CONTRACTOR SHALL SUBMIT A DEMOLITION PLAN THAT ADDRESSES METHODS, EQUIPMENT AND OPERATING SEQUENCES, INCLUDING, BUT, NOT LIMITED TO, COORDINATION FOR SHUT-OFF, CAPPING, TEMPORARY SERVICES, CONTINUATION OF UTILITY SERVICES AND OTHER APPLICABLE ITEMS TO ENSURE NO INTERRUPTION OF CON EDISON'S OPERATIONS.
4. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTALS AS INDICATED ON THE PLANS REQUIRED FOR DEMOLITIONS, MATERIAL SIZING AND MATERIAL REMOVAL AND DISPOSAL. WORK SHALL INCLUDE DEMOLITION ASSOCIATED WITH EXISTING STRUCTURES AND FACILITIES AND REMNANT SUBSURFACE STRUCTURES, PROCESS PIPING, AND FACILITIES.
5. THE CONTRACTOR SHALL DISPOSE OF ALL DEMOLITION MATERIALS AT A DISPOSAL FACILITY APPROVED BY CON EDISON.
6. THE CONTRACTOR SHALL PERFORM ALL DEMOLITION AND REMOVAL WORK TO PREVENT DAMAGE OR INJURY TO STRUCTURES ADJACENT FEATURES WHICH MAY RESULT FROM FALLING DEBRIS OR OTHER CAUSES, AND WHICH WILL INTERFERE WITH THE USE OF AND FREE AND SAFE PASSAGE TO AND FROM ADJACENT STRUCTURES.
7. THE CONTRACTOR SHALL ERECT AND MAINTAIN BARRIERS, LIGHTS, SHEDS AND OTHER NECESSARY PROTECTIVE DEVICES.
8. CONTRACTOR SHALL SEGREGATE AND MANAGE ALL DEMOLISHED CONCRETE/ASPHALT. DEMOLISHED CONCRETE/ASPHALT SHALL BE DISPOSED OF AS C&D DEBRIS MATERIALS PROVIDED IT MEETS THE DISPOSAL FACILITIES ACCEPTANCE CRITERIA.

EXCAVATION:

1. ANY EXCAVATED MATERIAL SHALL BE SEGREGATED BY THE CONTRACTOR. CONTRACTOR SHALL PERFORM WASTE CHARACTERIZATION FOR OFF SITE DISPOSAL, TRANSPORT USING CON EDISON APPROVED TRANSPORTERS AND DISPOSE OF AT A CON EDISON APPROVED DISPOSAL FACILITY. EXCAVATED SOIL SHALL NOT BE REUSED AS BACKFILL.
2. ALL EXCAVATED MATERIAL WITH THE EXCEPTION OF C&D DEBRIS MATERIALS THAT HAVE BEEN CONFIRMED TO NOT MEET C&D WASTE DISPOSAL REQUIREMENTS WILL BE STAGED WITHIN THE ACTIVE CONSTRUCTION AREAS DESIGNATED BY CON EDISON FOR WASTE CHARACTERIZATION.

EXCAVATION SUPPORT:

1. THE CONTRACTOR SHALL SUBMIT EXCAVATION SUPPORT DESIGN, DRAWINGS, AND CALCULATIONS TO THE ENGINEER FOR REVIEW AND COMMENT. EXCAVATION SUPPORT SHALL NOT BE INSTALLED UNTIL THE CONTRACTORS DESIGN SUBMITTAL HAS BEEN REVIEWED AND ACCEPTED BY THE ENGINEER AND CON EDISON. DESIGN DRAWINGS AND CALCULATIONS FOR THE EXCAVATION SUPPORT DESIGN SHALL BE SIGNED AND SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER.
2. ALL EXCAVATION, TRENCHING, SHEETING, BRACING, AND RELATED ACTIVITIES SHALL FULLY COMPLY WITH THE REQUIREMENTS OF OSHA EXCAVATION SAFETY STANDARDS (29 CFR PART 1926).
3. THE SUBSURFACE SOILS ARE KNOWN TO CONTAIN REMNANT STRUCTURES, CONSTRUCTION DEBRIS AND RUBBLE IN VARYING QUANTITIES AND SIZE ALONG WITH ABANDONED AND ACTIVE SUBSURFACE UTILITIES. THE DESIGN AND INSTALLATION OF THE EXCAVATION SUPPORT MEASURES SHALL CONSIDER THE PRESENCE OF THESE OBSTRUCTIONS.

WATER MANAGEMENT:

1. PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL DEVELOP A CONSTRUCTION WATER MANAGEMENT PLAN IN ACCORDANCE WITH TECHNICAL SPECIFICATION SECTION 02240.
2. THE CONTRACTOR SHALL PROVIDE THE PROPER PUMPS, STORAGE FACILITIES, TRANSFER PIPING, HOSES, ETC. WHICH INCLUDE SAFEGUARDS AGAINST LEAKS, FREEZING, PUNCTURES, OR BREAKAGE TO ENSURE EFFECTIVE SITE WATER MANAGEMENT.
3. CONTRACTOR SHALL DIVERT SURFACE WATER TO PREVENT ENTRY INTO THE EXCAVATION AND LIMIT DEWATERING TO THAT WHICH IS NECESSARY TO PROVIDE ADEQUATE ACCESS, A SAFE EXCAVATION IN ACCORDANCE WITH NYC BUILDING CODE REQUIREMENTS, PREVENT THE SPREAD OF CONTAMINATION, AND ENSURE THAT COMPACTION REQUIREMENTS CAN BE MET.

RIGGING:

1. CONTRACTOR IS TO PROVIDE ALL DOCUMENTATION AND SITE PRESENCE AS PER THE REQUIREMENTS OF THE CON EDISON SPECIFICATION CE-SS-3400-13794. THE REQUIRED DOCUMENTS INCLUDE, BUT NOT LIMITED TO, PROCEDURE, CALCULATIONS, PLOT PLANS SHOWING CRANE AND/OR EQUIPMENT LAYOUT, AND EQUIPMENT AND SHALL BE SIGNED AND SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER. THE NEW YORK STATE PROFESSIONAL ENGINEER WHO DESIGNED AND CERTIFIED THE RIGGING DOCUMENTS SHALL BE PRESENT ON SITE EACH DAY OF RIGGING.

WORK SEQUENCE:

1. THE FOLLOWING SEQUENCE OF WORK IS PROVIDED FOR GENERAL PLANNING PURPOSES ONLY, AND IS NOT INCLUSIVE OF ALL WORK TO BE PERFORMED:
    A. OBTAIN ALL NECESSARY PERMITS
    B. PREPARE AND SUBMIT ALL REQUIRED SUBMITTALS IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS
    C. VERIFY THE EXISTENCE AND LOCATION OF ALL UTILITIES WITHIN THE PROJECT WORK AREA
    D. MOBILIZATION
    E. INSTALLATION OF TEMPORARY EROSION & SEDIMENT CONTROL MEASURES
    F. PERFORM SITE PREPARATION AND DEMOLITION ACTIVITIES
    G. PERFORM PHASE 1 GREATER THAN 10 MG/KG PCB EXCAVATIONS
    H. PERFORM PHASE 2 LESS THAN 10 MG/KG PCB REMOVALS TO FOUR FEET BGS WITHIN THE LIMITS OF ISS
    I. PERFORM THE REMAINDER OF THE PHASE 2 FOUR FOOT EXCAVATIONS WITHIN THE LIMITS OF ISS
    J. PERFORM IN-SITU SOIL STABILIZATION
    K. PERFORM BACKFILL AND GEOTEXTILE PLACEMENT
    L. PERFORM SITE GRADING
    M. RE-ESTABLISH SITE FEATURES
2. THE CONTRACTOR SHALL COORDINATE THE SEQUENCING OF ALL WORK ACTIVITIES WITH CON EDISON.

PERMITTING AND SPECIAL INSPECTION REQUIREMENTS:

1. PERMITTING AND SPECIAL INSPECTION REQUIREMENTS FOR SITE STORM DRAINAGE DISPOSAL AND DETENTION FACILITIES WILL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN CHAPTER 100 OF TITLE 1 OF THE RULES OF THE CITY OF NEW YORK; CHAPTER 17 OF THE NYC BUILDING CODE; AND CHAPTER 11 OF THE NYC PLUMBING CODE. NYC DEPARTMENT OF BUILDINGS SPECIAL INSPECTIONS TO BE COMPLETED ARE AS FOLLOWS:

CATEGORY 1 – GENERAL BUILDING CONSTRUCTION
A. FLOOD ZONE COMPLIANCE BC 1704.29; BC G105

CATEGORY 4 – STRUCTURAL MATERIALS & CONSTRUCTION OPERATIONS
A. SUBSURFACE CONDITIONS – SUBGRADE INSPECTION BC 1704.7.1
B. SUBSURFACE CONDITIONS – FILL PLACEMENT, IN-PLACE DENSITY BC 1704.7.2; BC 1704.7.3
C. EXCAVATION – SHEETING, SHORING AND BRACING BC 1704.20.2; 3304.4.1
D. FINAL INSPECTION BC 110.5

REVISION
USE .1 SIZE TEXT ONLY

65% DESIGN ISSUED FOR REVIEW AND COMMENTS	A
P.N. 453055	
PARSONS 1/3/2025	

PROJECT NUMBER
453055

DWG. NO. G-002 - A
DWG. SIZE D | DWG. TYPE COMPANY | SHT. 2

CON EDISON | LOCATION FLUSHING

TITLE
FARRINGTON REMEDIAL DESIGN

CURRENT ENGINEERING APPROVALS

ENGINEERING MANAGER	D. MARTOCCIA
ENGINEER	M. BROSCHART
DESIGNER	J. NASSIMOS
DESIGN CHECKER	S. LIBERATORE
SCALE	NONE
DISCIPLINE CODE	SA

PROJECT:
FORMER FARRINGTON STREET
GAS WORKS SITE REMEDIAL DESIGN
133-58 31ST DR FLUSHING, NY 11354

TITLE:
GENERAL NOTES AND LEGEND

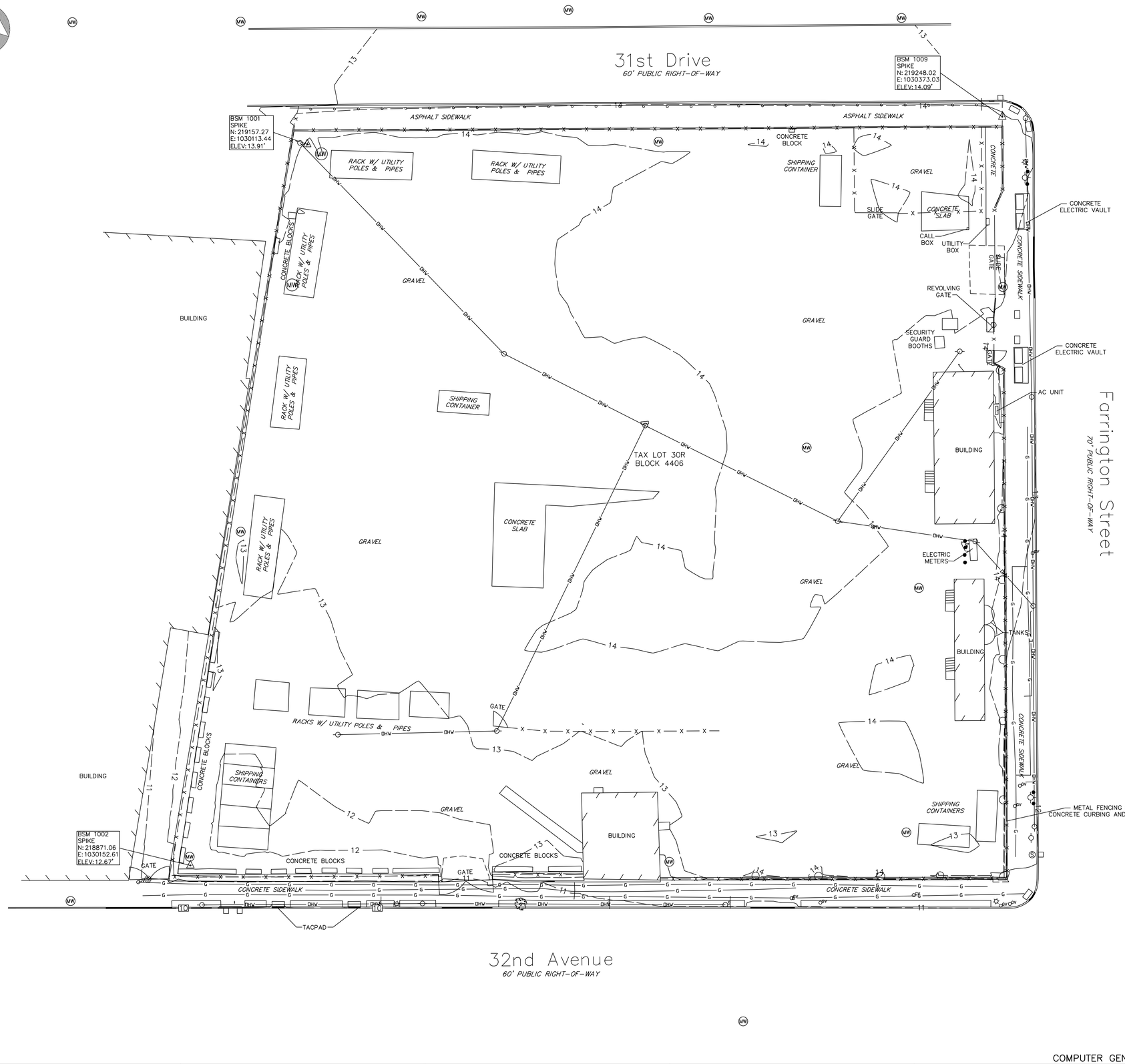
SEAL & SIGNATURE
NOT FOR BIDDING OR CONSTRUCTION

DATE: 1/3/2025
PROJECT No.: 453055-01000
DRAWING BY: JN
CHK BY: DM
DOB DWG No: 453055-G-002
SHEET No. 2 OF 14

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, FOR ANY PERSON, UNLESS UNDER THE DIRECTION OF A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DOCUMENT IN ANY WAY.

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

FILE: (\\nysyr04fs01) P:\CONED\453055 - FARRINGTON MGP SICP RDR\11.0 TECHNICAL\11.1 CAD\65% DESIGN\GENERAL\453055-G-002 GENERAL NOTES AND LEGEND.DWG, DATE: 02/06/2025 10:11:22AM, p0015477



NOTES:

1. SEE DRAWING G-002 FOR GENERAL NOTES AND LEGEND.

REVISION	
USE .1 SIZE TEXT ONLY	
65% DESIGN ISSUED FOR REVIEW AND COMMENT P.N. 453055 PARSONS 1/3/2025	A

20 10 0 20 40

SCALE: 1"=20'

PROJECT NUMBER
453055

DWG. NO. C-001 - A

DWG. SIZE D | DWG. TYPE COMPANY | SHT. 3

CON EDISON | LOCATION FLUSHING

TITLE
FARRINGTON REMEDIAL DESIGN

CURRENT ENGINEERING APPROVALS

ENGINEERING MANAGER	D. MARTOCCIA
ENGINEER	M. BROSCHART
DESIGNER	J. NASSIMOS
DESIGN CHECKER	S. LIBERATORE
SCALE 1" = 20'	DISCIPLINE CODE SA

PROJECT:
FORMER FARRINGTON STREET
GAS WORKS SITE REMEDIAL DESIGN
133-58 31ST DR FLUSHING, NY 11354

TITLE:
EXISTING CONDITIONS PLAN

SEAL & SIGNATURE

NOT FOR BIDDING OR CONSTRUCTION

DATE: 1/3/2025
PROJECT No.: 453055-01000
DRAWING BY: JN
CHK BY: DM
DOB DWG No: 453055-C-001
SHEET No. 3 OF 14

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, FOR ANY PERSON, UNLESS UNDER THE DIRECTION OF A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DOCUMENT IN ANY WAY.

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

FILE: (\\nysyr04fs01) P:\CONED\453055 - FARRINGTON MGP SCP RDR\11.0 TECHNICAL\11.1 CAD\65% DESIGN\CIVIL\453055-C-001 EXISTING CONDITIONS PLAN.DWG, DATE: 02/06/2025 08:24:17AM, p0015477

LEGEND:

- HISTORICAL STRUCTURE (NOTES 2,3)
- 6 — OBSTRUCTION POINT FOR DETAILED DESCRIPTION (INSET TABLE)
- OBSTRUCTION ENCOUNTERED DURING HISTORICAL SITE INVESTIGATION WORK OR PERIMETER FENCE INSTALLATION (NOTE 4)

NOTES:

1. SEE DRAWING G-002 FOR GENERAL NOTES AND LEGEND.
2. LOCATIONS OF HISTORICAL STRUCTURES SHOWN FOR INFORMATION ONLY, ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
3. LOCATIONS OF HISTORICAL STRUCTURES BASED ON FIGURE 4 IN THE SITE HISTORY REPORT (ENSR, 2003) WITH ONE EXCEPTION. THE LOCATION OF THE FORMER STEEL GAS HOLDER HAS BEEN SHIFTED BASED ON OBSERVATIONS DURING THE SITE CHARACTERIZATION. ALL HISTORICAL STRUCTURES SHOULD BE CONSIDERED APPROXIMATE ON THIS DRAWING.
4. OBSTRUCTION ENCOUNTERED LOCATIONS NOT IDENTIFIED WITH A POINT NUMBER WERE ONLY IDENTIFIED QUALITATIVELY AND THEREFORE DO NOT HAVE SUBSURFACE OBSTRUCTION DETAILS.

SUBSURFACE OBSTRUCTION DETAIL

POINT #	NORTHING	EASTING	OBSERVED OBSTRUCTION DEPTH (FT)	OBSTRUCTION DESCRIPTION
1	218926.46	1030206.77	3.0	UNMARKED UTILITY
2	219080.42	1030404.02	3.0	CONCRETE SLAB
3	219173.64	1030382.23	4.0	CONCRETE SLAB
4	219139.36	1030170.95	4.0	CONCRETE SLAB
5	219224.51	1030307.35	4.0	CONCRETE SLAB
6	219230.81	1030364.67	1.0	CONCRETE SLAB
7	219096.84	1030342.29	4.5	PIPES AT 4.5, CONCRETE AT 1.5
8	219064.73	1030395.74	1.5	CONCRETE SLAB
9	218997.67	1030187.84	10.0	CONCRETE – DRILLING
10	219040.99	1030362.82	0.1	CONCRETE SLAB
11	218994.08	1030409.44	1.5	CONCRETE SLAB
12	218955.18	1030262.98	0.7	UNKNOWN
13	219034.03	1030148.99	8.0	CONCRETE – ENCOUNTERED DURING DRILLING
14	219056.35	1030201.85	10.0	CONCRETE – ENCOUNTERED DURING DRILLING
15	219188.09	1030315.73	7.0	CONCRETE – ENCOUNTERED DURING DRILLING
16	219086.39	1030286.28	0.1	CONCRETE SLAB
17	218899.30	1030214.83	3.0	CONCRETE SLAB
18	218969.65	1030444.22	4.0	CONCRETE SLAB
19	218996.58	1030281.44	3.4	CONCRETE SLAB
20	219018.21	1030398.20	3.0	CONCRETE SLAB
21	218972.07	1030137.75	3.0	CONCRETE SLAB
22	218996.99	1030216.65	2.5	CONCRETE SLAB
23	219014.59	1030273.95	2.0	CONCRETE SLAB
24	219032.55	1030331.53	2.5	CONCRETE SLAB
25	219047.58	1030382.75	3.9	CONCRETE SLAB
26	219015.16	1030179.48	2.5	CONCRETE SLAB
27	219067.51	1030323.99	0.1	CONCRETE SLAB
28	219138.07	1030377.61	3.4	CONCRETE SLAB
29	219120.08	1030185.11	3.5	CONCRETE SLAB
30	219158.51	1030323.55	3.6	CONCRETE SLAB
31	219156.23	1030124.73	0.1	CONCRETE SLAB
32	219162.06	1030227.97	2.0	CONCRETE SLAB
33	219222.01	1030335.88	0.8	CONCRETE SLAB
34	219219.89	1030277.15	2.0	CONCRETE SLAB
35	219175.68	1030130.62	3.5	CONCRETE SLAB
36	219230.41	1030307.99	2.0	CONCRETE SLAB
37	219110.95	1030367.95	4.5	PIPES AT 4.5, CONCRETE AT 1.5
38	219188.09	1030315.73	4.0	CONCRETE SLAB
39	218907.69	1030234.03	0.1	CONCRETE SLAB, BRICK CONCRETE WALL
40	218893.07	1030175.04	0.1	METAL WALL
41	218906.36	1030188.67	5.5	BRICK WALL
42	219140.30	1030256.34	2.0	CONCRETE SLAB
43	219141.14	1030276.84	4.0	CONCRETE CONDUIT
44	219135.06	1030273.23	4.0	CONCRETE CONDUIT
45	218998.30	1030425.30	9.5	INACTIVE GAS LINE, BRICK FOUNDATION
46	219102.47	1030152.22	0.1	CONCRETE SLAB
47	219193.67	1030389.09	3.0	PIPES, VALVES
48	219180.15	1030393.42	3.0	PIPES, VALVES
49	218881.75	1030155.22	0.1	CONCRETE SLAB
50	219115.57	1030412.64	0.1	CONCRETE SLAB
51	219080.41	1030423.88	0.1	CONCRETE SLAB
52	219023.15	1030441.33	0.1	CONCRETE SLAB

20 10 0 20 40

SCALE: 1"=20'

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, FOR ANY PERSON, UNLESS UNDER THE DIRECTION OF A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DOCUMENT IN ANY WAY.

REVISION

USE .1 SIZE TEXT ONLY

65% DESIGN ISSUED FOR REVIEW AND COMMENT	A
P.N. 453055	
PARSONS 1/3/2025	

PROJECT NUMBER 453055

DWG. NO. C-002 - A

DWG. SIZE D | DWG. TYPE COMPANY | SHT. 4

CON EDISON | LOCATION FLUSHING

TITLE: FARRINGTON REMEDIAL DESIGN

CURRENT ENGINEERING APPROVALS

ENGINEERING MANAGER	D. MARTOCCIA
ENGINEER	M. BROSCHART
DESIGNER	J. NASSIMOS
DESIGN CHECKER	S. LIBERATORE
SCALE	1" = 20'
DISCIPLINE CODE	SA

PROJECT:
FORMER FARRINGTON STREET
GAS WORKS SITE REMEDIAL DESIGN
133-58 31ST DR FLUSHING, NY 11354

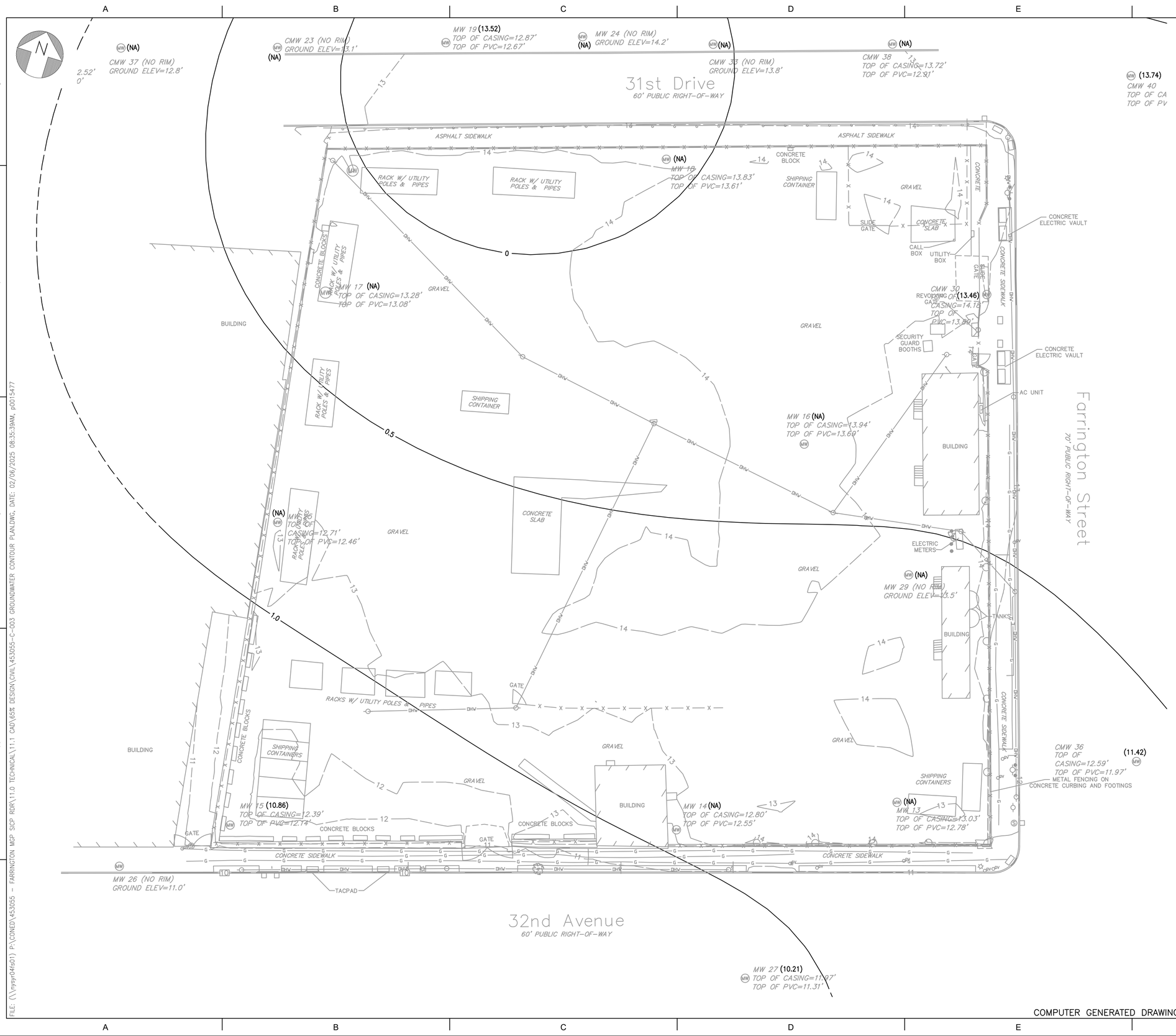
TITLE:
SUBSURFACE OBSTRUCTION SUMMARY

SEAL & SIGNATURE

NOT FOR BIDDING OR CONSTRUCTION

DATE:	1/3/2025
PROJECT No.:	453055-01000
DRAWING BY:	JN
CHK BY:	DM
DOB DWG No:	453055-C-002
SHEET No.	4 OF 14

FILE: L:\nyspw04fs01\ P:\CONED\453055 - FARRINGTON MGP SICP RDR\11.0 TECHNICAL\11.1 CAD\65% DESIGN\CIVIL\453055-C-002 SUBSURFACE OBSTRUCTION SUMMARY.DWG, DATE: 02/10/2025 09:10:13AM, p0015477



LEGEND:

1.0	GROUNDWATER ELEVATION CONTOUR
-1.0-	INFERRED GROUNDWATER ELEVATION CONTOUR
(13.74)	DEPTH TO GROUNDWATER (FT), NA = NOT AVAILABLE

(13.74) CMW 40 TOP OF CA TOP OF PV

NOTES:

1. SEE DRAWING G-002 FOR GENERAL NOTES AND LEGEND.
2. DEPTH TO GROUNDWATER MEASUREMENTS WERE COLLECTED BY PARSONS IN NOVEMBER 2018.

REVISION
USE .1 SIZE TEXT ONLY

65% DESIGN ISSUED FOR REVIEW AND COMMENT	A
P.N. 453055	
PARSONS 1/3/2025	

SCALE: 1"=20'

PROJECT NUMBER 453055

DWG. NO. C-003 - A

DWG. SIZE D | DWG. TYPE COMPANY | SHT. 5

CON EDISON | LOCATION FLUSHING

TITLE
FARRINGTON REMEDIAL DESIGN

CURRENT ENGINEERING APPROVALS

ENGINEERING MANAGER	D. MARTOCCIA
ENGINEER	M. BROSCHART
DESIGNER	J. NASSIMOS
DESIGN CHECKER	S. LIBERATORE
SCALE 1" = 20'	DISCIPLINE CODE SA

PROJECT:
FORMER FARRINGTON STREET
GAS WORKS SITE REMEDIAL DESIGN
133-58 31ST DR FLUSHING, NY 11354

TITLE:
GROUNDWATER CONTOUR PLAN

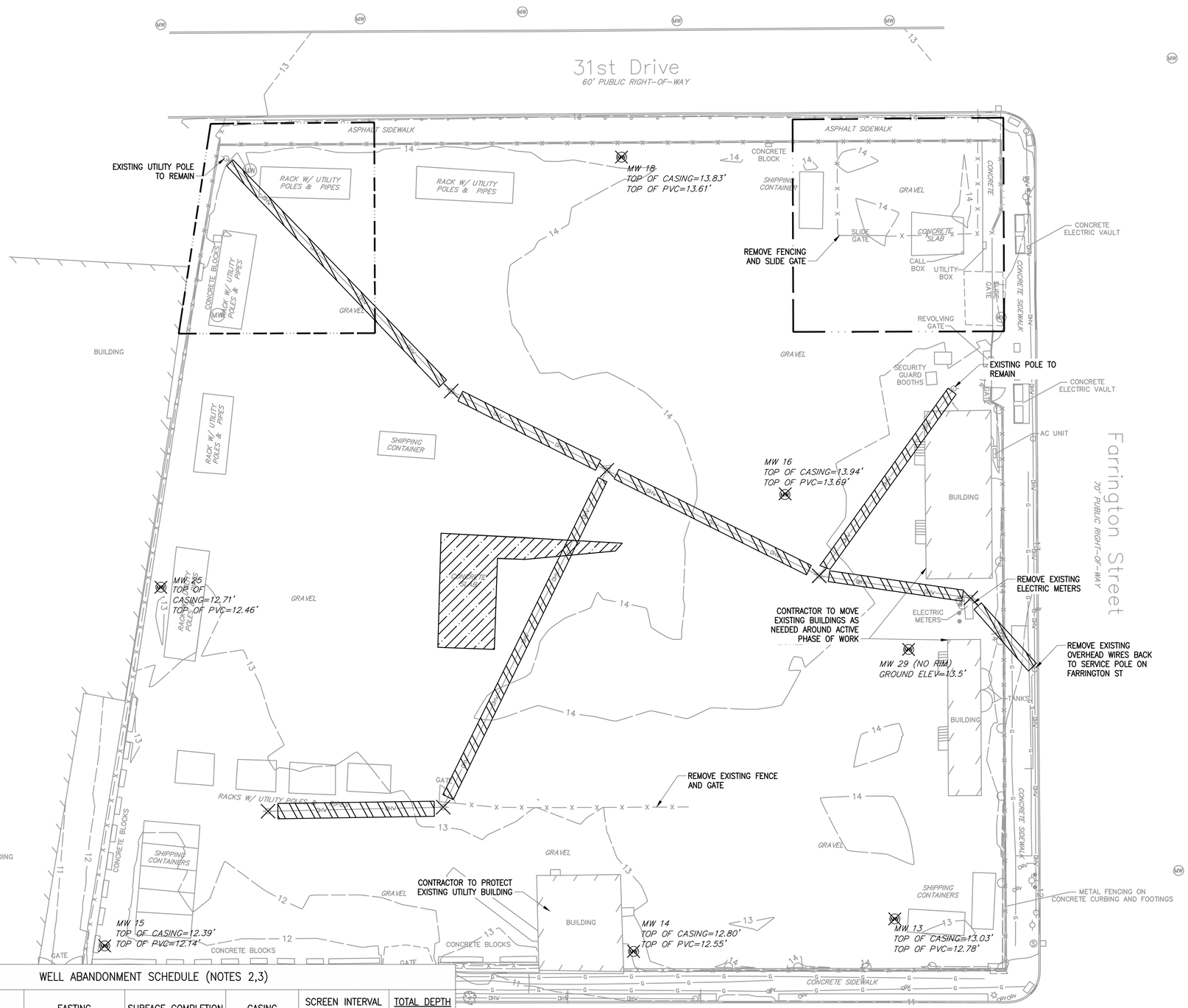
SEAL & SIGNATURE
NOT FOR BIDDING OR CONSTRUCTION

DATE:	1/3/2025
PROJECT No.:	453055-01000
DRAWING BY:	JN
CHK BY:	DM
DOB DWG No:	453055-C-003
SHEET No.	5 OF 14

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, FOR ANY PERSON, UNLESS UNDER THE DIRECTION OF A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DOCUMENT IN ANY WAY.

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

FILE: (\\nysyor04fs01) P:\CONED\453055 - FARRINGTON MGP SUCP RDR\11.0 TECHNICAL\11.1 CAD\65% DESIGN\CIVIL\453055-C-003 GROUNDWATER CONTOUR PLAN.DWG, DATE: 02/06/2025 08:35:39AM, p0015477



LEGEND:

- EXISTING OVERHEAD WIRE TO BE REMOVED
- EXISTING CONCRETE SLAB DEMO
- LEAD IMPACTED SOIL AREA (NOTES 7,8)
- MONITORING WELL TO BE ABANDONED
- MONITORING WELL TO REMAIN
- UTILITY POLE TO BE REMOVED

NOTES:

1. SEE DRAWING G-002 FOR GENERAL NOTES AND LEGEND.
2. MONITORING WELLS MW-13, MW-14, MW-16, MW-18 AND MW-29 ARE NOT VISIBLE AT THE SURFACE AND ARE PRESUMED DESTROYED. CONTRACTOR SHALL ATTEMPT TO LOCATE WELLS UP TO 4 FEET BGS FOR ABANDONMENT.
3. MONITORING WELLS SHALL BE ABANDONED IN ACCORDANCE WITH NYSDEC CP-43: GROUNDWATER MONITORING WELL DECOMMISSIONING POLICY, DATED NOVEMBER 3, 2009.
4. SHIPPING CONTAINERS TO BE RELOCATED BY OTHERS PRIOR TO CONSTRUCTION.
5. RACKS WITH UTILITY POLES AND PIPES TO BE RELOCATED BY OTHERS PRIOR TO CONSTRUCTION.
6. SEE DRAWING C-002 FOR SUBSURFACE OBSTRUCTION DETAILS.
7. CONTRACTOR SHALL HANDLE EXCAVATED SOILS IN AREAS PREVIOUSLY IDENTIFIED TO BE IMPACTED WITH LEAD IN ACCORDANCE WITH THE WASTE MANAGEMENT PLAN. EXCAVATED SOILS WILL BE STOCKPILED SEPARATELY PRIOR TO CHARACTERIZATION AND DISPOSAL. EXCAVATED SOILS IN AREAS PREVIOUSLY IDENTIFIED TO BE IMPACTED WITH PCBS SHALL BE HANDLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPROVED SICP AND THE WASTE MANAGEMENT PLAN. CONTRACTOR HEALTH AND SAFETY PLAN SHALL BE FOLLOWED WHEN HANDLING EXCAVATED SOILS.
8. LAYOUT POINTS FOR THE LEAD IMPACTED SOIL AREAS ARE PRESENTED ON DRAWING C-006 AND C-007.

WELL ABANDONMENT SCHEDULE (NOTES 2,3)

WELL ID	NORTHING	EASTING	SURFACE COMPLETION	CASING	SCREEN INTERVAL (FT)	TOTAL DEPTH (FT)
MW 13	218966.32	1030419.46	FLUSH MOUNT	2" PVC	11-26	26
MW 14	218927.77	1030333.27	FLUSH MOUNT	2" PVC	12-24	26
MW 15	218874.24	1030151.33	FLUSH MOUNT	2" PVC	11-26	28
MW 16	219100.28	1030337.30	FLUSH MOUNT	2" PVC	12-28	30
MW 18	219198.82	1030245.90	FLUSH MOUNT	2" PVC	12-22	24
MW 25	219003.08	1030133.02	FLUSH MOUNT	2" PVC	5-45	48
MW 29	219060.15	1030395.96	-	-	-	39

20 10 0 20 40

SCALE: 1"=20'

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, FOR ANY PERSON, UNLESS UNDER THE DIRECTION OF A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DOCUMENT IN ANY WAY.

REVISION
USE .1 SIZE TEXT ONLY

65% DESIGN ISSUED FOR REVIEW AND COMMENT P.N. 453055 PARSONS 1/3/2025	A

PROJECT NUMBER
453055

DWG. NO. C-004 - A
DWG. SIZE D | DWG. TYPE COMPANY | SHT. 6

CON EDISON | LOCATION FLUSHING

TITLE
FARRINGTON REMEDIAL DESIGN

CURRENT ENGINEERING APPROVALS

ENGINEERING MANAGER	D. MARTOCCIA
ENGINEER	M. BROSCHART
DESIGNER	J. NASSIMOS
DESIGN CHECKER	S. LIBERATORE
SCALE	1" = 20'
DISCIPLINE CODE	SA

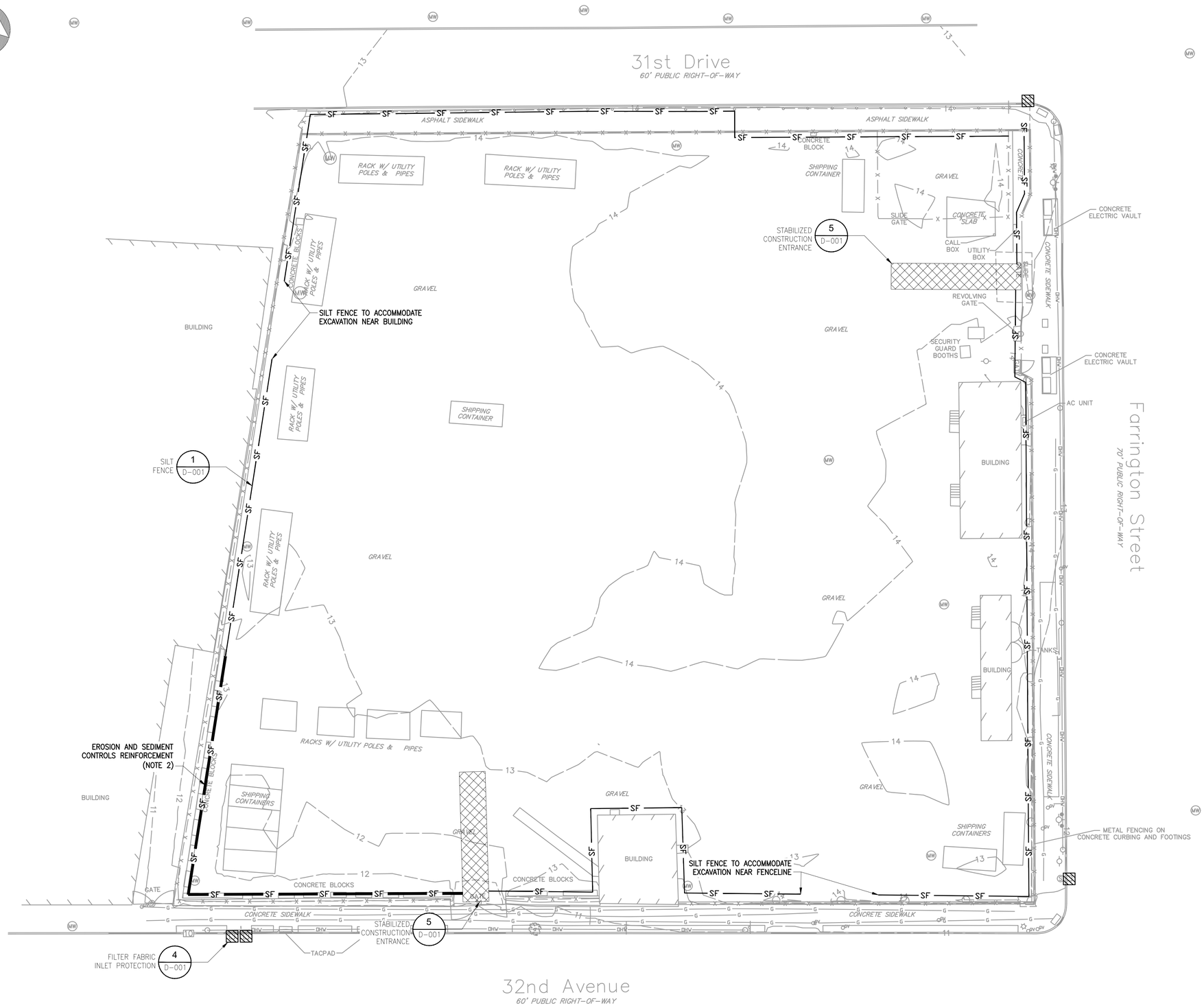
PROJECT:
FORMER FARRINGTON STREET
GAS WORKS SITE REMEDIAL DESIGN
133-58 31ST DR FLUSHING, NY 11354

TITLE:
SITE PREPARATION AND DEMOLITION PLAN

SEAL & SIGNATURE
NOT FOR BIDDING OR CONSTRUCTION

DATE: 1/3/2025
PROJECT No.: 453055-01000
DRAWING BY: JN
CHK BY: DM
DOB DWG No: 453055-C-004
SHEET No. 6 OF 14

FILE: \\nysyor04fs01\ P:\CONED\453055 - FARRINGTON MGP SICP RDR\11.0 TECHNICAL\11.1 CAD\65% DESIGN\CIVIL\453055-C-004 SITE PREPARATION AND DEMOLITION PLAN.DWG, DATE: 02/06/2025 08:36:38AM, p0015477



LEGEND:

- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED INLET PROTECTION
- SF — EROSION AND SEDIMENT CONTROLS
- SF ▬ EROSION AND SEDIMENT CONTROLS REINFORCEMENT

NOTES:

1. SEE DRAWING G-002 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL SUPPLEMENT EROSION AND SEDIMENT CONTROLS AS NEEDED BASED ON SURFACE WATER OVERLAND FLOW CONDITIONS WITH STRAW BALES, OR EQUIVALENT.

SCALE: 1"=20'

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

REVISION
USE .1 SIZE TEXT ONLY

65% DESIGN ISSUED FOR REVIEW AND COMMENT P.N. 453055 PARSONS 1/3/2025	A

PROJECT NUMBER
453055

DWG. NO. C-005 - A

DWG. SIZE D | DWG. TYPE COMPANY | SHT. 7

CON EDISON | LOCATION FLUSHING

TITLE
FARRINGTON REMEDIAL DESIGN

CURRENT ENGINEERING APPROVALS

ENGINEERING MANAGER	D. MARTOCCIA
ENGINEER	M. DEGRACIA
DESIGNER	J. NASSIMOS
DESIGN CHECKER	S. LIBERATORE
SCALE	1" = 20'
DISCIPLINE CODE	SA

PROJECT:
FORMER FARRINGTON STREET
GAS WORKS SITE REMEDIAL DESIGN
133-58 31ST DR FLUSHING, NY 11354

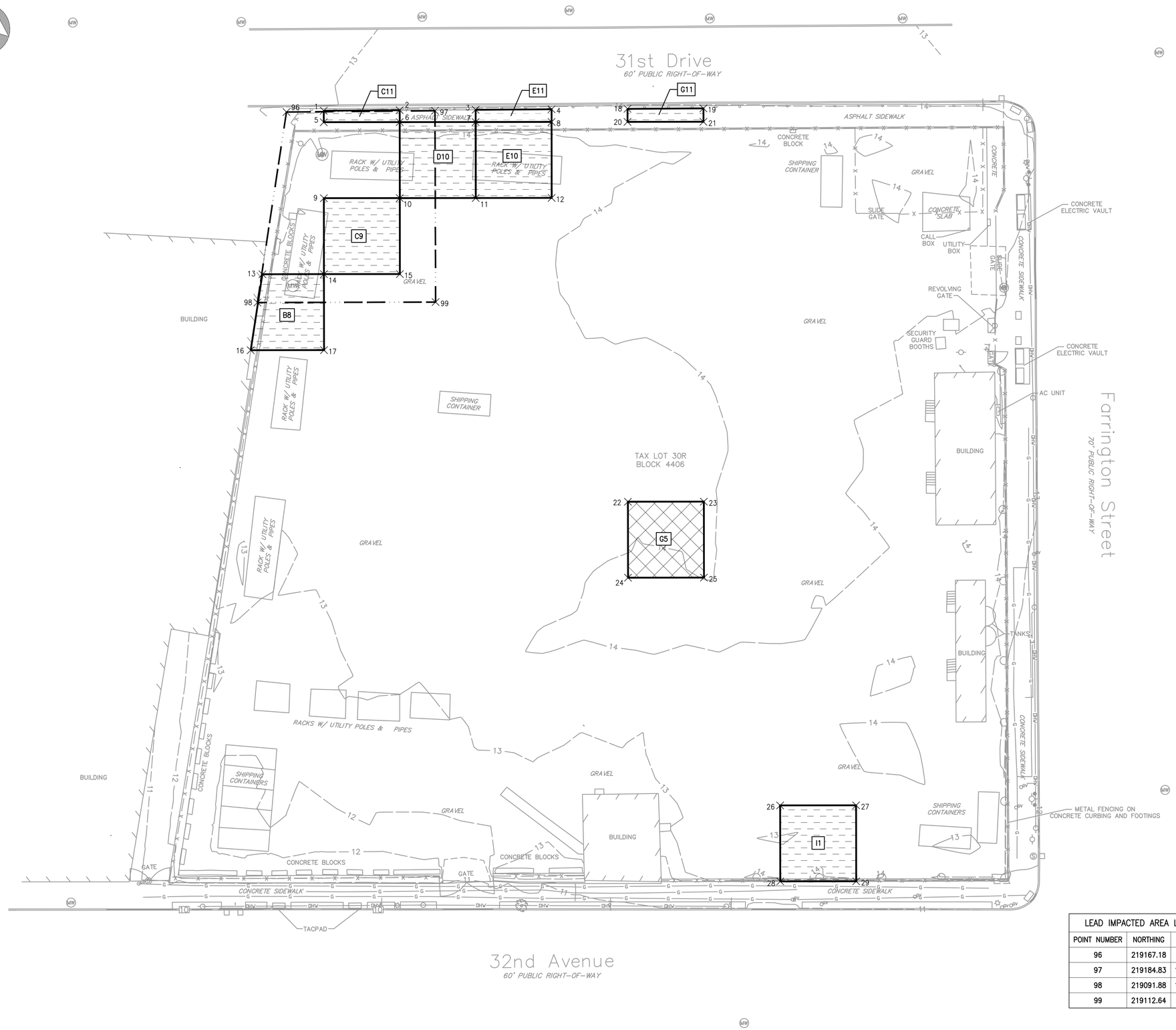
TITLE:
SOIL EROSION AND SEDIMENT CONTROL PLAN

SEAL & SIGNATURE
NOT FOR BIDDING OR CONSTRUCTION

DATE: 1/3/2025
PROJECT No.: 453055-01000
DRAWING BY: JN
CHK BY: DM
DOB DWG No: 453055-C-005
SHEET No. 7 OF 14

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, FOR ANY PERSON, UNLESS UNDER THE DIRECTION OF A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DOCUMENT IN any WAY.

FILE: (\\nysvr04fs01) P:\CONED\453055 - FARRINGTON MGP SICP RDR\11.0 TECHNICAL\11.1 CAD\65% DESIGN\CIVIL\453055-C-005 SOIL EROSION AND SEDIMENT CONTROL PLAN.DWG, DATE: 02/06/2025 08:37:58AM, p0015477



LEGEND:

- HAZARDOUS EXCAVATION (≥50 MG/KG PCB CONCENTRATIONS)
- NON-HAZARDOUS EXCAVATION (>10 MG/KG AND <50 MG/KG PCB CONCENTRATIONS)
- LEAD IMPACTED SOIL AREA (NOTE 5)
- × 6 — LAYOUT POINT
- G5 — EXCAVATION GRID ID

NOTES:

1. SEE DRAWING G-002 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR TO HANDLE EXCAVATED PCB IMPACTED SOILS IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPROVED SICP AND WASTE MANAGEMENT PLAN. EXCAVATED SOILS WILL BE STOCKPILED SEPARATELY PRIOR TO CHARACTERIZATION AND APPROPRIATE DISPOSAL. CONTRACTOR HEALTH AND SAFETY PLAN TO BE UTILIZED WHEN HANDLING EXCAVATED SOILS.
3. ALL PCB EXCAVATION AREAS SHALL HAVE CONFIRMATORY SAMPLING OF THE BOTTOM AND SIDEWALLS IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPROVED SICP AND CQAPP.
4. EXCAVATIONS IN EXCESS OF 4 FEET BGS SHALL BE MANAGED IN ACCORDANCE WITH OSHA STANDARDS. MATERIAL DISPOSAL WILL BE MANAGED IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPROVED SICP.
5. CONTRACTOR SHALL HANDLE EXCAVATED SOILS IN AREAS PREVIOUSLY IDENTIFIED TO BE IMPACTED WITH LEAD IN ACCORDANCE WITH THE WASTE MANAGEMENT PLAN. EXCAVATED SOILS WILL BE STOCKPILED SEPARATELY PRIOR TO CHARACTERIZATION AND DISPOSAL. EXCAVATED SOILS IN AREAS PREVIOUSLY IDENTIFIED TO BE IMPACTED WITH PCBS SHALL BE HANDLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPROVED SICP AND THE WASTE MANAGEMENT PLAN. CONTRACTOR HEALTH AND SAFETY PLAN SHALL BE FOLLOWED WHEN HANDLING EXCAVATED SOILS.

GRID ID	EXCAVATION DEPTH (FEET)
B8	6.0
C9	5.0
C11	7.0
D10	7.0
E10	4.0
E11	7.0
G5	6.5
G11	4.0
I1	1.0

PHASE 1 EXCAVATION LAYOUT POINTS		
POINT NUMBER	NORTHING	EASTING
1	219172.00	1030115.45
2	219180.95	1030144.08
3	219189.90	1030172.72
4	219198.84	1030201.35
5	219167.64	1030116.79
6	219176.44	1030145.46
7	219185.25	1030174.14
8	219194.05	1030202.82
9	219138.96	1030125.59
10	219147.77	1030154.27
11	219156.57	1030182.95
12	219165.37	1030211.63
13	219103.15	1030111.15
14	219110.28	1030134.39
15	219119.09	1030163.07
16	219073.10	1030115.50
17	219081.60	1030143.20
18	219207.79	1030229.99
19	219216.74	1030258.62
20	219202.86	1030231.50
21	219211.66	1030260.18
22	219059.46	1030275.52
23	219068.26	1030304.20
24	219030.78	1030284.32
25	219039.58	1030313.00
26	218962.35	1030368.09
27	218971.15	1030396.77
28	218933.67	1030376.90
29	218942.48	1030405.58

LEAD IMPACTED AREA LAYOUT		
POINT NUMBER	NORTHING	EASTING
96	219167.18	1030101.51
97	219184.83	1030157.48
98	219091.88	1030112.53
99	219112.64	1030179.81

20 10 0 20 40

SCALE: 1"=20'

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, FOR ANY PERSON, UNLESS UNDER THE DIRECTION OF A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DOCUMENT IN ANY WAY.

REVISION
USE .1 SIZE TEXT ONLY

65% DESIGN ISSUED FOR REVIEW AND COMMENT P.N. 453055 PARSONS 1/3/2025	A

PROJECT NUMBER
453055

DWG. NO. C-006 - A

DWG. SIZE D | DWG. TYPE COMPANY | SHT. 8

CON EDISON | LOCATION FLUSHING

TITLE
FARRINGTON REMEDIAL DESIGN

CURRENT ENGINEERING APPROVALS

ENGINEERING MANAGER	D. MARTOCCIA
ENGINEER	M. BROSCHART
DESIGNER	J. NASSIMOS
DESIGN CHECKER	S. LIBERATORE
SCALE	1" = 20'
DISCIPLINE CODE	SA

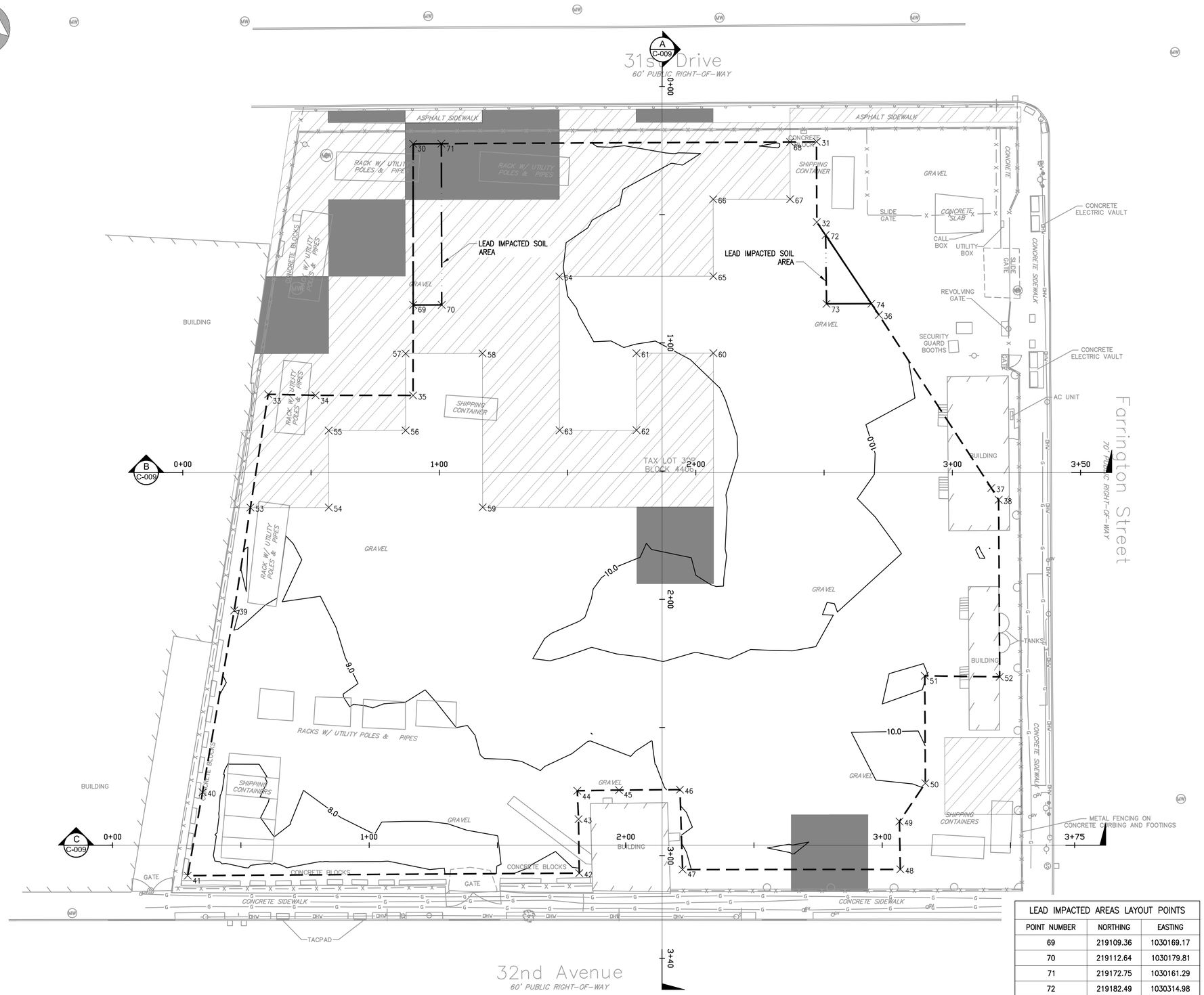
PROJECT:
FORMER FARRINGTON STREET
GAS WORKS SITE REMEDIAL DESIGN
133-58 31ST DR FLUSHING, NY 11354

TITLE:
PHASE 1 PCB EXCAVATION PLAN

SEAL & SIGNATURE
NOT FOR BIDDING OR CONSTRUCTION

DATE: 1/3/2025
PROJECT No.: 453055-01000
DRAWING BY: JN
CHK BY: DM
DOB DWG No: 453055-C-006
SHEET No. 8 OF 14

FILE: (\\nysyor04fs01) P:\CONED\453055 - FARRINGTON MGP SUCP RDR\11.0 TECHNICAL\11.1 CAD\65% DESIGN\CIVIL\453055-C-006 PHASE I EXCAVATION PLAN.DWG, DATE: 02/06/2025 08:43:33AM, p0015477



LEGEND:

- LEAD IMPACTED SOIL AREA (NOTES 2,3 DRAWING C-001)
- PROPOSED LIMITS OF ISS WORK (NOTE 2)
- PHASE 1 REMOVAL AREAS
- SOILS WITH >1 MG/KG AND ≤10 MG/KG PCBS
- 10.0 — PHASE 2 EXCAVATION CONTOUR (SEE NOTE 4)

NOTES:

1. SEE DRAWING G-002 FOR GENERAL NOTES AND LEGEND.
2. EXCAVATIONS IN EXCESS OF 4 FEET BGS SHALL BE MANAGED IN ACCORDANCE WITH OSHA STANDARDS.
3. REFER TO DRAWING G-002 FOR EXCAVATION WORK SEQUENCE.
4. EXCAVATION CONTOURS SHOWN REPRESENT A 4-FT REMOVAL FROM EXISTING GRADE.

4-FT REMOVAL/ISS BOUNDARY LAYOUT POINTS		
POINT NUMBER	NORTHING	EASTING
30	219169.48	1030150.83
31	219216.27	1030300.98
32	219186.29	1030310.21
33	219059.54	1030125.32
34	219064.56	1030143.08
35	219075.64	1030179.47
36	219158.76	1030343.93
37	219107.01	1030405.58
38	219103.44	1030409.65
39	218975.07	1030137.30
40	218903.67	1030146.20
41	218870.86	1030150.19
42	218916.42	1030295.86
43	218936.48	1030289.45
44	218946.92	1030285.76
45	218951.92	1030301.21
46	218959.03	1030323.89
47	218929.50	1030333.99
48	218954.41	1030415.13
49	218972.19	1030409.35
50	218989.40	1030414.63
51	219029.40	1030402.19
52	219037.53	1030430.24

PCB IMPACTED SOILS LAYOUT POINTS		
POINT NUMBER	NORTHING	EASTING
53	219015.28	1030131.60
54	219024.25	1030160.80
55	219052.92	1030152.00
56	219061.73	1030180.68
57	219090.41	1030171.88
58	219099.21	1030200.55
59	219041.85	1030218.16
60	219125.62	1030286.59
61	219116.82	1030257.91
62	219088.14	1030266.72
63	219079.34	1030238.04
64	219136.69	1030220.43
65	219154.30	1030277.79
66	218982.98	1030268.99
67	219191.78	1030297.66
68	219213.12	1030291.11

LEAD IMPACTED AREAS LAYOUT POINTS		
POINT NUMBER	NORTHING	EASTING
69	219109.36	1030169.17
70	219112.64	1030179.81
71	219172.75	1030161.29
72	219182.49	1030314.98
73	219156.93	1030323.12
74	219162.09	1030339.85

20 10 0 20 40

SCALE: 1"=20'

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, FOR ANY PERSON, UNLESS UNDER THE DIRECTION OF A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DOCUMENT IN ANY WAY.

REVISION
USE .1 SIZE TEXT ONLY

65% DESIGN ISSUED FOR REVIEW AND COMMENT P.N. 453055 PARSONS 1/3/2025	A

PROJECT NUMBER 453055

DWG. NO. C-007 - A

DWG. SIZE D | DWG. TYPE COMPANY | SHT. 9

CON EDISON | LOCATION FLUSHING

TITLE
FARRINGTON REMEDIAL DESIGN

CURRENT ENGINEERING APPROVALS

ENGINEERING MANAGER	D. MARTOCCIA
ENGINEER	M. BROSCHART
DESIGNER	J. NASSIMOS
DESIGN CHECKER	S. LIBERATORE
SCALE	1" = 20'
DISCIPLINE CODE	SA

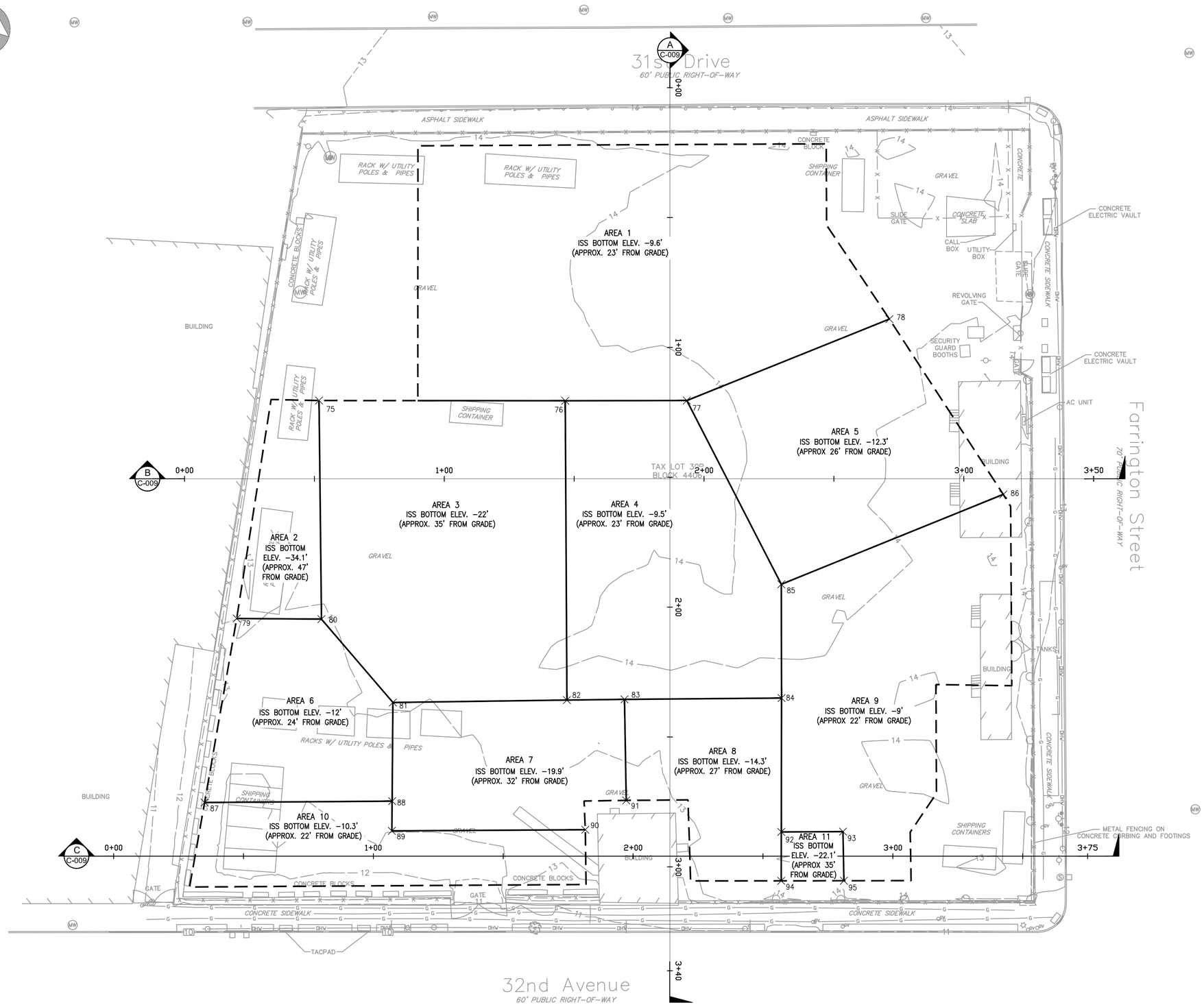
PROJECT:
FORMER FARRINGTON STREET
GAS WORKS SITE REMEDIAL DESIGN
133-58 31ST DR FLUSHING, NY 11354

TITLE:
PHASE 2 EXCAVATION PLAN

SEAL & SIGNATURE
NOT FOR BIDDING OR CONSTRUCTION

DATE: 1/3/2025
PROJECT No.: 453055-01000
DRAWING BY: JN
CHK BY: DM
DOB DWG No: 453055-C-007
SHEET No. 9 OF 14

FILE: (\\nyqsyc04fs01) P:\CONED\453055 - FARRINGTON MGP SICP RDR\11.0 TECHNICAL\11.1 CAD\65% DESIGN\CIVIL\453055-C-007 PHASE II EXCAVATION PLAN.DWG, DATE: 02/07/2025 08:49:24AM, p0015477



LEGEND:

PROPOSED LIMITS OF ISS WORK

× 6 LAYOUT POINT

NOTES:

1. SEE DRAWING G-002 FOR GENERAL NOTES AND LEGEND.
2. TOP OF SOILS TREATED VIA ISS SHALL BE AT A DEPTH OF 48-INCHES BELOW FINISH GRADE. ISS TREATED SOILS AT DEPTHS OF LESS THAN 48-INCHES DUE TO SWELLING SHALL BE EXCAVATED AND MANAGED CONSISTENT WITH PHASE 2 SOILS.

AREA NUMBER	TOTAL AREA (SQ FT)	ISS MIXING VOLUME (CY)	ISS BOTTOM ELEVATION (FT)
1	15,470	10,886	-9.6
2	2,154	3,431	-34.1
3	10,512	12,070	-22.0
4	8,235	5,795	-9.5
5	6,973	5,682	-12.3
6	4,222	3,127	-12.0
7	4,293	4,452	-19.9
8	3,448	2,937	-14.3
9	8,792	5,861	-9.0
10	4,014	2,676	-10.3
11	452	519	-22.1

ISS AREA BOUNDARY LAYOUT POINTS		
POINT NUMBER	NORTHING	EASTING
75	219064.56	1030143.08
76	219092.18	1030233.77
77	219105.96	1030278.50
78	219158.76	1030343.93
79	218975.03	1030137.31
80	218984.35	1030168.59
81	218961.69	1030204.28
82	218982.19	1030268.07
83	218988.91	1030289.19
84	219007.06	1030346.88
85	219048.93	1030333.96
86	219107.01	1030405.58
87	218903.67	1030146.20
88	218925.28	1030215.08
89	218914.30	1030218.34
90	218936.48	1030289.45
91	218951.92	1030301.21
92	218957.76	1030361.86
93	218964.80	1030384.53
94	218939.74	1030367.33
95	218946.82	1030390.40

20 10 0 20 40

SCALE: 1"=20'

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, FOR ANY PERSON, UNLESS UNDER THE DIRECTION OF A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DOCUMENT IN ANY WAY.

REVISION
USE .1 SIZE TEXT ONLY

65% DESIGN ISSUED FOR REVIEW AND COMMENT P.N. 453055 PARSONS 1/3/2025	A

PROJECT NUMBER
453055

DWG. NO. C-008 - A

DWG. SIZE D | DWG. TYPE COMPANY | SHT. 10

CON EDISON | LOCATION FLUSHING

TITLE
FARRINGTON REMEDIAL DESIGN

CURRENT ENGINEERING APPROVALS

ENGINEERING MANAGER	D. MARTOCCIA
ENGINEER	M. BROSCHART
DESIGNER	J. NASSIMOS
DESIGN CHECKER	S. LIBERATORE
SCALE	1" = 20'
DISCIPLINE CODE	SA

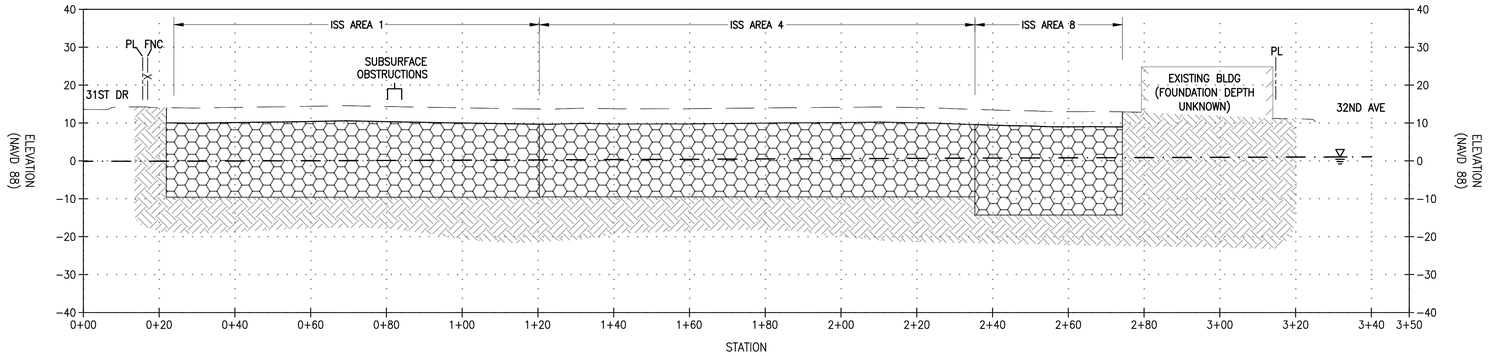
PROJECT:
FORMER FARRINGTON STREET
GAS WORKS SITE REMEDIAL DESIGN
133-58 31ST DR FLUSHING, NY 11354

TITLE:
ISS SITE PLAN

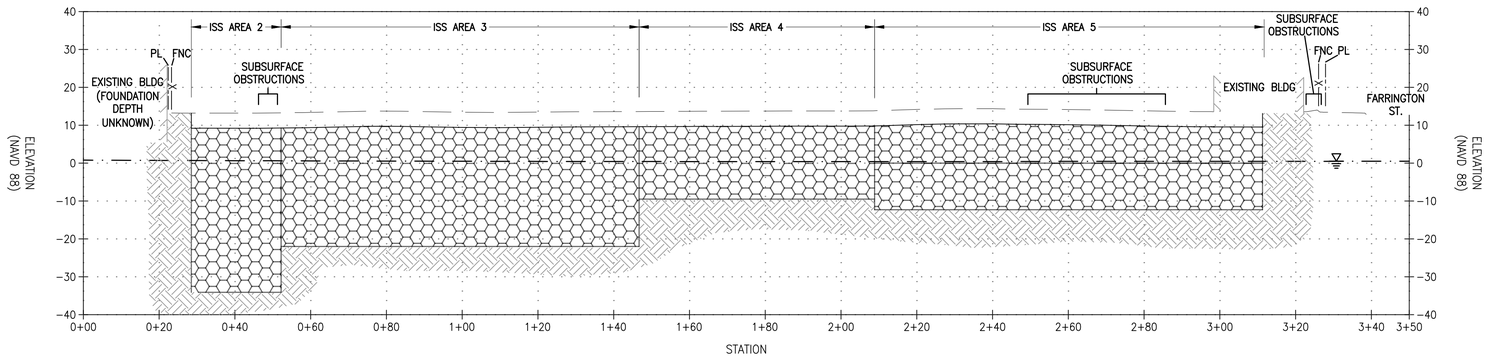
SEAL & SIGNATURE
NOT FOR BIDDING OR CONSTRUCTION

DATE:	1/3/2025
PROJECT No.:	453055-01000
DRAWING BY:	JN
CHK BY:	DM
DOB DWG No:	453055-C-008
SHEET No.	10 OF 14

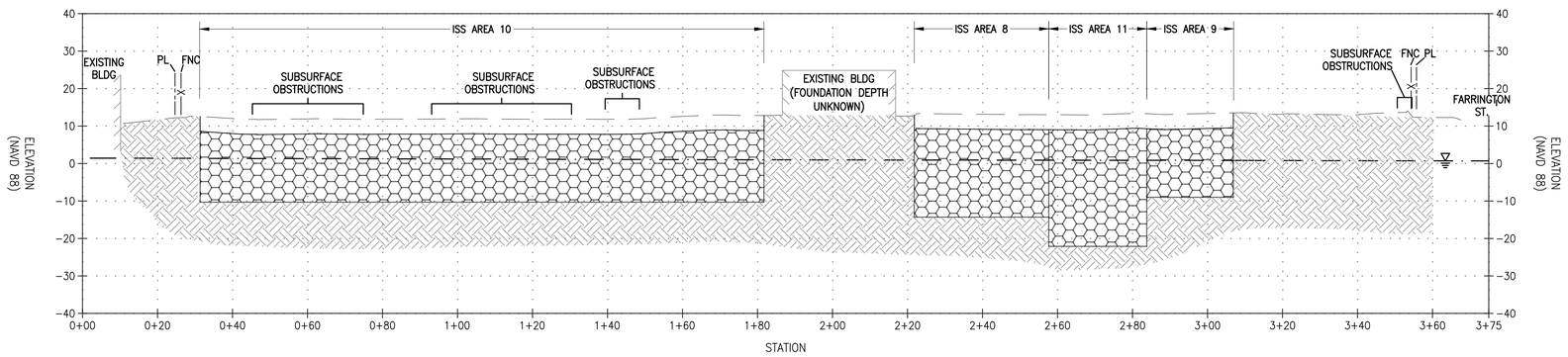
FILE: (\\nysyor04fs01) P:\CONED\453055 - FARRINGTON MGP SICP RDR\11.0 TECHNICAL\11.1 CAD\65% DESIGN\CIVIL\453055-C-008 ISS SITE PLAN.DWG, DATE: 02/12/2025 01:21:55PM, p0015477



A C-007 / C-008 CROSS SECTION A
HORIZONTAL AND VERTICAL SCALE: 1"=20'



B C-007 / C-008 CROSS SECTION B
HORIZONTAL AND VERTICAL SCALE: 1"=20'



C C-007 / C-008 CROSS SECTION C
HORIZONTAL AND VERTICAL SCALE: 1"=20'

LEGEND:

- EXISTING GRADE
- GROUNDWATER (NOVEMBER 2018)
- ISS FORMATION
- EXISTING
- PROPERTY LINE
- FENCELINE

NOTES:

1. SEE DRAWING G-002 FOR GENERAL NOTES AND LEGEND.
2. SEE DETAILS ON SUBSURFACE OBSTRUCTIONS ON DRAWING C-002.
3. PROPERTY LINES SHOWN ARE APPROXIMATE.

20 10 0 20 40
SCALE: 1"=20'

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

REVISION
USE .1 SIZE TEXT ONLY

65% DESIGN ISSUED FOR REVIEW AND COMMENT P.N. 453055 PARSONS 1/3/2025	A

PROJECT NUMBER
453055

DWG. NO. C-009 - A

DWG. SIZE D | DWG. TYPE COMPANY | SHT. 11

CON EDISON | LOCATION FLUSHING

TITLE
FARRINGTON REMEDIAL DESIGN

CURRENT ENGINEERING APPROVALS

ENGINEERING MANAGER	D. MARTOCCIA
ENGINEER	M. BROSCHART
DESIGNER	J. NASSIMOS
DESIGN CHECKER	S. LIBERATORE
SCALE	1" = 20'
DISCIPLINE CODE	SA

PROJECT:
FORMER FARRINGTON STREET
GAS WORKS SITE REMEDIAL DESIGN
133-58 31ST DR FLUSHING, NY 11354

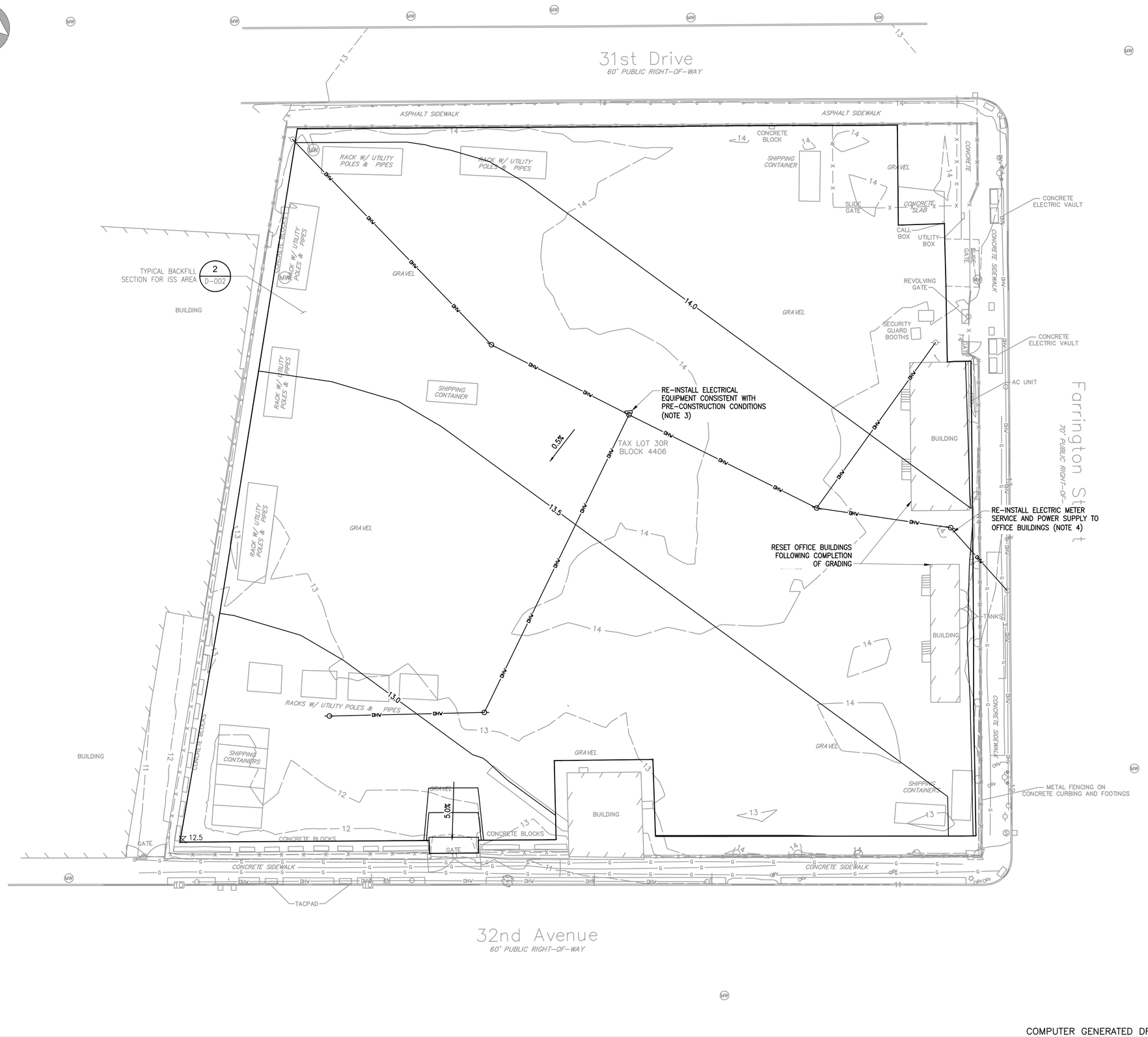
TITLE:
REMEDIAL ACTION CROSS SECTIONS

SEAL & SIGNATURE
NOT FOR BIDDING OR CONSTRUCTION

DATE: 1/3/2025
PROJECT No.: 453055-01000
DRAWING BY: JN
CHK BY: DM
DOB DWG No.: 453055-C-010
SHEET No. 11 OF 14

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, FOR ANY PERSON, UNLESS UNDER THE DIRECTION OF A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DOCUMENT IN any WAY.

FILE: (\\rpsyr04fs01) P:\CONED\453055 - FARRINGTON MGP SICP RDR\11.0 TECHNICAL\11.1 CAD\65% DESIGN\CIVIL\453055-C-009 REMEDIAL ACTION CROSS SECTIONS.DWG, DATE: 02/06/2025 08:52:03AM, p0015477



LEGEND:

- PROPOSED GRADING LIMITS
- 6 — SPOT ELEVATION
- PROPOSED UTILITY POLE (NOTE 2)
- 14.0 — FINISH GRADE CONTOUR
- 0.5% — GRAVEL SURFACE SLOPE
- DHV — PROPOSED OVERHEAD WIRING (NOTE 3)

NOTES:

1. SEE DRAWING G-002 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL INSTALL NEW UTILITY POLES IN THE SAME LOCATIONS AS PRE-CONSTRUCTION CONDITIONS.
3. CONTRACTOR SHALL REINSTALL ALL ELECTRICAL EQUIPMENT REMOVED DURING SITE PREPARATION AND DEMOLITION ON NEW UTILITY POLES. ELECTRICAL EQUIPMENT DAMAGED DURING SITE PREPARATION AND DEMOLITION ACTIVITIES SHALL BE REPLACED IN KIND.
4. CONTRACTOR TO REINSTALL ELECTRIC METER SERVICE PANELS ON NEW POSTS.

20 10 0 20 40

SCALE: 1"=20'

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, FOR ANY PERSON, UNLESS UNDER THE DIRECTION OF A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DOCUMENT IN ANY WAY.

REVISION
USE .1 SIZE TEXT ONLY

65% DESIGN ISSUED FOR REVIEW AND COMMENT P.N. 453055 PARSONS 1/3/2025	A

PROJECT NUMBER
453055

DWG. NO. C-010 - A

DWG. SIZE D | DWG. TYPE COMPANY | SHT. 12

CON EDISON | LOCATION FLUSHING

TITLE
FARRINGTON REMEDIAL DESIGN

CURRENT ENGINEERING APPROVALS

ENGINEERING MANAGER	D. MARTOCCIA
ENGINEER	M. BROSCHART
DESIGNER	J. NASSIMOS
DESIGN CHECKER	S. LIBERATORE
SCALE	1" = 20'
DISCIPLINE CODE	SA

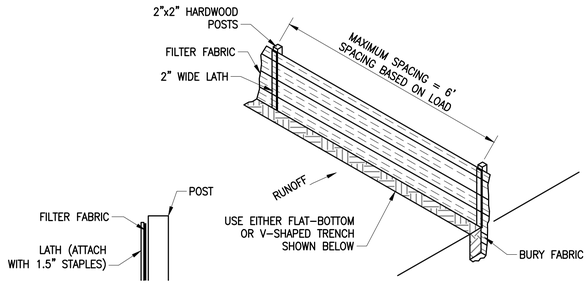
PROJECT:
FORMER FARRINGTON STREET
GAS WORKS SITE REMEDIAL DESIGN
133-58 31ST DR FLUSHING, NY 11354

TITLE:
SITE RESTORATION PLAN

SEAL & SIGNATURE
NOT FOR BIDDING OR CONSTRUCTION

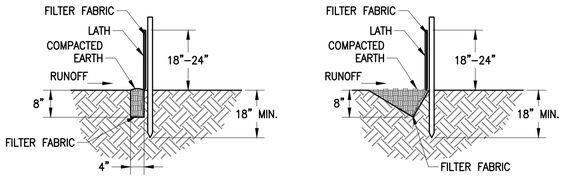
DATE:	1/3/2025
PROJECT No.:	453055-01000
DRAWING BY:	JN
CHK BY:	DM
DOB DWG No.:	453055-C-010
SHEET No.	12 OF 14

FILE: (\\nysvr04fs01) P:\CONED\453055 - FARRINGTON MGP SICP RDR\11.0 TECHNICAL\11.1 CAD\65% DESIGN\CIVIL\453055-C-010 SITE RESTORATION PLAN.DWG, DATE: 02/06/2025 08:52:55AM, p0015477



FABRIC ATTACHMENT DETAIL

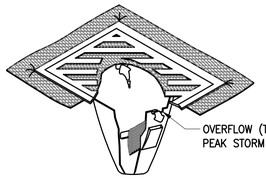
SILT-FENCE INSTALLATION



FLAT-BOTTOM TRENCH DETAIL

V-SHAPED TRENCH DETAIL

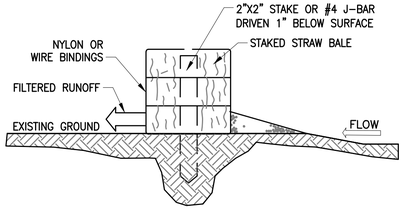
1 C-005 SILT FENCE
N.T.S.



NOTES:

1. DETAIL APPLIES FOR PROTECTION OF EXISTING STORM DRAIN STRUCTURES INCLUDING TRENCH DRAINS.
2. STORM DRAIN INLET PROTECTION SHALL BE REMOVED AT THE COMPLETION OF THE WORK.
3. STORM DRAIN INLETS ARE ONLY TO BE INSTALLED IN DRAINAGE DEVICES PER THE MANUFACTURER'S RECOMMENDATIONS. CATCH BASIN INSERTS ARE NOT TO BE INSTALLED IN CURB INLETS.
4. INSERTS SHALL BE INSPECTED AND MAINTAINED WHEN A 1/2 INCH RAIN ACCUMULATES WITHIN A 24 HOUR PERIOD. CLEAN AND/OR REPLACE INSERT WHEN HALF OF THE TRAP IS FILLED WITH SEDIMENTS.

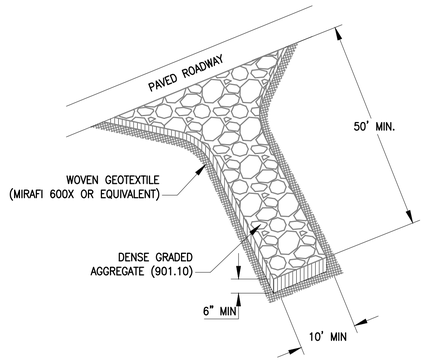
4 C-005 FILTER FABRIC INLET PROTECTION
N.T.S



STRAW BALE BARRIER NOTES:

1. BALES SHALL BE PLACED SO THAT BINDINGS ARE HORIZONTAL. MAXIMUM SPACING BETWEEN BALE ROWS SHALL BE 100 FEET.
2. BALES SHALL BE ANCHORED BY TWO 2"x2" STAKES OR #4 J-BAR DRIVEN THROUGH THE BALE AND INTO THE GROUND A MINIMUM DEPTH OF ONE FOOT. STAKES OR J-BARS SHALL BE DRIVEN 1" OR MORE BELOW THE SURFACE OF THE BALE. THE FIRST STAKE OR J-BAR IN EACH BALE SHALL BE DRIVEN AT AN ANGLE TOWARDS THE PREVIOUSLY LAID BALE TO FORCE THE BALES TIGHTLY TOGETHER.
3. CONTRACTOR SHALL MAKE PERIODIC INSPECTIONS TO DETERMINE IF REPAIRS OR SEDIMENT REMOVAL IS REQUIRED. SEDIMENT SHALL BE REMOVED WHEN IT HAS BUILT UP TO A DEPTH OF ONE HALF THE BALE HEIGHT.
4. BALES SHALL BE REPLACED WHEN THEY HAVE BEEN DAMAGED, COLLAPSED OR DECOMPOSED.

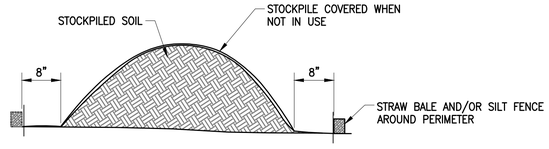
2 C-005 STRAW BALE
N.T.S



NOTES:

1. GEOTEXTILE – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
2. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ACCESS SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
3. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
4. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

5 C-005 STABILIZED CONSTRUCTION ENTRANCE
N.T.S



NOTE:

1. DETAIL APPLIES TO BORROW SOURCE SOILS TO BE TEMPORARILY STAGED ON SITE FOR BACKFILL PURPOSES. EXCAVATED MATERIALS SHALL BE STAGED IN AN AREA PER THE DETAIL PROVIDED ON DRAWING D-001 OR AS OTHERWISE SPECIFIED.

3 – STOCKPILE AREA DETAIL
N.T.S

NOTES:

1. SEE DRAWING G-002 FOR GENERAL NOTES AND LEGEND.

REVISION
USE .1 SIZE TEXT ONLY

65% DESIGN ISSUED FOR REVIEW AND COMMENTS P.N. 453055 PARSONS 1/3/2025	A

PROJECT NUMBER
453055

DWG. NO. D-001 - A

DWG. SIZE D | DWG. TYPE COMPANY | SHT. 13

CON EDISON | LOCATION FLUSHING

TITLE
FARRINGTON REMEDIAL DESIGN

CURRENT ENGINEERING APPROVALS

ENGINEERING MANAGER	D. MARTOCCIA
ENGINEER	M. DEGRACIA
DESIGNER	J. NASSIMOS
DESIGN CHECKER	S. LIBERATORE
SCALE	N.T.S.
DISCIPLINE CODE	SA

PROJECT:
FORMER FARRINGTON STREET
GAS WORKS SITE REMEDIAL DESIGN
133-58 31ST DR FLUSHING, NY 11354

TITLE:
DETAILS (SHEET 1 OF 2)

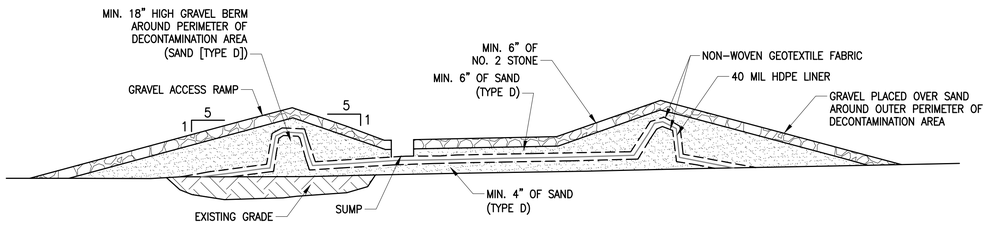
SEAL & SIGNATURE
NOT FOR BIDDING OR CONSTRUCTION

DATE: 1/3/2025
PROJECT No.: 453055-01000
DRAWING BY: JN
CHK BY: DM
DOB DWG No: 453055-D-001
SHEET No. 13 OF 14

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, FOR ANY PERSON, UNLESS UNDER THE DIRECTION OF A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DOCUMENT IN ANY WAY.

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

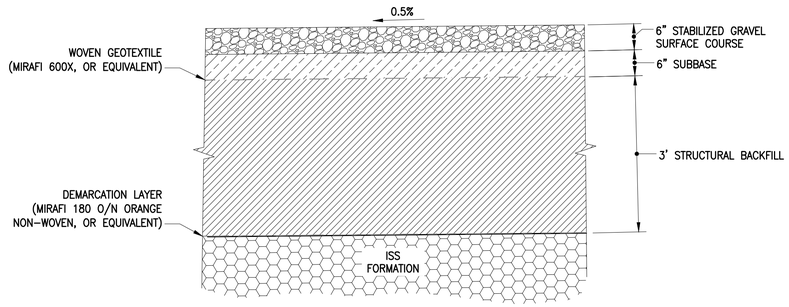
FILE: (\\nysyr04fs01) P:\CONED\453055 - FARRINGTON MGP SICP RDR\11.0 TECHNICAL\11.1 CAD\65% DESIGN\CIVIL\453055-D-001 DETAILS SHEET 1 OF 2.DWG, DATE: 02/06/2025 08:53:36AM, p0015477



NOTE:

1. DECONTAMINATION AREA SHALL HAVE A GENERAL SLOPE TOWARD A COLLECTION SUMP TO FACILITATE THE COLLECTION OF WASH FLUIDS. FLUIDS SHALL BE PUMPED FROM COLLECTION SUMP INTO 55 GALLON DRUMS OR A TEMPORARY STORAGE TANK (IF NECESSARY).
2. UPON COMPLETION OF CONSTRUCTION ACTIVITIES, THE DECONTAMINATION AREA, INCLUDING HDPE LINER, SHALL BE REMOVED BY THE CONTRACTOR FOR DISPOSAL.
3. ALTERNATE DESIGN FOR TEMPORARY IMPACTED AREAS MAY BE USED IN PLACE OF THIS DETAIL, WITH APPROVAL FROM THE ENGINEER.

1 / – IMPACTED MATERIAL STAGING AREA
N.T.S



NOTES:

1. GEOTEXTILES SHALL BE PLACED IN ACCORDANCE WITH SPECIFICATION SECTION 02070 – GEOTEXTILES.
2. PROPOSED SURFACE COURSE AND SUBBASE FILL MATERIAL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH SPECIFICATION SECTION 02310 – ROUGH GRADING AND BACKFILL.
3. STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH SPECIFICATION SECTION 02310 – ROUGH GRADING AND BACKFILL.

2 / C-010 TYPICAL BACKFILL DETAIL FOR ISS AREA
N.T.S

NOTES:

1. SEE DRAWING G-002 FOR GENERAL NOTES AND LEGEND.

REVISION
USE .1 SIZE TEXT ONLY

65% DESIGN ISSUED FOR REVIEW AND COMMENTS P.N. 453055 PARSONS 1/3/2025	A

PROJECT NUMBER
453055

DWG. NO. D-002 - A

DWG. SIZE D | DWG. TYPE COMPANY | SHT. 14

CON EDISON | LOCATION FLUSHING

TITLE
FARRINGTON REMEDIAL DESIGN

CURRENT ENGINEERING APPROVALS

ENGINEERING MANAGER	D. MARTOCCIA
ENGINEER	M. BROSCHART
DESIGNER	J. NASSIMOS
DESIGN CHECKER	S. LIBERATORE
SCALE	N.T.S.
DISCIPLINE CODE	SA

PROJECT:
FORMER FARRINGTON STREET
GAS WORKS SITE REMEDIAL DESIGN
133-58 31ST DR FLUSHING, NY 11354

TITLE:
DETAILS (SHEET 2 OF 2)

SEAL & SIGNATURE
NOT FOR BIDDING OR CONSTRUCTION

DATE: 1/3/2025
PROJECT No.: 453055-01000
DRAWING BY: JN
CHK BY: DM
DOB DWG No: 453055-D-002
SHEET No. 14 OF 14

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145, FOR ANY PERSON, UNLESS UNDER THE DIRECTION OF A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DOCUMENT IN ANY WAY.

COMPUTER GENERATED DRAWING NOT TO BE HAND REVISED

FILE: (\\nysvr04fs01) P:\CONED\453055 - FARRINGTON MGP SICP RDR\11.0 TECHNICAL\11.1 CAD\65% DESIGN\CIVIL\453055-D-002 DETAILS SHEET 2 OF 2.DWG, DATE: 02/07/2025 09:03:53AM, p0015477

APPENDIX F

ISS TREATABILITY STUDY

Geo-Solutions
Soil and Groundwater Problems Solved

1250 Fifth Avenue, New Kensington, PA 15068
T 724-335-7273 F 724-335-7271
www.geo-solutions.com

Sent via email to: stephen.liberatore@parsons.com

August 21, 2022

Parsons
301 Plainfield Road, Suite 350
Syracuse, NY 13212
Attn: Stephen Liberatore
Phone: (315) 418-8767

21-137

**SUBJECT: BENCH SCALE TREATABILITY STUDY REPORT
IN SITU STABILIZATION OF MGP IMPACTED SOILS
CON EDISON FARRINGTON ST. FORMER MGP SITE
FLUSHING, NY**

Stephen,

In accordance with Geo-Solutions, Inc.'s (GSI) Laboratory Testing Proposal for the above referenced project, GSI has completed multiple phases of a bench scale treatability study to evaluate, test, and report on potential *in-situ* stabilization / solidification (ISS) mixes for use at this site. This letter report summarizes the results of the work.

Materials

The materials used in the ISS bench scale treatability study are summarized on Table 1.

Table 1. Phase I Material Type and Source

Material	Type	Soil Boring ID and Depth Interval	Abbreviation
Site Soils	Underlying Sand	SB-111 (12'-35')	SB-111
	Underlying Sand	SB-201 (10'-25')	SB-201
	Underlying Sand	SB-211 (10'-24')	SB-211
	NAPL saturated Sand	SB-86 (21'-26')	SB-86
	Overlying Fill	SB-203 (5'-11')	SB-203
	Overlying Fill	SB-97 (5'-10')	SB-97
	Overlying Fill	SB-205 (5'-10')	SB-205
Water	Municipal Water	Pittsburgh Municipal Water	W
Water	Groundwater	MW - 33	GW
Cement	Type IL Portland Cement	Lafarge	PC
Slag	Grade 100 Blast-Furnace Slag	Lafarge	BFS

Study Objectives

The study objectives were developed to find a mixture of site soils and reagents that can achieve the ISS remedial objectives of creating a monolith of reduced the hydraulic conductivity (below 1 x10^{-6} cm/s) and moderate compressive strength (approximately 50 psi). In order to accomplish this overall objective, GSI established the following sub objectives:

- Select commercially available reagents (e.g. Portland cement, blast-furnace slag) that are suitable for use in the ISS project and available at the project site in the quantities required for the full-scale work.
- Develop a mixture of site soils and reagents that achieves a hydraulic conductivity of approximately $5x10^{-7}$ cm/s or less in order to provide roughly a half an order of magnitude factor of safety to achieve a field hydraulic conductivity of less than $1x10^{-6}$ cm/s.
- Develop a mixture of site soils and reagents that achieves an unconfined compressive strength (UCS) of approximately 100 psi or more in order to provide roughly a factor of safety of 2 to achieve a field UCS of greater than 50 psi.

Sample Information

Seven different site soil samples and one groundwater sample, as identified in Table 1, were received by JLT Laboratories in March 2022. SB-111, SB-201, and SB-211 consisted of soils from the underlying sand layer at approximate depths of 10' to 35' bgs. SB-203, SB-97, SB-205 consisted of soils from overlying fill layer at approximate depths of 5' to 10' bgs. SB-86 consisted of soils from a zone in the underlying sand layer anticipated to have a higher NAPL concentration than the other soils. The groundwater was collected from monitoring well MW-33.

Soil Index Testing

After the samples were received and homogenized, a grab sample of each was subjected to soil index testing. The results of the soil index testing are summarized on Table 2. Laboratory data reports to support the information presented on Table 2 are attached to this letter.

Table 2. Soil Index Test Results

Soil Sample ID	Description	pH	Fines Content %	Organic Content %	Moisture Content %	Single Pt Proctor – dry (pcf)	Single Pt Proctor – wet (pcf)
SB-111 (12'-35')	Underlying Sand	7.8	10	1.3	12.8	118	133
SB-201 (10'-25')	Underlying Sand	6.5	14.1	0.8	10.4	120	132
SB-211 (10'-24')	Underlying Sand	5.6	6.3	0.4	21.8	99	121
SB-86 (21'-26')	NAPL Saturated Sand	5.6	6.7	0.5	26.3	too wet - "mush"	
SB-203 (5'-11')	Overlying Fill	10.8	20.4	2.0	16.0	115	133
SB-97 (5'-10')	Overlying Fill	7.2	21	1.4	15.4	117	135
SB-205 (5'-10')	Overlying Fill	6.1	14.8	0.9	11.9	111	124

Based on the Index Testing and Analytical results, GSI and Parson agreed to combine soils SB-111, SB-201, and SB-211 into one composite named "underlying sand composite" and SB-203, SB-97, and SB-205 into a second composite names "overlying fill composite".

After completion of the index testing and composite creation, samples of the underlying sand composite and SB-86 were sent to Integrated Geosciences Laboratories (IGS) for NAPL saturation testing per API RP 40 for the purpose of determining if SB-86 should be used to spike the NAPL concentration of the underlying sand composite. The results of the NAPL saturation testing are summarized on Table 3. Laboratory data reports to support the information presented on Table 3 are attached to this letter.

Table 3. NAPL Saturation Results

Soil ID	Moisture Content, % Weight	Density		Porosity, % Vb		Pore Fluid Saturations, % Pv	
		Dry Bulk g/cc	Grain g/cc	Total	Air Filled	Water	NAPL
SB-86	18.5	1.56	2.72	42.7	13.8	67.0	0.68
Underlying Sand Composite	16.3	1.48	2.69	45.0	20.6	51.4	2.78

Based on the NAPL saturation results, GSI and Parson agreed to not include the soil from SB-86 in any further testing since it did not contain higher NAPL concentrations than the Underlying Sand Composite.

Soil-Grout Mixtures

Using the results of the soil index testing and past experience, GSI selected and created mixtures of the site composite and reagents. The soil-grout mixtures were created using methods that mimic an ISS field mixing process. The general procedure is described below:

1. Run soil composite through a 12.7mm (0.5 inch) sieve to remove large pieces of gravel or clods of soil that would have an unrepresentatively large impact on the behavior of the relatively small, 51 mm (2 inch) and 76 mm (3 inch), diameter laboratory samples
2. Weigh appropriate amount of soil composite, generally between 2,000 and 5,000 g.
3. Mix grout consisting of predetermined amounts of water and reagents. Reagent addition rates are based on experience with treating similar soil types/contaminants.
    a. Test grout for marsh funnel viscosity, density, pH and temperature
4. Add grout to soil composite until workable condition is achieved. Assess workable condition using experience and visual indicators (generally consistent with a slump of 100 – 180 mm (4” – 7))
5. Mix until visually homogeneous.
6. Place mix into 2x4” and 3x6” testing cylinders in a manner that limits air entrapment (e.g. see Andromalos et al 2015).

A summary of the composition of the Round 1 mixes along with the grout properties and slump is included on Table 4.

Table 4. Round 1: Soil-Grout Mixes

Mix ID	Soil	PC	BFS	W:C	Grout Properties				Approx. Slump (in)
					Viscosity (s)	Density (pcf)	Temp (F)	pH	
M-1	Overlying Fill	6.0%	0.0%	1.40	28	86	70	13	4"
M-2	Overlying Fill	9.0%	0.0%	1.10	28	93	71	13	4"
M-3	Overlying Fill	12.0%	0.0%	0.85	30	99	71	13	6"
M-4	Overlying Fill	3.0%	6.0%	1.10	28	92	70	13	4"
M-5	Overlying Fill	5.0%	0.0%	1.75	28	82	74	13	4"
M-6	Overlying Fill	6.0%	3.0%	1.10	28	91	73	13	4"
M-7	Underlying Sand	5.0%	0.0%	1.75	28	83	75	13	4"
M-8	Underlying Sand	6.0%	0.0%	1.40	28	87	75	13	4"
M-9	Underlying Sand	9.0%	0.0%	1.10	28	92	74	13	4"
M-10	Underlying Sand	6.0%	3.0%	1.10	28	90	79	13	4"
M-11	Underlying Sand	4.5%	4.5%	1.10	28	92	81	13	4"
M-12	Underlying Sand	6.0%	3.0%	1.10	28	82	84	13	4"

Reagent percentages based on reagent weight to soil weight (wet)

After samples had taken their initial set, specimens of each mixture were taken to a geotechnical laboratory for hydraulic conductivity and UCS testing. The results of this testing are summarized on Table 5. Laboratory data sheets to support Table 5 are included in an attachment to this letter.

Table 5. UCS and Hydraulic Conductivity Test Result Summary

Mix ID	Soil	PC	BFS	UCS (psi)			Hydraulic Conductivity (cm/s)			
				7 Day	14 Day	28 Day	7 Day	10-12 Day	14-16 Day	28 Day
M-1	Fill	6.0%	0.0%	95	126	-	$1.0x10^{-6}$	-	$3.3x10^{-7}$	-
M-2	Fill	9.0%	0.0%	159	211	191	$1.9x10^{-6}$	-	$7.0x10^{-7}$	$4.9x10^{-7}$
M-3	Fill	12.0%	0.0%	264	321	-	$6.3x10^{-6}$	-	$5.1x10^{-7}$	-
M-4	Fill	3.0%	6.0%	54	184	521	$5.7x10^{-6}$	-	$1.2x10^{-6}$	$1.6x10^{-7}$
M-5	Fill	5.0%	0.0%	54	63	-	-	$5.1x10^{-6}$	$2.3x10^{-6}$	-
M-6	Fill	6.0%	3.0%	142	173	269	-	$2.8x10^{-6}$	$7.7x10^{-7}$	$5.0x10^{-7}$
M-7	Sand	5.0%	0.0%	38	33	-	-	$4.8x10^{-6}$	$4.0x10^{-6}$	-
M-8	Sand	6.0%	0.0%	51	52	-	-	$3.6x10^{-6}$	$3.3x10^{-6}$	-
M-9	Sand	9.0%	0.0%	96	120	145	-	$5.1x10^{-6}$	$3.7x10^{-6}$	$5.8x10^{-7}$
M-10	Sand	3.0%	6.0%	117	202	295	-	$3.5x10^{-6}$	$2.7x10^{-6}$	$1.4x10^{-7}$
M-11	Sand	4.5%	4.5%	130	152	-	-	$3.6x10^{-6}$	$2.7x10^{-6}$	-
M-12	Sand	6.0%	3.0%	90	97	-	-	$4.8x10^{-6}$	$3.0x10^{-6}$	-

Round 1 Results Discussions

Based on the first round of mixes, the following conclusions can be made:

- The first round of mixes successfully bracketed the cement addition rate with 6% Portland cement addition not meeting the mix design target for hydraulic conductivity in the underlying sand composite, and 9% total cementitious meeting all the mix design targets but with a likely higher than necessary factor of safety.
- The underlying sand composite appears to be the controlling soil type with lower strengths and higher hydraulic conductivities respectively compared to equivalent mixes using the overlying fill composite.
- Strength development should not be a concern for addition rates between 6% and 9% total cementitious and hydraulic conductivity will be the controlling property for mix selection.
- The mixes containing slag-cement outperformed equivalent mixes using only Portland cement, especially at the slag-PC ratio of 2:1.

Based on the results of this initial phase of testing, GSI concluded that further testing should focus on reagent addition optimization between 6% and 9% total cementitious materials.

Round 2 Mixture Evaluation

Since the geotechnical objectives were effectively bracketed with the Round 1 ISS mixtures, the Round 2 mixtures were structured to focus on optimizing the reagent addition between 6% and 9% total cementitious. A summary of the composition of the Round 2 mixes along with the grout properties and slump is included on Table 6.

Table 6. Round 2: Soil-Grout Mixes

Mix ID	Soil	PC	BFS	W:C	Grout Properties				Approx. Slump (in)
					Viscosity (s)	Density (pcf)	Temp (F)	pH	
M-13	Overlying Fill	8.0%	0.0%	1.20	28	90	78	13	4"
M-14	Underlying Sand	8.0%	0.0%	1.20	28	90	78	13	4"
M-15	Overlying Fill	2.3%	4.7%	1.30	28	88	76	13	4"
M-16	Underlying Sand	2.3%	4.7%	1.30	28	88	76	13	4"
M-17	Overlying Fill	2.0%	4.0%	1.40	28	86	74	13	4"
M-18	Underlying Sand	2.0%	4.0%	1.40	28	86	74	13	4"

Reagent percentages based on reagent weight to soil weight (wet)
Slump approximation is for visual assessment of workability in the bench scale and not necessary for full-scale testing

After mixing, specimens of each mixture were taken to a geotechnical laboratory for hydraulic conductivity and UCS testing. Early strength development was monitored using a pocket penetrometer. The results of this testing are summarized on Table 7. Laboratory data sheets to support Table 7 are included in an attachment to this letter.

Table 7. Round 2 UCS and Hydraulic Conductivity Test Result Summary

Mix ID	Soil	PC	BFS	Pocket Penetrometer (psi)			UCS (psi)		Hydraulic Conductivity (cm/s)	
				1 Day	4 Day	7 Day	28 Day	42 Day	28 Day	42 Day
M-13	Fill	8.0%	0.0%	>63	>63	>63	159	-	$1.3x10^{-6}$	-
M-14	Sand	8.0%	0.0%	>63	>63	>63	117	-	$2.2x10^{-6}$	-
M-15	Fill	2.3%	4.7%	59	63	>63	223	-	$4.2x10^{-7}$	-
M-16	Sand	2.3%	4.7%	38	63	>63	207	-	$1.6x10^{-7}$	-
M-17	Fill	2.0%	4.0%	59	63	>63	-	287	-	$2.1x10^{-8}$
M-18	Sand	2.0%	4.0%	35	45	>63	-	113	-	$2.4x10^{-8}$

Sample cylinders from Mixes M-13, M-14, M-15, M-16 were transferred to Parsons custody via Eurofins for the purpose of completing analytical/leachability testing. The results from this testing will be reported under a separate cover.

In addition to the geotechnical testing, GSI conducted a modified slake immersion test. Slake immersion testing was performed to provide a visual indication of the compatibility of the sample(s) exposed to site groundwater. For each of mix M-13 through M-18, one mold from each sample set was weighed and placed in a glass jar filled with tap water, and a second mold was placed in a glass jar filled with site groundwater. All samples were allowed to sit undisturbed for 41 days. After the samples were allowed to soak in the respective environments, they were photographed and removed from the jars to be towel dried and weighed for comparison to the day 0 weights. The approach used is considered to be aggressive based on the amount of impacted groundwater in direct contact with a large portion of the sample area. In-field exposure would be significantly reduced and occur over a longer period of time. The images and results of the testing can be found below in Figures 1 and 2 and Table 8 respectively.

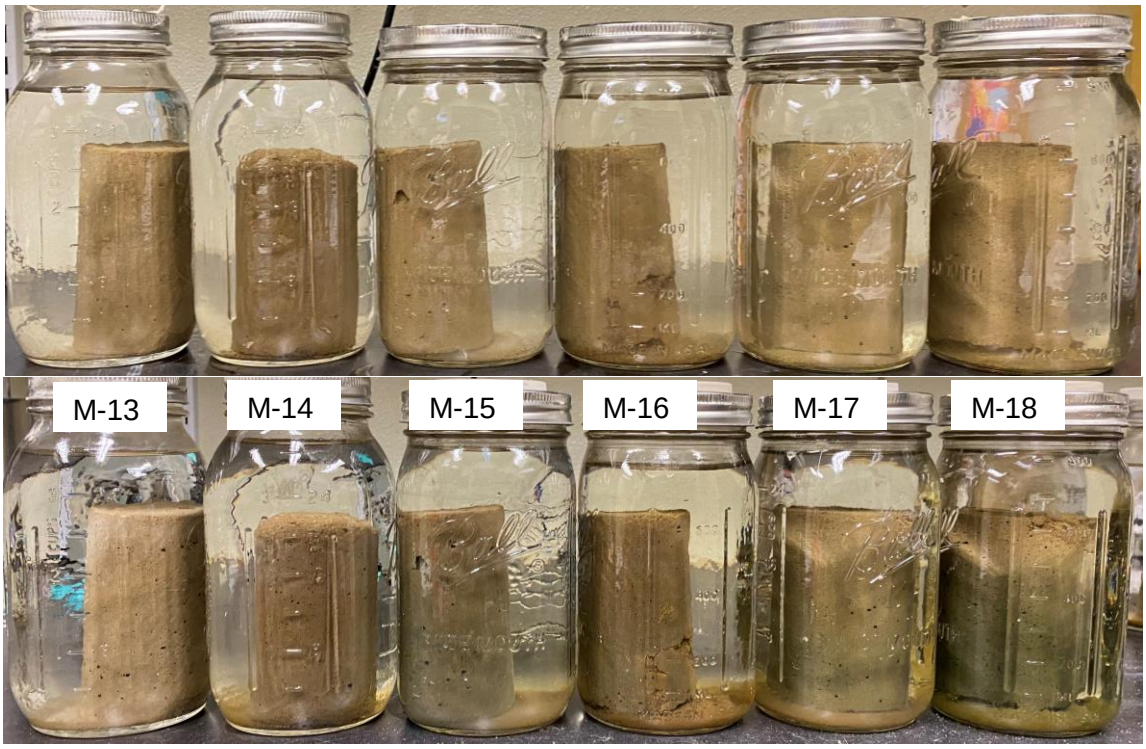


Figure 1. Slake Immersion Test Samples – Day 0 (top) and Day 41 (bottom) Tap Water

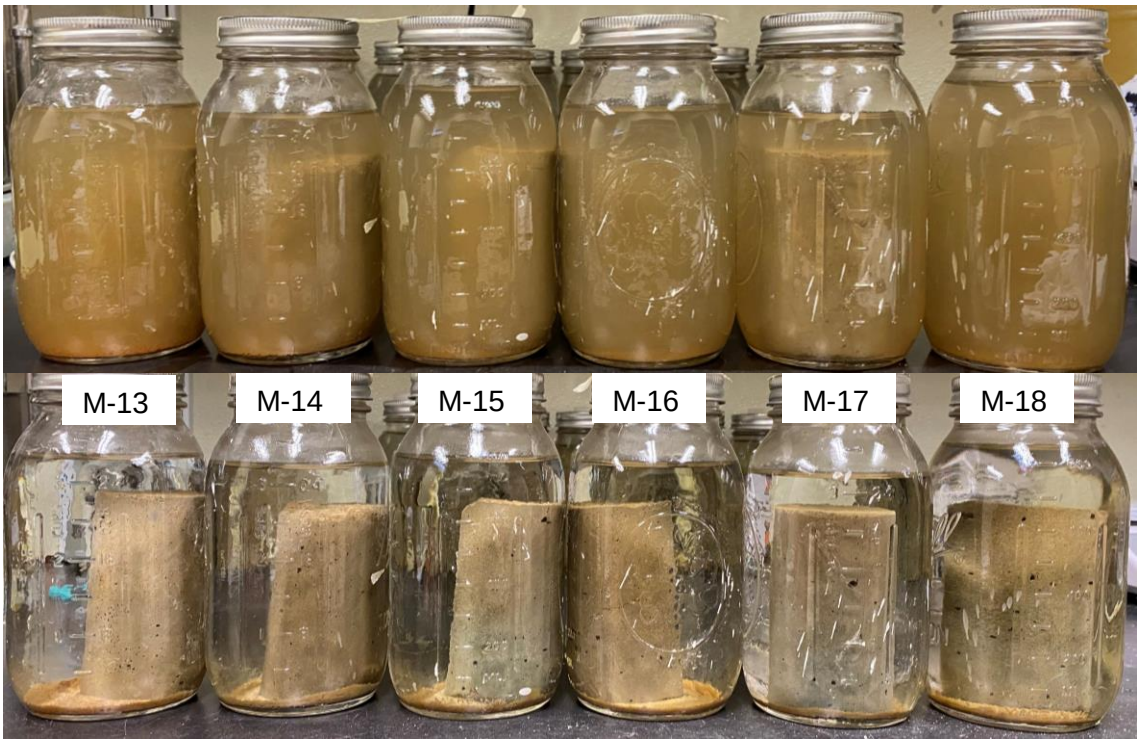


Figure 2. Slake Immersion Test Samples – Day 0 (top) and Day 41 (bottom) Groundwater

Table 9. Slake Immersion testing – before/after sample weights

Mix ID	Tap Water		Groundwater	
	Day 0 Weight (g)	Day 41 Weight (g)	Day 0 Weight (g)	Day 41 Weight (g)
M-13	406.7	408.5	412.6	414.8
M-14	382.7	383.3	383.3	384.2
M-15	404.9	404.5	404.3	404.8
M-16	395.8	395.0	399.0	399.7
M-17	403.0	404.1	402.7	404.7
M-18	393.8	394.0	399.9	401.1

Visually, there was no evidence of a detrimental impact on the samples immersed in the site groundwater. Visual indicators typically include spalling, cracking, changes in surface texture, etc. of which none of the samples immersed in groundwater exhibited. During the process of removing the samples from the jars and towel drying, there was no noticeable physical difference in the groundwater samples relative to the companion tap water samples. The day 0 vs day 41 weights also quantifiably indicate that there was no impact resulting in mass loss of the samples such as spalling or degradation.

Round 2 Results Discussions

Based on the second round of mixes, the following conclusions can be made:

- The mixes containing 6% and 7% total cementitious at a 2:1 slag/Portland ratio (M-15 and M-16) met the mix design objectives for UCS and hydraulic conductivity, including the target factor of safeties, for both soil types.
- The mixes containing 8% Portland cement addition, (M-13 and M-14) met the objectives for UCS but not hydraulic conductivity.
- Based on the observations from the slake immersion testing, it does not appear that the site groundwater has a significant impact on the durability of the mixes.
- The differences in the test results between the two material types (underlying sand vs overlying fill) were less pronounced in the second round of testing.
- Strength development was again shown to not be a concern for these addition rates and hydraulic conductivity continues to be the controlling property for mix selection.
- The mixes containing slag-cement again outperformed the mixes using only Portland cement.

Summary Conclusions

The following conclusions were made from this completed bench scale study:

- Commercially available reagents were successful in achieving standard UCS and hydraulic conductivity objectives for ISS mixes with the site soils.
- Based on the results of this study, a 6% total cement addition using a slag to Portland ratio of 2:1, by weight of soil, can achieve the UCS and hydraulic conductivity objectives with a typical factor of safety.
- If a mix of only Portland cement is to be used, an addition rate of at least 9%, by weight of soil, would likely be necessary to meet the target hydraulic conductivity of less than $1x10^{-6}$ cm/s.
- The slake immersion results showed no visual evidence of a significant impact on durability of the samples from the site groundwater.

- Based on a 120 pcf soil unit weight, a cement addition rate of 7%, and a W:C ratio of 1.3, the grout volume to be added is approximately 30% of the initial soil treatment volume. This would result in a minimum anticipated spoils volume of 30% of the treatment volume. The spoils volume could be higher depending on the swell factor of the soils being disturbed but can also be offset from particle rearrangement from the wet-mixing process.

Sincerely,

Geo-Solutions, Inc.

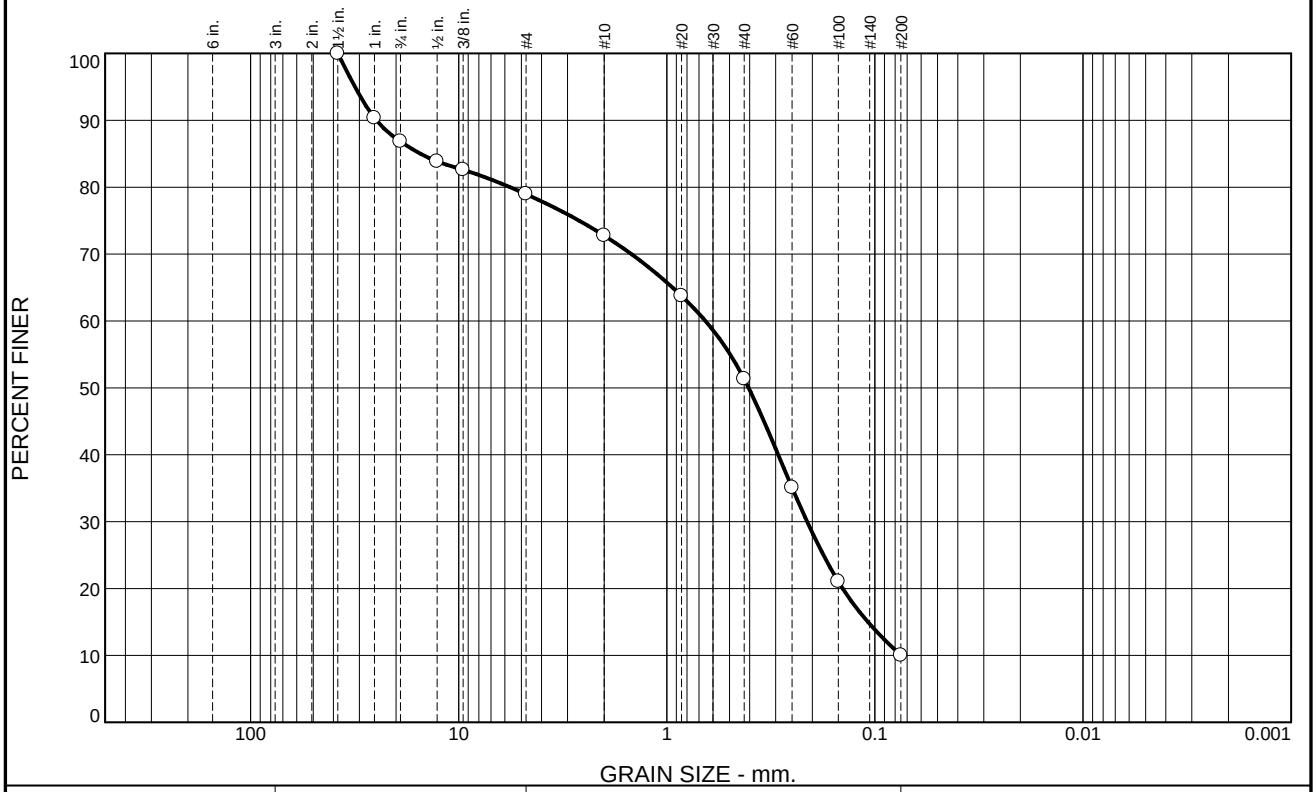
Nathan Coughenour, P.E.
Project Manager

CC: Dan Ruffing, P.E. - druffing@geo-solutions.com

Attachments:

- Laboratory Data Sheets

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	13.2	7.8	6.2	21.5	41.3	10.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.50	100.0		
1.00	90.4		
0.75	86.8		
0.50	83.9		
0.375	82.6		
#4	79.0		
#10	72.8		
#20	63.7		
#40	51.3		
#60	35.1		
#100	21.0		
#200	10.0		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 24.8716 D_{85}= 15.2574 D_{60}= 0.6516
D_{50}= 0.4044 D_{30}= 0.2116 D_{15}= 0.1080
D_{10}= 0.0751 C_u= 8.68 C_c= 0.92

Classification

USCS= AASHTO=

Remarks

Organic Content = 1.34%
pH = 7.8

Location: Flushing, NY
Sample Number: SB-111 **Depth:** 12-35' **Date:** 03/21/2022

JLT Laboratories, Inc.

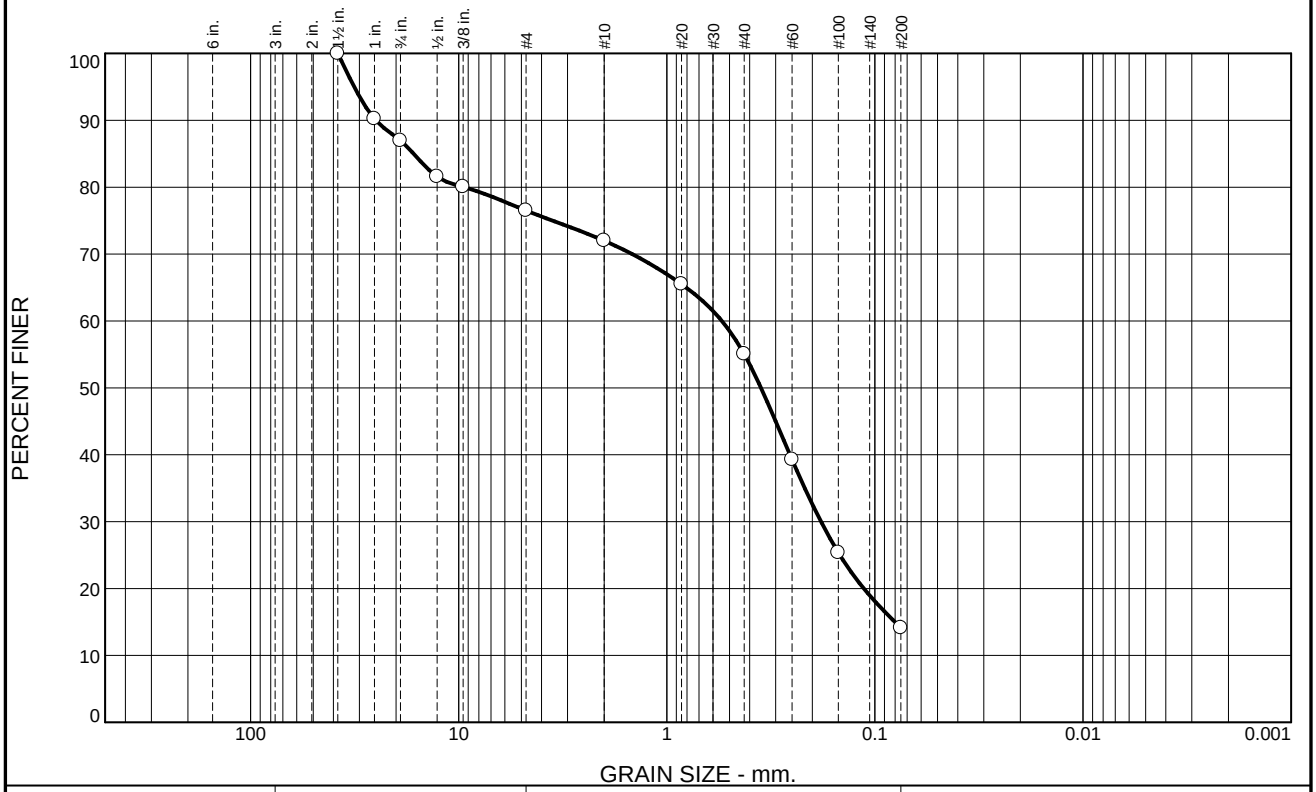
Canonsburg, PA

Client: GeoSolutions
Project: 21-137 Flushing, NY

Project No: 22LS3987 **Figure**

Tested By: AE **Checked By:** JB

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	13.0	10.5	4.5	17.0	40.9	14.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.50	100.0		
1.00	90.2		
0.75	87.0		
0.50	81.6		
0.375	80.1		
#4	76.5		
#10	72.0		
#20	65.5		
#40	55.0		
#60	39.3		
#100	25.4		
#200	14.1		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 25.0488 D_{85}= 16.4772 D_{60}= 0.5438
D_{50}= 0.3527 D_{30}= 0.1815 D_{15}= 0.0801
D_{10}= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Organic Content = 0.79%
pH = 6.5

Location: Flushing, NY
Sample Number: SB-201 **Depth:** 10-25' **Date:** 03/21/2022

JLT Laboratories, Inc.

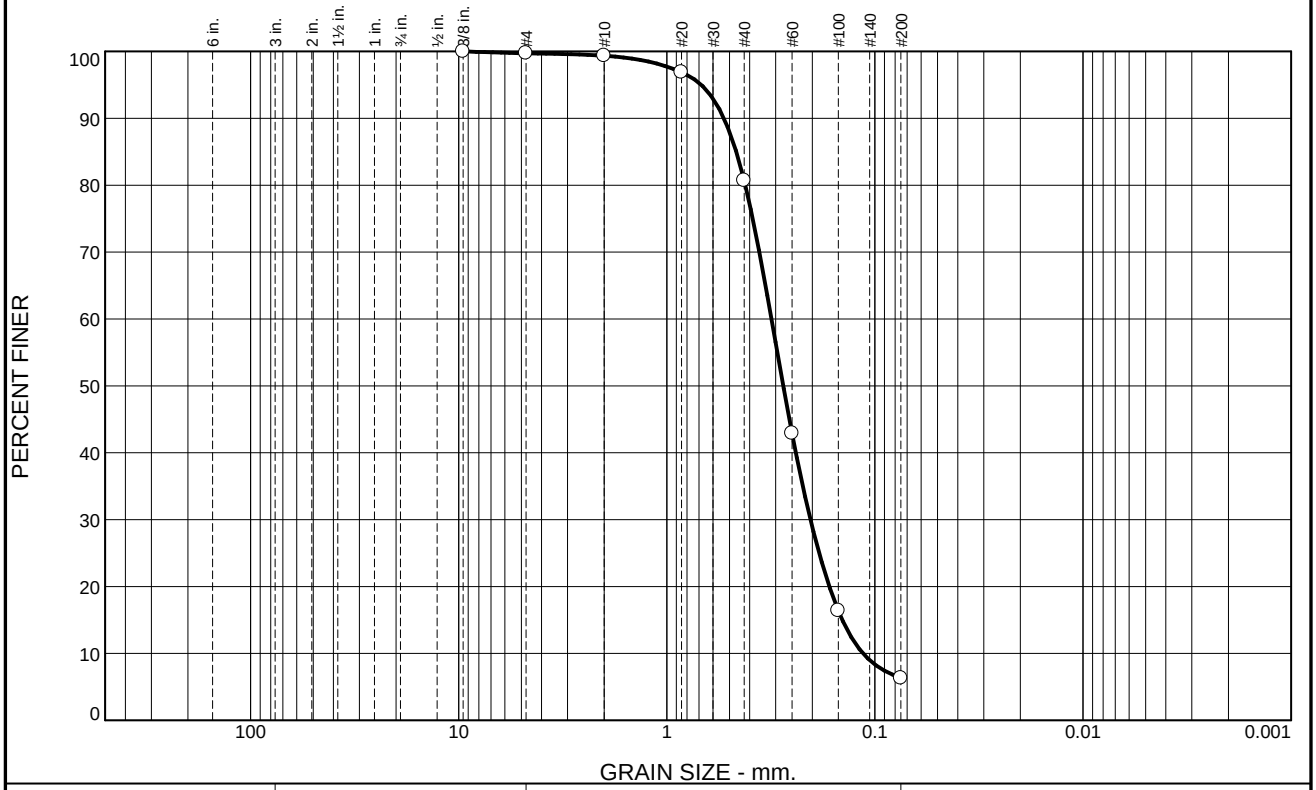
Canonsburg, PA

Client: GeoSolutions
Project: 21-137 Flushing, NY

Project No: 22LS3987 **Figure**

Tested By: AE **Checked By:** JB

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.3	0.4	18.6	74.4	6.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.375	100.0		
#4	99.7		
#10	99.3		
#20	96.9		
#40	80.7		
#60	42.9		
#100	16.4		
#200	6.3		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.5322 D_{85}= 0.4640 D_{60}= 0.3140
D_{50}= 0.2755 D_{30}= 0.2039 D_{15}= 0.1434
D_{10}= 0.1140 C_u= 2.75 C_c= 1.16

Classification

USCS= AASHTO=

Remarks

Organic Content = 0.39%
pH = 5.6

Location: Flushing, NY
Sample Number: SB-211 **Depth:** 10-24' **Date:** 03/21/2022

JLT Laboratories, Inc.

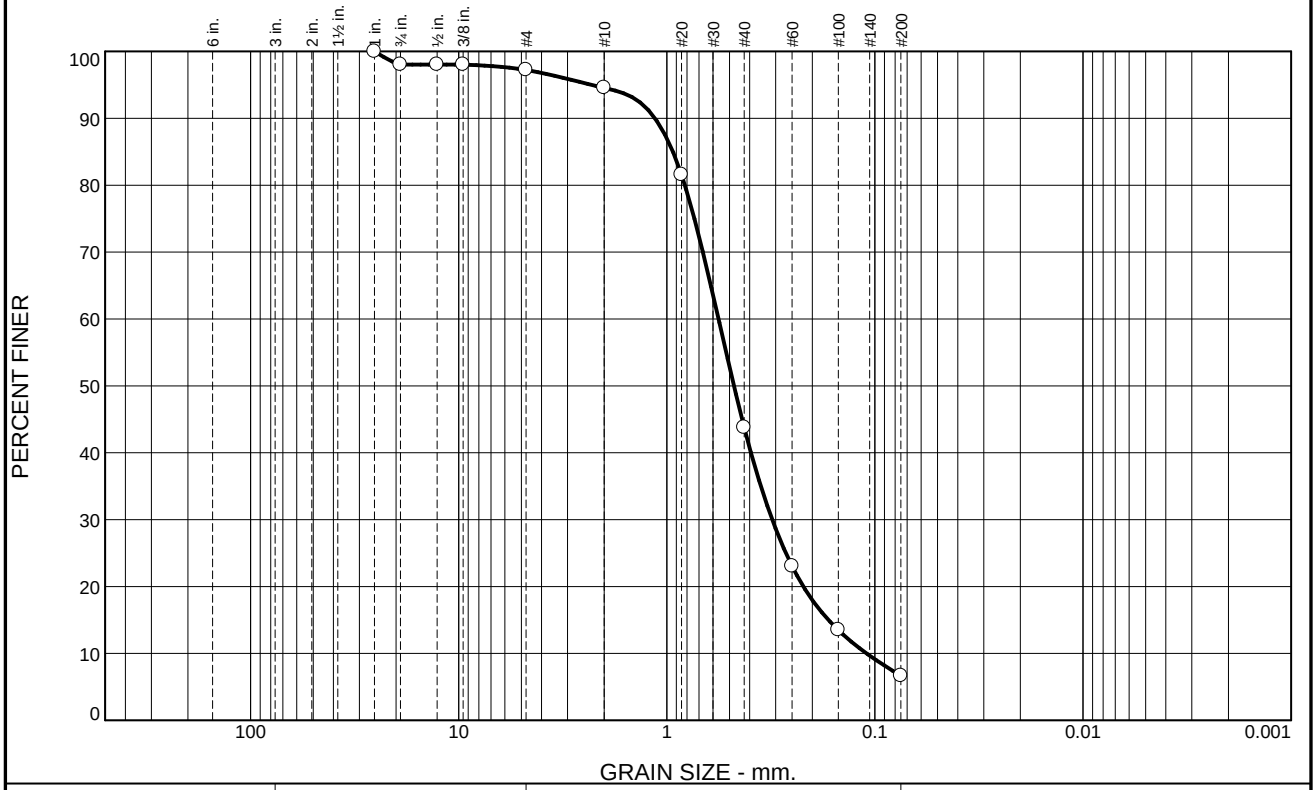
Canonsburg, PA

Client: GeoSolutions
Project: 21-137 Flushing, NY

Project No: 22LS3987 **Figure**

Tested By: AE **Checked By:** JB

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	2.0	0.8	2.7	50.7	37.1	6.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.00	100.0		
0.75	98.0		
0.50	98.0		
0.375	98.0		
#4	97.2		
#10	94.5		
#20	81.6		
#40	43.8		
#60	23.1		
#100	13.5		
#200	6.7		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 1.1406 D_{85}= 0.9347 D_{60}= 0.5644
D_{50}= 0.4760 D_{30}= 0.3113 D_{15}= 0.1673
D_{10}= 0.1097 C_u= 5.15 C_c= 1.57

Classification

USCS= AASHTO=

Remarks

Organic Content = 0.54%
pH = 5.6

Location: Flushing, NY
Sample Number: SB-86 **Depth:** 21-26' **Date:** 03/21/2022

JLT Laboratories, Inc.

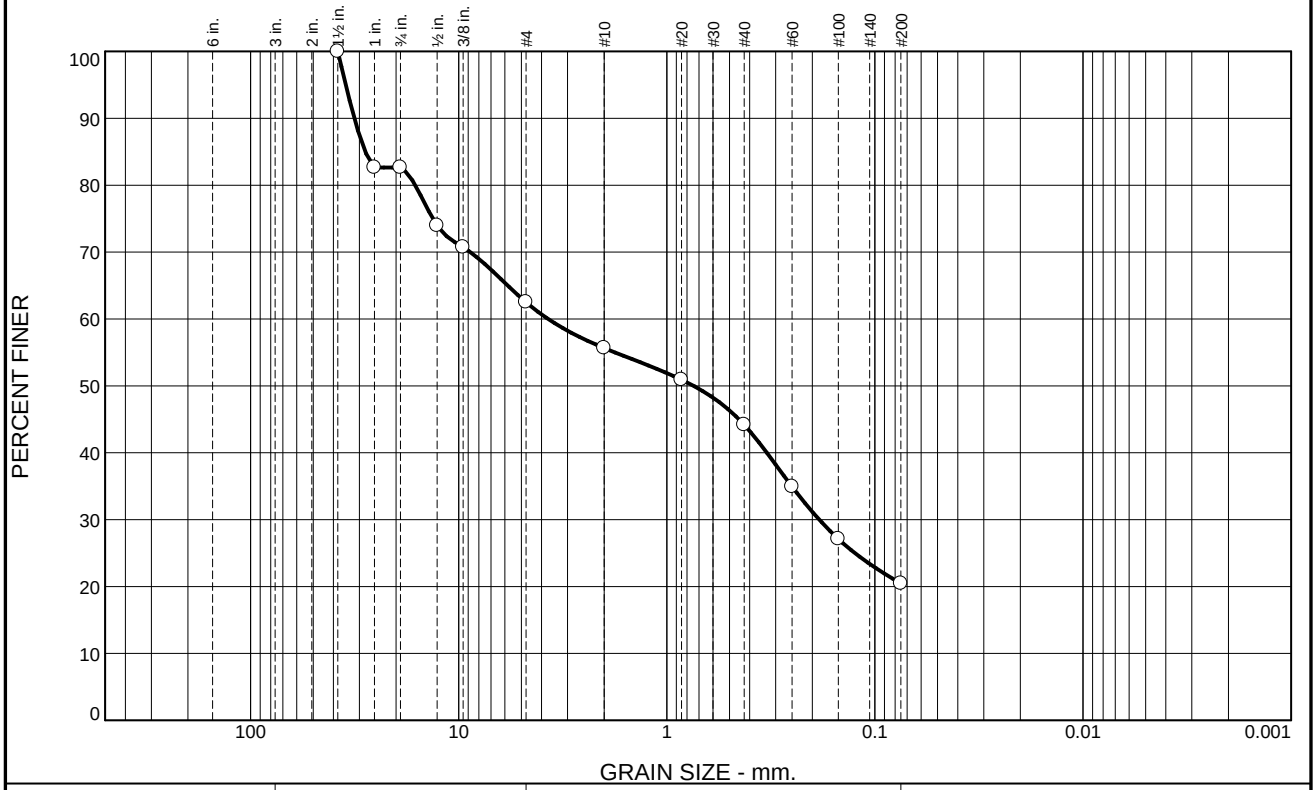
Canonsburg, PA

Client: GeoSolutions
Project: 21-137 Flushing, NY

Project No: 22LS3987 **Figure**

Tested By: AE **Checked By:** JB

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	17.4	20.1	6.8	11.5	23.8	20.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.50	100.0		
1.00	82.6		
0.75	82.6		
0.50	74.0		
0.375	70.7		
#4	62.5		
#10	55.7		
#20	50.9		
#40	44.2		
#60	34.9		
#100	27.1		
#200	20.4		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 31.7284 D_{85}= 28.1064 D_{60}= 3.7177
D_{50}= 0.7438 D_{30}= 0.1851 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Organic Content = 2.00%
pH = 10.8

Location: Flushing, NY
Sample Number: SB-203 **Depth:** 5-11' **Date:** 03/21/2022

JLT Laboratories, Inc.

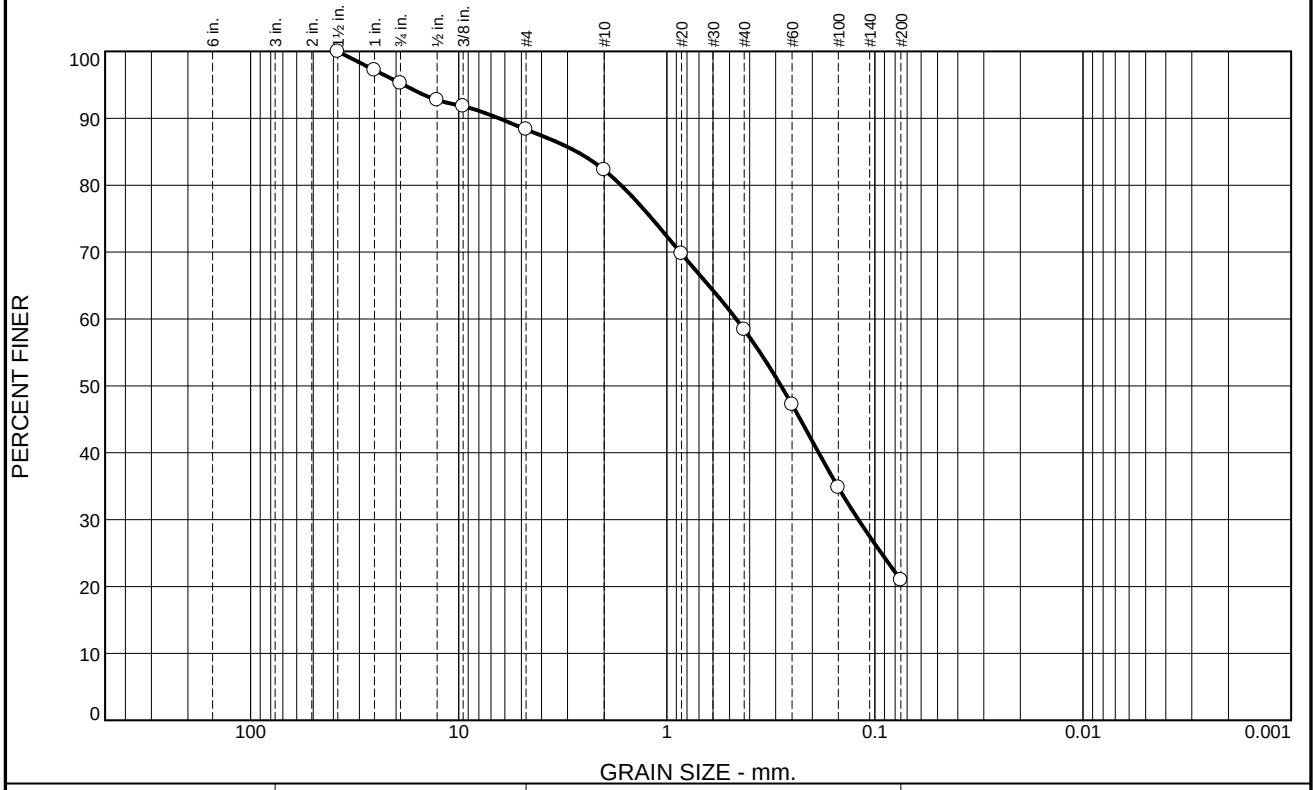
Canonsburg, PA

Client: GeoSolutions
Project: 21-137 Flushing, NY

Project No: 22LS3987 **Figure**

Tested By: AE **Checked By:** JB

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	4.7	7.0	6.0	23.9	37.4	21.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.50	100.0		
1.00	97.2		
0.75	95.3		
0.50	92.7		
0.375	91.8		
#4	88.3		
#10	82.3		
#20	69.8		
#40	58.4		
#60	47.2		
#100	34.8		
#200	21.0		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 6.4003 D_{85}= 2.7056 D_{60}= 0.4645
D_{50}= 0.2823 D_{30}= 0.1201 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Organic Content = 1.40%
pH = 7.2

Location: Flushing, NY
Sample Number: SB-97 **Depth:** 5-10' **Date:** 03/21/2022

JLT Laboratories, Inc.

Canonsburg, PA

Client: GeoSolutions
Project: 21-137 Flushing, NY

Project No: 22LS3987 **Figure**

Tested By: AE **Checked By:** JB

Particle Size Distribution Report

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	4.7	1.4	1.3	17.5	60.3	14.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.00	100.0		
0.75	95.3		
0.50	95.3		
0.375	94.8		
#4	93.9		
#10	92.6		
#20	88.7		
#40	75.1		
#60	47.5		
#100	27.5		
#200	14.8		

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 1.0319 D_{85}= 0.6077 D_{60}= 0.3148
D_{50}= 0.2625 D_{30}= 0.1632 D_{15}= 0.0758
D_{10}= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Organic Content = 0.94%
pH = 6.1

Location: Flushing, NY
Sample Number: SB-205 **Depth:** 5-10' **Date:** 03/21/2022

JLT Laboratories, Inc.

Canonsburg, PA

Client: GeoSolutions
Project: 21-137 Flushing, NY

Project No: 22LS3987 **Figure**

Tested By: AE **Checked By:** JB

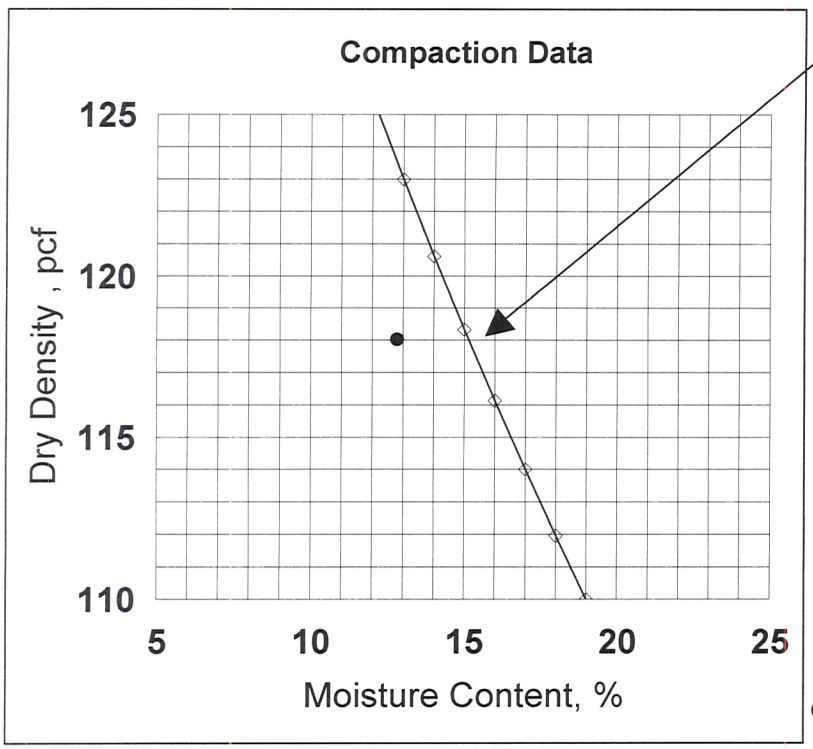
COMPACTION TEST REPORT

CLIENT : GeoSolutions
PROJECT : Flushing, NY 21=137
MATERIAL : SB-111
1 Point Proctor at As-Received Moisture

JOB NO 21LS3931
DATE 03/25/2022
Tested By MLB
Calc 'd By JBJr.

METHOD	ASTM	Mold	Hammer	Drop	Layers	Rock Cor.	Technique	Calibration
	D698-A	4"	5.5 lbs	12"	3/25	No	Auto Hammer	

	1	2	3	4	5	6	7	8
MOLD+WETSOIL, gr	6299							
MOLD, gr	4284							
WET SOIL, gr	2015							
WET DENSITY, pcf	133.15							
Tare ID	B13							
WET + TARE, gr	2126.8							
DRY + TARE, gr	1897.7							
TARE, gr	108.3							
DRY SOIL, gr	1789.4							
WATER, gr	229.1							
MOISTURE	0.128							
MOISTURE, %	**12.80**							
DRY DENSITY, pcf	**118.04**							



As-Received Moisture Content
12.8 %

Maximum Dry Density
NA pcf

Optimum Moisture Content
NA %

95% of Max. Density
0.0 pcf

90% of Max. Density
0.0 pcf

Atterberg Limits		
LL		%
PL		%
PI		%

Classification : _____

JLT Laboratories, Inc.

FIGURE - SB-111

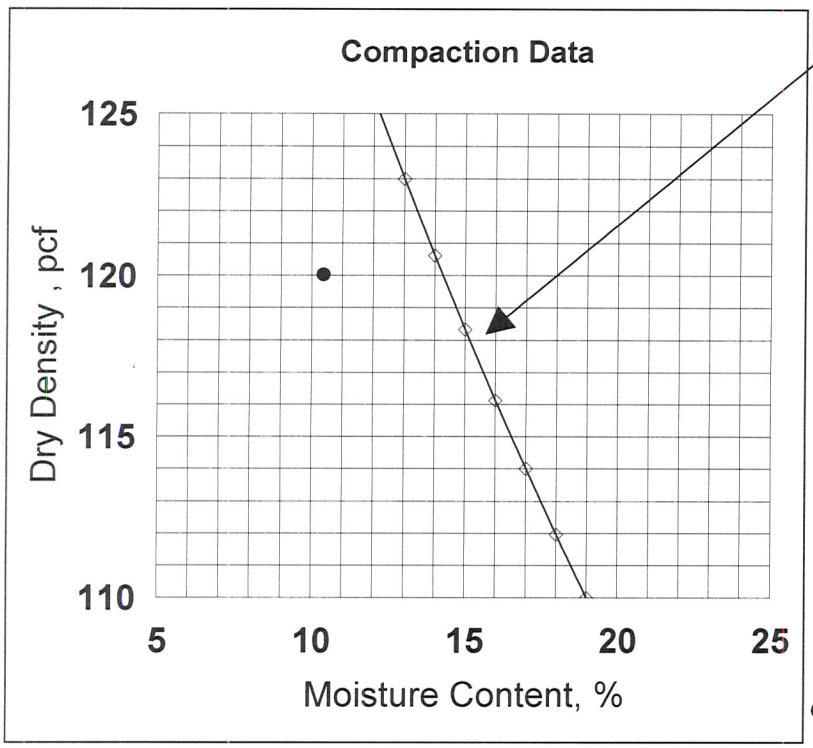
COMPACTION TEST REPORT

CLIENT : GeoSolutions
PROJECT : Flushing, NY 21=137
MATERIAL : SB-201
1 Point Proctor at As-Received Moisture

JOB NO 21LS3931
DATE 03/25/2022
Tested By MLB
Calc 'd By JBJr.

METHOD	ASTM	Mold	Hammer	Drop	Layers	Rock Cor.	Technique	Calibration
	D698-A	4"	5.5 lbs	12"	3/25	No	Auto Hammer	

	1	2	3	4	5	6	7	8
MOLD+WETSOIL, gr	6289							
MOLD, gr	4284							
WET SOIL, gr	2005							
WET DENSITY, pcf	132.49							
Tare ID	B54							
WET + TARE, gr	2091.2							
DRY + TARE, gr	1904.1							
TARE, gr	101.7							
DRY SOIL, gr	1802.4							
WATER, gr	187.1							
MOISTURE	0.104							
MOISTURE, %	**10.38**							
DRY DENSITY, pcf	**120.03**							



As-Received Moisture Content
10.4 %

Maximum Dry Density
NA pcf

Optimum Moisture Content
NA %

95% of Max. Density
0.0 pcf

90% of Max. Density
0.0 pcf

Atterberg Limits		
LL		%
PL		%
PI		%

Classification :

JLT Laboratories, Inc.

FIGURE - SB-201

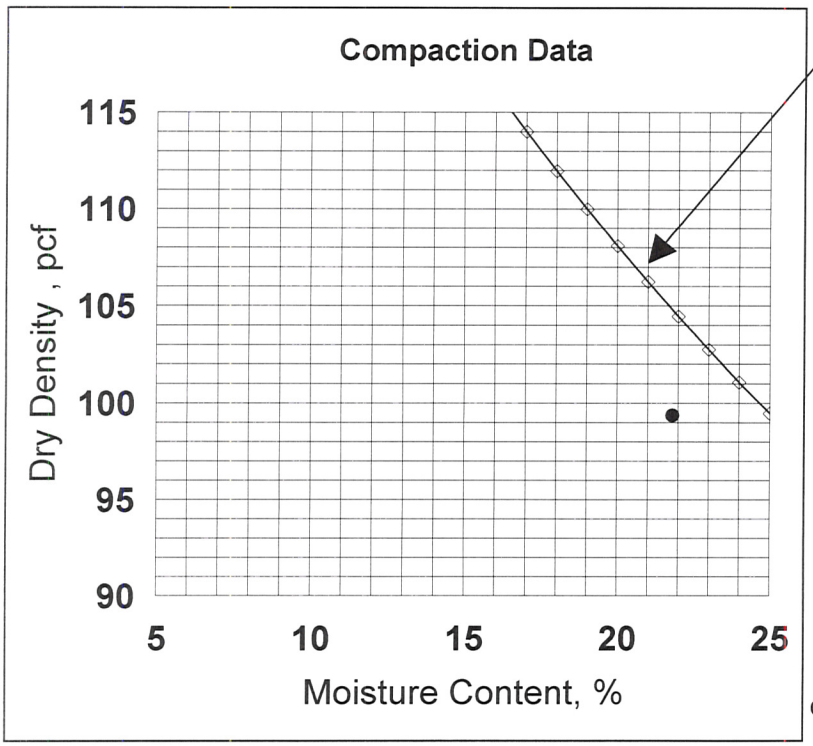
COMPACTION TEST REPORT

CLIENT : GeoSolutions
PROJECT : Flushing, NY 21=137
MATERIAL : SB-211
1 Point Proctor at As-Received Moisture

JOB NO 21LS3931
DATE 03/25/2022
Tested By MLB
Calc 'd By JBJr.

METHOD	ASTM	Mold	Hammer	Drop	Layers	Rock Cor.	Technique	Calibration
	D698-A	4"	5.5 lbs	12"	3/25	No	Auto Hammer	

	1	2	3	4	5	6	7	8
MOLD+WETSOIL, gr	6116							
MOLD, gr	4284							
WET SOIL, gr	1832							
WET DENSITY, pcf	121.06							
Tare ID	P68							
WET + TARE, gr	1918.7							
DRY + TARE, gr	1593.5							
TARE, gr	102.7							
DRY SOIL, gr	1490.8							
WATER, gr	325.2							
MOISTURE	0.218							
MOISTURE, %	**21.81**							
DRY DENSITY, pcf	**99.38**							



As-Received Moisture Content
21.8 %

Maximum Dry Density
NA pcf

Optimum Moisture Content
NA %

95% of Max. Density
0.0 pcf

90% of Max. Density
0.0 pcf

Atterberg Limits		
LL		%
PL		%
PI		%

Classification :

JLT Laboratories, Inc.

FIGURE - SB-211

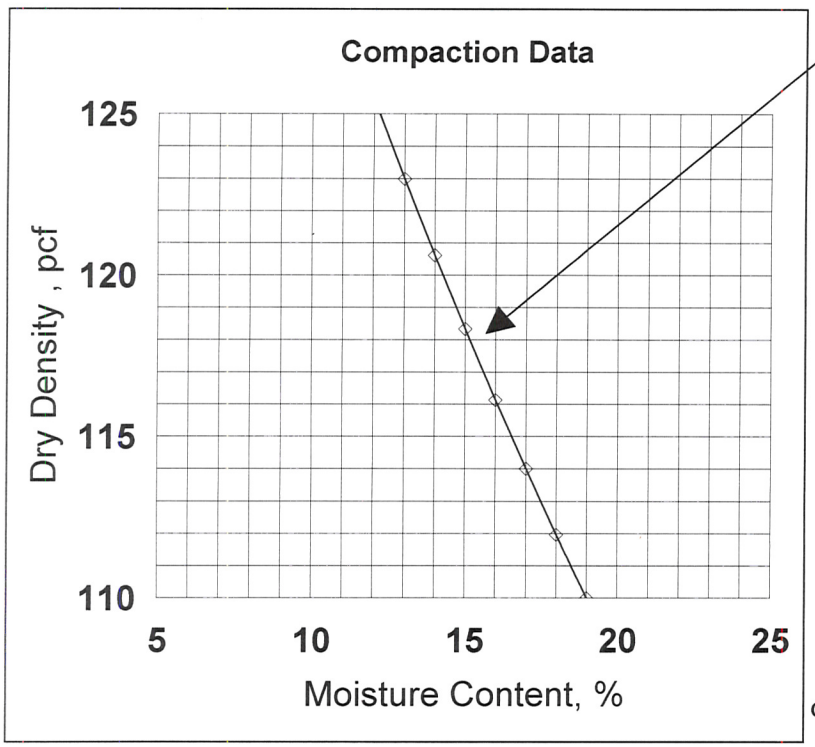
COMPACTION TEST REPORT

CLIENT : GeoSolutions
PROJECT : Flushing, NY 21=137
MATERIAL : SB-86
1 Point Proctor at As-Received Moisture

JOB NO 21LS3931
DATE 03/25/2022
Tested By MLB
Calc 'd By JBJr.

METHOD	ASTM	Mold	Hammer	Drop	Layers	Rock Cor.	Technique	Calibration
	D698-A	4"	5.5 lbs	12"	3/25	No	Auto Hammer	

	1	2	3	4	5	6	7	8
MOLD+WETSOIL, gr								
MOLD, gr			TO WET TO TEST... M,USH					
WET SOIL, gr								
WET DENSITY, pcf								
Tare ID	S103							
WET + TARE, gr	2402.9							
DRY + TARE, gr	1925.2							
TARE, gr	109.4							
DRY SOIL, gr	1815.8							
WATER, gr	477.7							
MOISTURE	0.263							
MOISTURE, %	**26.31**							
DRY DENSITY, pcf	**0.00**							



As-Received Moisture Content
26.3 %

Maximum Dry Density
NA pcf

Optimum Moisture Content
NA %

95% of Max. Density
0.0 pcf

90% of Max. Density
0.0 pcf

Atterberg Limits		
LL		%
PL		%
PI		%

Classification :

JLT Laboratories, Inc.

FIGURE - SB-86

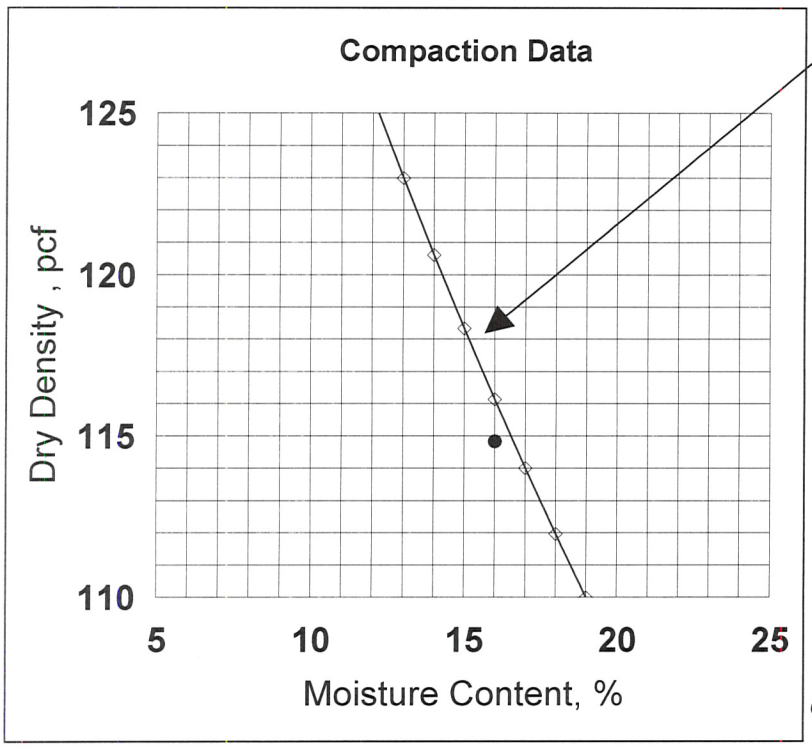
COMPACTION TEST REPORT

CLIENT : GeoSolutions
PROJECT : Flushing, NY 21=137
MATERIAL : SB-203
1 Point Proctor at As-Received Moisture

JOB NO 21LS3931
DATE 03/25/2022
Tested By MLB
Calc 'd By JBJr.

METHOD	ASTM	Mold	Hammer	Drop	Layers	Rock Cor.	Technique	Calibration
	D698-A	4"	5.5 lbs	12"	3/25	No	Auto Hammer	

	1	2	3	4	5	6	7	8
MOLD+WETSOIL, gr	6300							
MOLD, gr	4284							
WET SOIL, gr	2016							
WET DENSITY, pcf	133.22							
Tare ID	b49							
WET + TARE, gr	2218.6							
DRY + TARE, gr	1939.3							
TARE, gr	195.0							
DRY SOIL, gr	1744.3							
WATER, gr	279.3							
MOISTURE	0.160							
MOISTURE, %	**16.01**							
DRY DENSITY, pcf	**114.83**							



As-Received Moisture Content
16.0 %

Maximum Dry Density
NA pcf

Optimum Moisture Content
NA %

95% of Max. Density
0.0 pcf

90% of Max. Density
0.0 pcf

Atterberg Limits		
LL		%
PL		%
PI		%

Classification :

JLT Laboratories, Inc.

FIGURE - SB-203

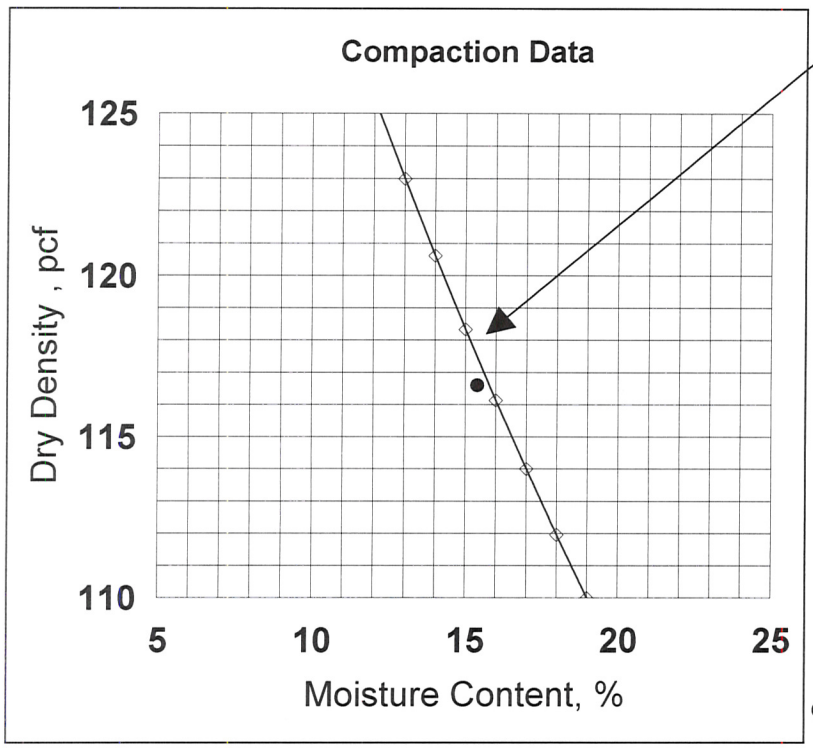
COMPACTION TEST REPORT

CLIENT : GeoSolutions
PROJECT : Flushing, NY 21=137
MATERIAL : SB-97
1 Point Proctor at As-Received Moisture

JOB NO 21LS3931
DATE 03/25/2022
Tested By MLB
Calc 'd By JBJr.

METHOD	ASTM	Mold	Hammer	Drop	Layers	Rock Cor.	Technique	Calibration
	D698-A	4"	5.5 lbs	12"	3/25	No	Auto Hammer	

	1	2	3	4	5	6	7	8
MOLD+WETSOIL, gr	6320							
MOLD, gr	4284							
WET SOIL, gr	2036							
WET DENSITY, pcf	134.54							
Tare ID	W2							
WET + TARE, gr	2219.7							
DRY + TARE, gr	1949.5							
TARE, gr	193.5							
DRY SOIL, gr	1756.0							
WATER, gr	270.2							
MOISTURE	0.154							
MOISTURE, %	**15.39**							
DRY DENSITY, pcf	**116.60**							



As-Received Moisture Content
15.4 %

Maximum Dry Density
NA pcf

Optimum Moisture Content
NA %

95% of Max. Density
0.0 pcf

90% of Max. Density
0.0 pcf

Atterberg Limits		
LL		%
PL		%
PI		%

Classification :

JLT Laboratories, Inc.

FIGURE - SB-97

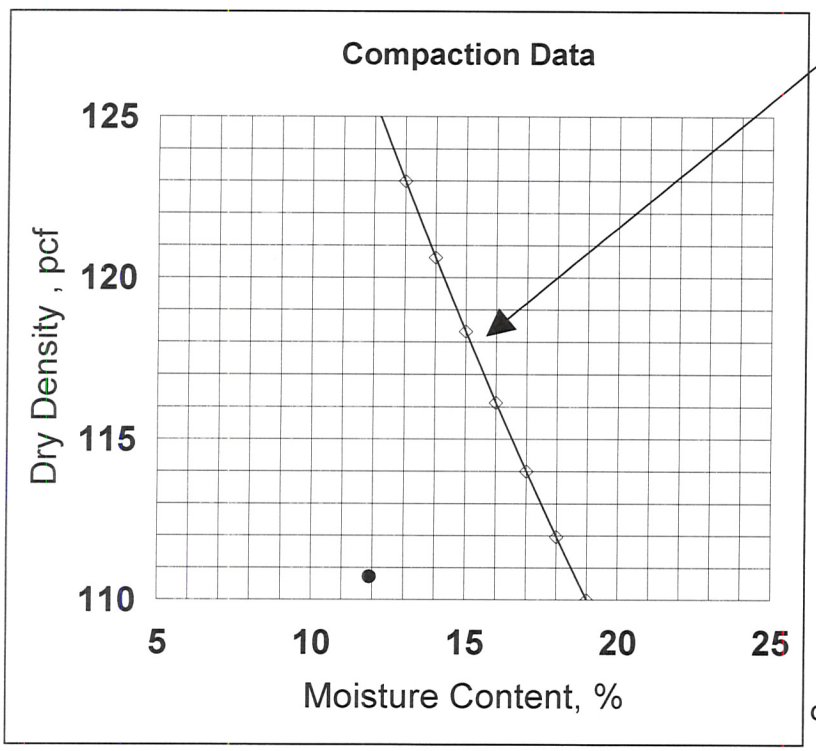
COMPACTION TEST REPORT

CLIENT : GeoSolutions
PROJECT : Flushing, NY 21=137
MATERIAL : SB-205
1 Point Proctor at As-Received Moisture

JOB NO 21LS3931
DATE 03/25/2022
Tested By MLB
Calc 'd By JBJr.

	ASTM	Mold	Hammer	Drop	Layers	Rock Cor.	Technique	Calibration
METHOD	D698-A	4"	5.5 lbs	12"	3/25	No	Auto Hammer	

	1	2	3	4	5	6	7	8
MOLD+WETSOIL, gr	6159							
MOLD, gr	4284							
WET SOIL, gr	1875							
WET DENSITY, pcf	123.90							
Tare ID	B9							
WET + TARE, gr	1976.7							
DRY + TARE, gr	1778.0							
TARE, gr	108.4							
DRY SOIL, gr	1669.6							
WATER, gr	198.7							
MOISTURE	0.119							
MOISTURE, %	**11.90**							
DRY DENSITY, pcf	**110.72**							



As-Received Moisture Content
11.9 %

Maximum Dry Density
NA pcf

Optimum Moisture Content
NA %

95% of Max. Density
0.0 pcf

90% of Max. Density
0.0 pcf

Atterberg Limits		
LL		%
PL		%
PI		%

Classification : _____

JLT Laboratories, Inc.

FIGURE - SB-97

Integrated Geosciences Laboratories, LLC

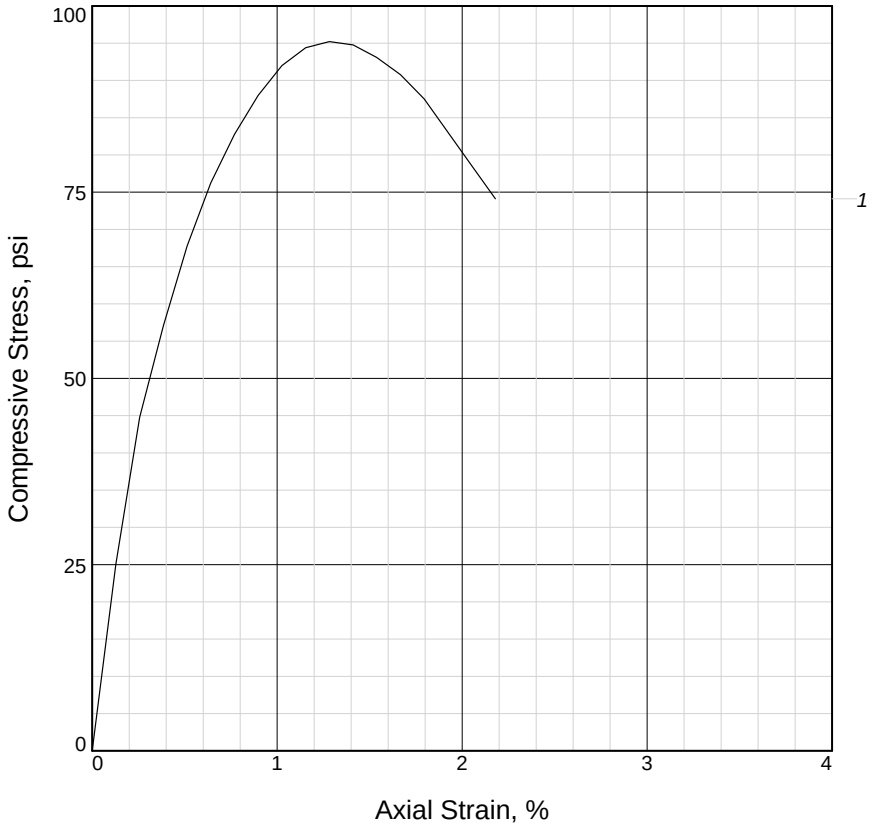
PHYSICAL PROPERTIES DATA - PORE FLUID SATURATIONS

IGS Labs File No:	**2204-66**	**Project Name:**	**Flushing, NY ISS Mix Design**
Client:	**Geo-Solutions**	**Project No:**	**21-077**
Report Date:	**04/29/22**	**Site location:**	**Flushing, NY**

				METHODS:	**API RP 40 / ASTM D2216**	**API RP 40**		**API RP 40**		**API RP 40**	
SAMPLE ID.	**IGS Labs ID**	**DEPTH, ft.**	**SAMPLE ORIENTATION (1)**		**MOISTURE CONTENT, % weight**	**DENSITY**		**POROSITY, %Vb (2)**		**PORE FLUID SATURATIONS, % Pv (3)**	
						DRY BULK, g/cc	**GRAIN, g/cc**	**TOTAL**	**AIR FILLED**	**WATER**	**NAPL**
SB-86	1	N/A	V		18.5	1.56	2.72	42.7	13.8	67.0	0.68
Underlying Sand Composite	2	N/A	V		16.3	1.48	2.69	45.0	20.6	51.4	2.78

(1) Sample Orientation: H = horizontal; V = vertical; R = remold
(2) Total Porosity = all non & interconnected pore channels; Air Filled = pore channels not occupied by pore fluids.
(3) Fluid density used to calculate pore fluid saturations: Water =0.9987 g/cc, NAPL = 0.8660 g/cc.
Vb = Bulk Volume, cc; Pv = Pore Volume, cc; ND = Not Detected

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	95.21			
Undrained shear strength, psi	47.61			
Failure strain,	1.3			
Strain rate, in./min.	0.050			
Water content, %	20.0			
Wet density, pcf	121.4			
Dry density, pcf	101.2			
Saturation, %	81.0			
Void ratio	0.6654			
Specimen diameter, in.	2.000			
Specimen height, in.	3.900			
Height/diameter ratio	1.95			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 04/29/22

Remarks:
ASTM D-2166
7 Days

Figure M17D

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-1

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/04/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-1		Tested By	: MLB	
Fabrication Date	: 04/22/2022		Checked By	: JBJr	
Age , Days	: 7 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.68	Final Height (in)	: 5.61
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 2.98
Initial Wet Weight (g)	: 1280.40	Final Wet Weight (g)	: 1316.26
Wet Density (pcf)	: 121.38	Wet Density (pcf)	: 128.04
Moisture Content %	: 19.99	Moisture Content %	: 23.35
Dry Density (pcf)	: 101.16	Dry Density (pcf)	: 103.80
Initial Void Ratio	: 0.6778	Final Void Ratio	: 0.6351
Saturation ,%	: 80.2	Saturation ,%	: 100.0

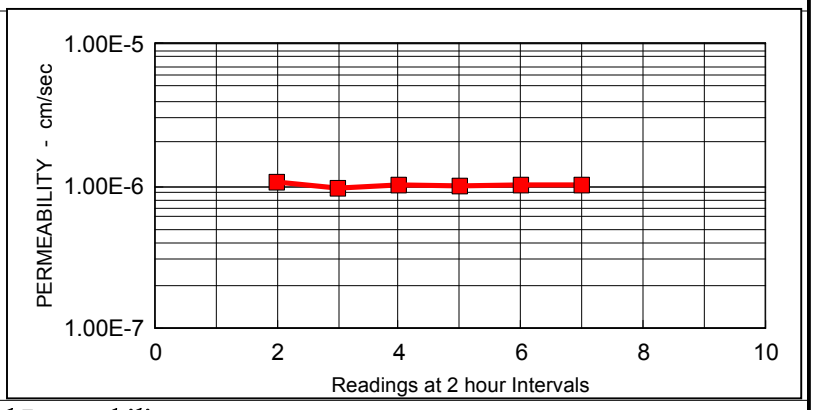
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.60	Gradient	: 25.58
Tail Water (psi)	: 52.40		

Permeability Input Data

For Last Data Point

Flow, Q (cc)	:	8.4
Length, L (in)	:	5.61
Area, A (sqin)	:	6.97
Head, h (psi)	:	**5.20**
Time, t (min)	:	120
Temp, T (Deg C)	:	19.8

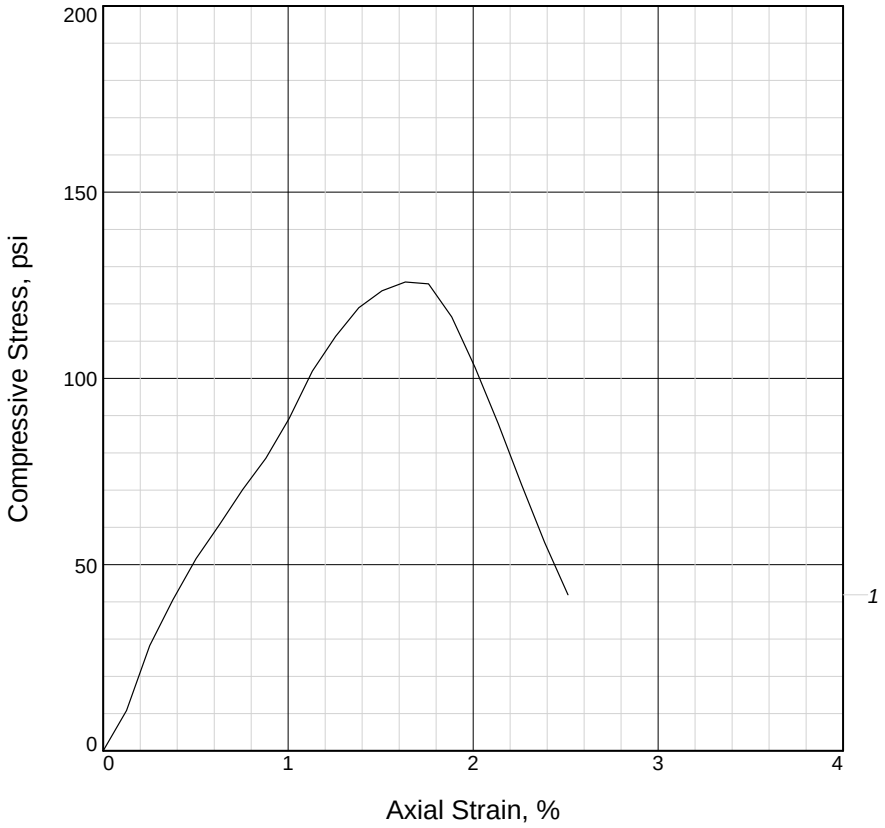


Computed Permeability

PERMEABILITY, K = 1.01E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 1.01E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	125.87			
Undrained shear strength, psi	62.94			
Failure strain,	1.6			
Strain rate, in./min.	0.050			
Water content, %	19.8			
Wet density, pcf	121.3			
Dry density, pcf	101.2			
Saturation, %	80.5			
Void ratio	0.6653			
Specimen diameter, in.	2.000			
Specimen height, in.	3.980			
Height/diameter ratio	1.99			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/09/2022

Remarks:
ASTM D-2166
14 Days

Figure M114D

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-1

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/11/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-1		Tested By	: MLB	
Fabrication Date	: 04/22/2022		Checked By	: JBJr	
Age , Days	: 14 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.20	Final Height (in)	: 5.00
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 2.99
Initial Wet Weight (g)	: 1143.20	Final Wet Weight (g)	: 1177.89
Wet Density (pcf)	: 118.38	Wet Density (pcf)	: 127.70
Moisture Content %	: 20.02	Moisture Content %	: 23.66
Dry Density (pcf)	: 98.63	Dry Density (pcf)	: 103.27
Initial Void Ratio	: 0.7208	Final Void Ratio	: 0.6436
Saturation ,%	: 75.5	Saturation ,%	: 100.0

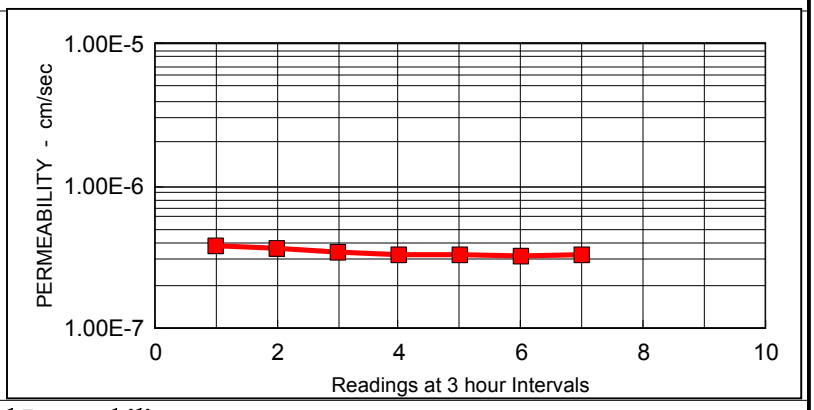
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.60	Gradient	: 28.70
Tail Water (psi)	: 52.40		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	:	4.6
Length, L	(in)	:	5.00
Area, A	(sqin)	:	7.02
Head, h	**(psi)**	:	**5.20**
Time, t	(min)	:	180
Temp, T	(Deg C)	:	19.8

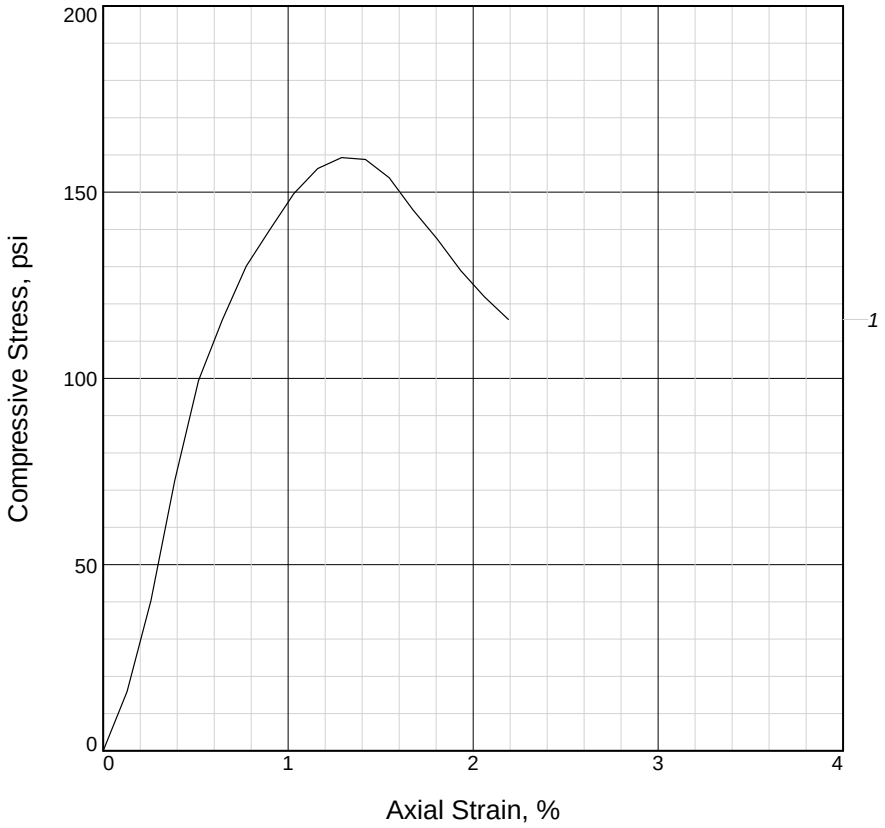


Computed Permeability

PERMEABILITY, K = 3.28E-007 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 3.26E-007 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	159.30			
Undrained shear strength, psi	79.65			
Failure strain,	1.3			
Strain rate, in./min.	0.050			
Water content, %	20.7			
Wet density, pcf	124.4			
Dry density, pcf	103.0			
Saturation, %	88.1			
Void ratio	0.6358			
Specimen diameter, in.	2.000			
Specimen height, in.	3.880			
Height/diameter ratio	1.94			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 04/29/2022

Remarks:
ASTM D-2166
7 Days

Figure M27D

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-2

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/04/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-2		Tested By	: MLB	
Fabrication Date	: 04/22/2022		Checked By	: JBJr	
Age , Days	: 7 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.22	Final Height (in)	: 5.15
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 2.96
Initial Wet Weight (g)	: 1182.60	Final Wet Weight (g)	: 1200.64
Wet Density (pcf)	: 121.99	Wet Density (pcf)	: 128.95
Moisture Content %	: 20.69	Moisture Content %	: 22.53
Dry Density (pcf)	: 101.08	Dry Density (pcf)	: 105.24
Initial Void Ratio	: 0.6791	Final Void Ratio	: 0.6127
Saturation ,%	: 82.8	Saturation ,%	: 100.0

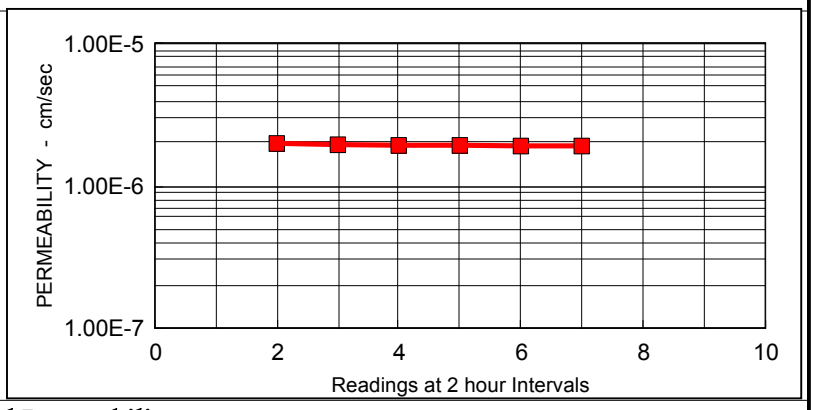
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.30	Gradient	: 24.65
Tail Water (psi)	: 52.70		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	: 15.1
Length, L	(in)	: 5.15
Area, A	(sqin)	: 6.88
Head, h	**(psi)**	: **4.60**
Time, t	(min)	: 120
Temp, T	(Deg C)	: 19.8

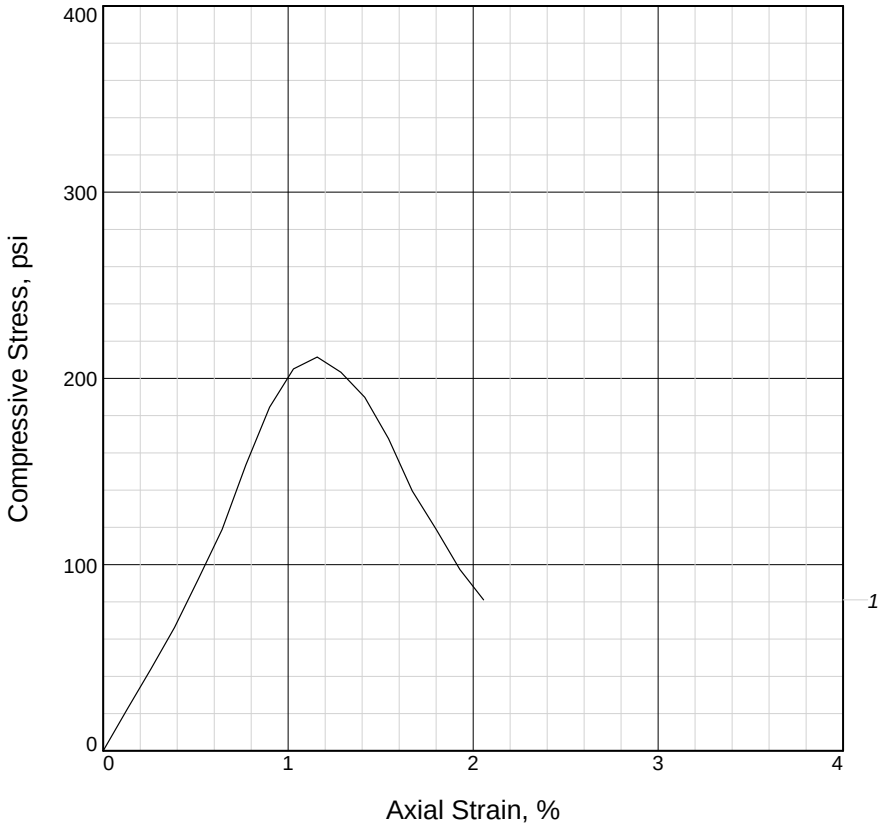


Computed Permeability

PERMEABILITY, K = 1.92E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 1.92E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	211.43			
Undrained shear strength, psi	105.71			
Failure strain,	1.2			
Strain rate, in./min.	0.050			
Water content, %	19.7			
Wet density, pcf	123.9			
Dry density, pcf	103.5			
Saturation, %	84.5			
Void ratio	0.6287			
Specimen diameter, in.	2.000			
Specimen height, in.	3.890			
Height/diameter ratio	1.95			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/09/2022

Remarks:
ASTM D-2166
14 Days

Figure M214D

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-2

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/11/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-2		Tested By	: MLB	
Fabrication Date	: 04/22/2022		Checked By	: JBJr	
Age , Days	: 14 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.00	Final Height (in)	: 4.99
Initial Diameter (in)	: 33.00	Final Diameter (in)	: 2.99
Initial Wet Weight (g)	: 1144.80	Final Wet Weight (g)	: 1175.09
Wet Density (pcf)	: 1.02	Wet Density (pcf)	: 127.65
Moisture Content %	: 20.52	Moisture Content %	: 23.71
Dry Density (pcf)	: 0.85	Dry Density (pcf)	: 103.19
Initial Void Ratio	: 199.7580	Final Void Ratio	: 0.6448
Saturation ,%	: 0.3	Saturation ,%	: 100.0

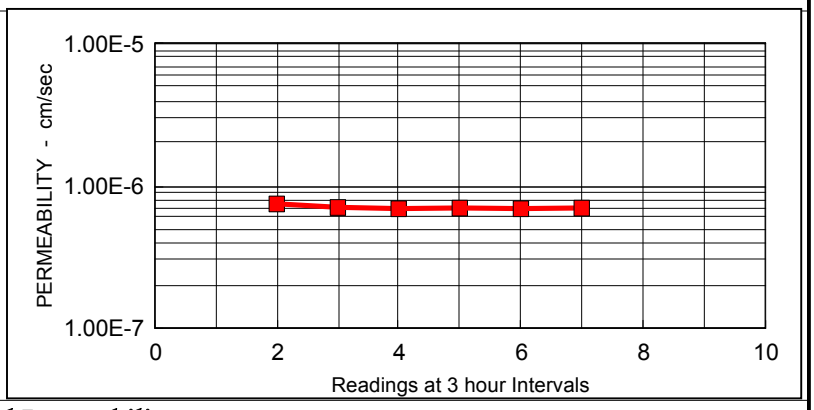
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.30	Gradient	: 25.44
Tail Water (psi)	: 52.70		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	: 8.7
Length, L	(in)	: 4.99
Area, A	(sqin)	: 7.02
Head, h	**(psi)**	: **4.60**
Time, t	(min)	: 180
Temp, T	(Deg C)	: 19.8

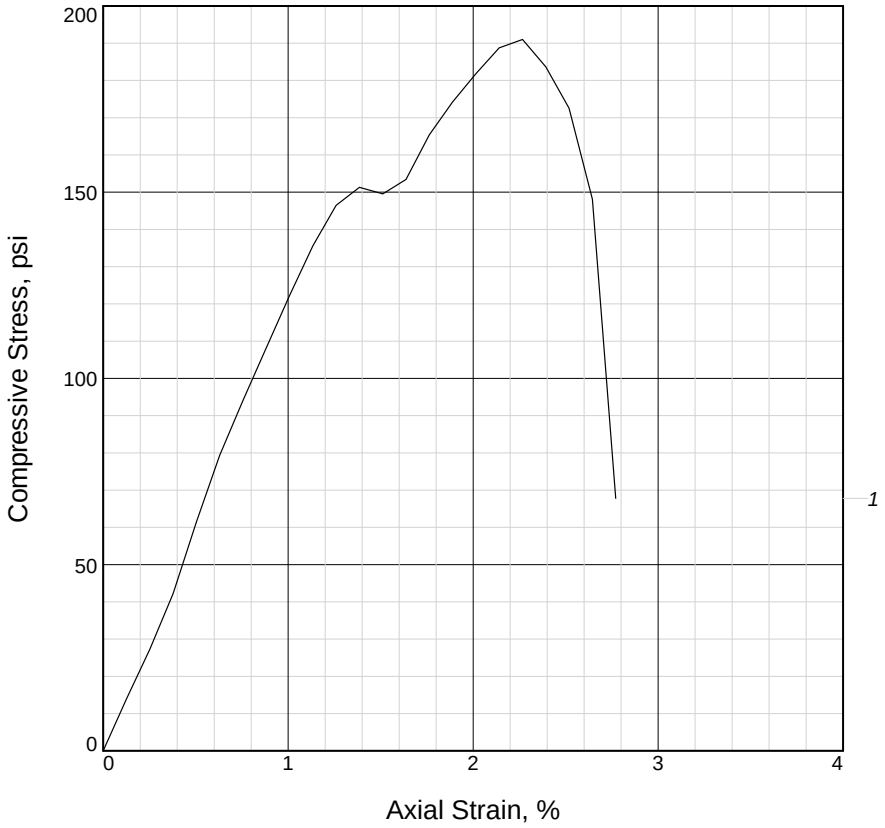


Computed Permeability

PERMEABILITY, K = 7.00E-007 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 6.97E-007 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	191.01			
Undrained shear strength, psi	95.51			
Failure strain,	2.3			
Strain rate, in./min.	0.500			
Water content, %	23.6			
Wet density, pcf	124.5			
Dry density, pcf	100.7			
Saturation, %	94.7			
Void ratio	0.6744			
Specimen diameter, in.	2.000			
Specimen height, in.	3.970			
Height/diameter ratio	1.99			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 06/06/2022

Remarks:
ASTM D-2166
38 Days

Figure M2D38

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-2

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 06/07/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-2		Tested By	: MLB	
Fabrication Date	: 04/22/2022		Checked By	: JBJr	
Age , Days	: 38 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	:	3.97	Final Height (in)	:	3.96
Initial Diameter (in)	:	2.00	Final Diameter (in)	:	2.00
Initial Wet Weight (g)	:	397.60	Final Wet Weight (g)	:	412.57
Wet Density (pcf)	:	121.34	Wet Density (pcf)	:	126.22
Moisture Content %	:	20.52	Moisture Content %	:	25.06
Dry Density (pcf)	:	100.68	Dry Density (pcf)	:	100.93
Initial Void Ratio	:	0.6859	Final Void Ratio	:	0.6816
Saturation ,%	:	81.4	Saturation ,%	:	100.0

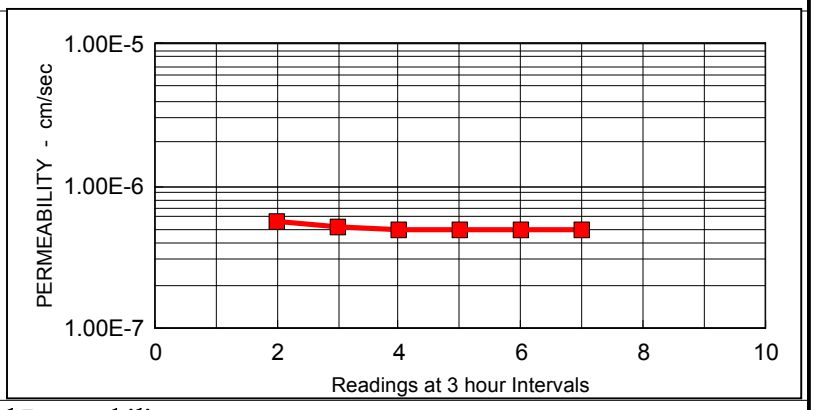
Test Parameters

Fluid	:	De-Aired Water	**Effective**		
Cell Pressure (psi)	:	65.00	**Confining Pressure (psi)**	:	**10**
Head Water (psi)	:	56.40	Gradient	:	19.52
Tail Water (psi)	:	53.60			

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	:	2.1
Length, L	(in)	:	3.96
Area, A	(sqin)	:	3.14
Head, h	**(psi)**	:	**2.80**
Time, t	(min)	:	180
Temp, T	(Deg C)	:	19.8

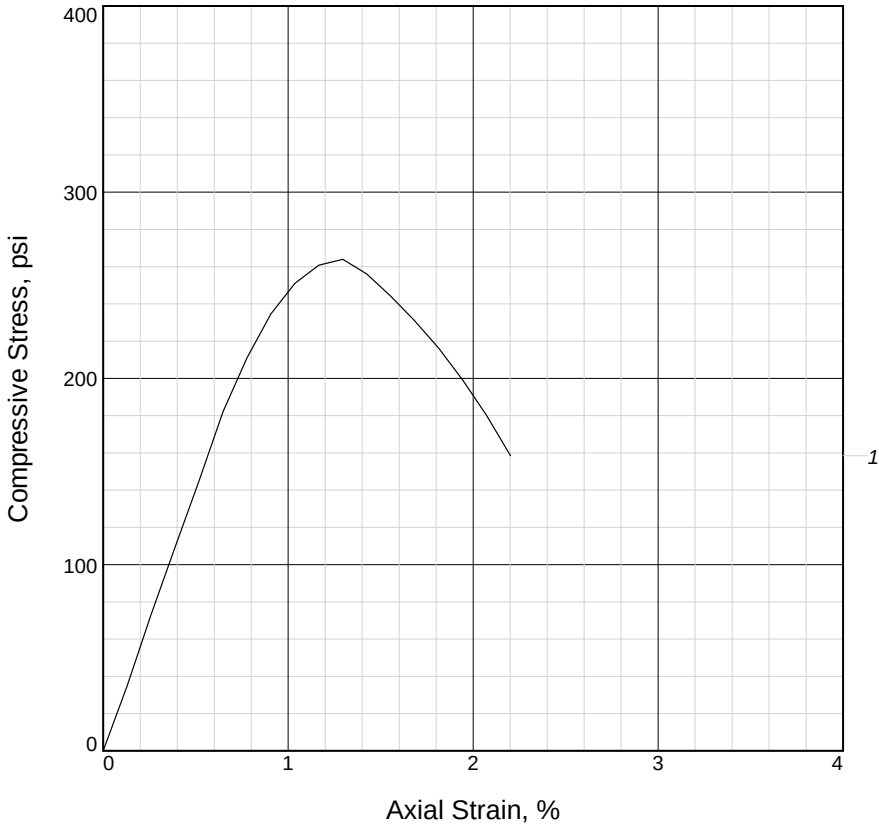


Computed Permeability

PERMEABILITY, K = 4.92E-007 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 4.92E-007 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	263.92			
Undrained shear strength, psi	131.96			
Failure strain,	1.3			
Strain rate, in./min.	0.050			
Water content, %	20.2			
Wet density, pcf	122.8			
Dry density, pcf	102.1			
Saturation, %	83.9			
Void ratio	0.6505			
Specimen diameter, in.	2.000			
Specimen height, in.	3.860			
Height/diameter ratio	1.93			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 04/29/2022

Remarks:
ASTM D-2166
7 Days

Figure M37D

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-3

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/04/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-3		Tested By	: MLB	
Fabrication Date	: 04/22/2022		Checked By	: JBJr	
Age , Days	: 7 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.10	Final Height (in)	: 5.05
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 2.99
Initial Wet Weight (g)	: 1168.10	Final Wet Weight (g)	: 1196.80
Wet Density (pcf)	: 123.33	Wet Density (pcf)	: 128.47
Moisture Content %	: 20.01	Moisture Content %	: 22.96
Dry Density (pcf)	: 102.76	Dry Density (pcf)	: 104.48
Initial Void Ratio	: 0.6517	Final Void Ratio	: 0.6246
Saturation ,%	: 83.5	Saturation ,%	: 100.0

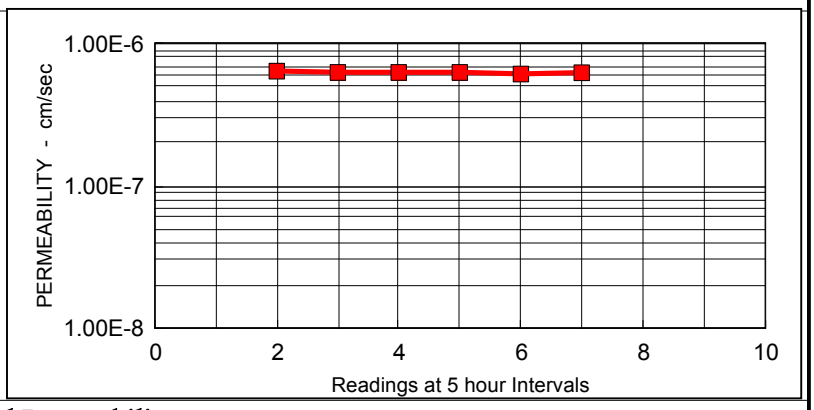
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.30	Gradient	: 25.14
Tail Water (psi)	: 52.70		

Permeability Input Data

For Last Data Point

Flow, Q (cc)	:	12.8
Length, L (in)	:	5.05
Area, A (sqin)	:	7.02
Head, h (psi)	:	**4.60**
Time, t (min)	:	300
Temp, T (Deg C)	:	19.8

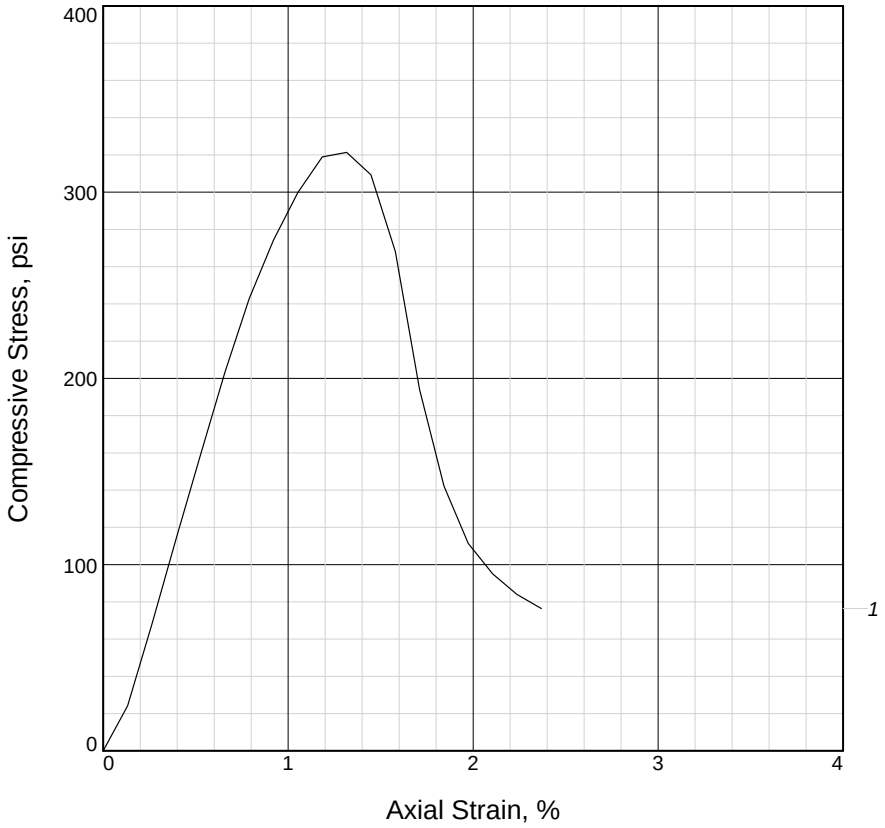


Computed Permeability

PERMEABILITY, K = 6.25E-007 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 6.24E-007 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	321.35			
Undrained shear strength, psi	160.67			
Failure strain,	1.3			
Strain rate, in./min.	0.050			
Water content, %	19.4			
Wet density, pcf	123.2			
Dry density, pcf	103.1			
Saturation, %	82.7			
Void ratio	0.6344			
Specimen diameter, in.	2.000			
Specimen height, in.	3.800			
Height/diameter ratio	1.90			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/09/2022

Remarks:
ASTM D-2166
14 Days

Figure M314D

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-3

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/11/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-3		Tested By	: MLB	
Fabrication Date	: 04/22/2022		Checked By	: JBJr	
Age , Days	: 14 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	:	5.10	Final Height (in)	:	5.05
Initial Diameter (in)	:	3.00	Final Diameter (in)	:	2.99
Initial Wet Weight (g)	:	1151.90	Final Wet Weight (g)	:	1189.78
Wet Density (pcf)	:	121.62	Wet Density (pcf)	:	127.71
Moisture Content %	:	19.72	Moisture Content %	:	23.65
Dry Density (pcf)	:	101.59	Dry Density (pcf)	:	103.28
Initial Void Ratio	:	0.6707	Final Void Ratio	:	0.6433
Saturation ,%	:	80.0	Saturation ,%	:	100.0

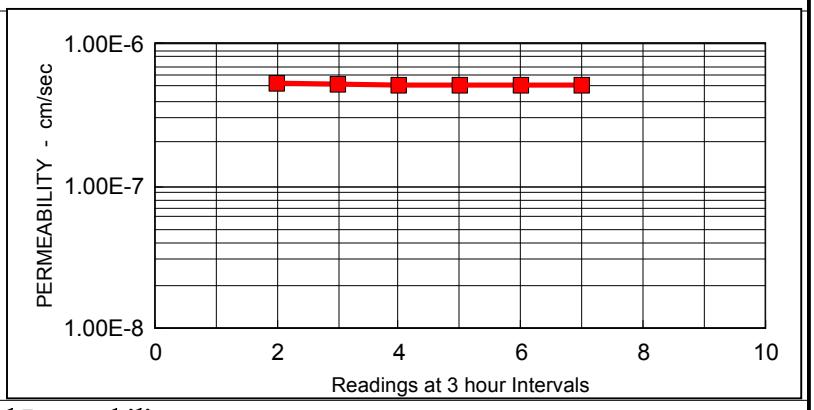
Test Parameters

Fluid	:	De-Aired Water	**Effective**		
Cell Pressure (psi)	:	65.00	**Confining Pressure (psi)**	:	**10**
Head Water (psi)	:	57.30	Gradient	:	25.14
Tail Water (psi)	:	52.70			

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	:	6.3
Length, L	(in)	:	5.05
Area, A	(sqin)	:	7.02
Head, h	**(psi)**	:	**4.60**
Time, t	(min)	:	180
Temp, T	(Deg C)	:	19.8

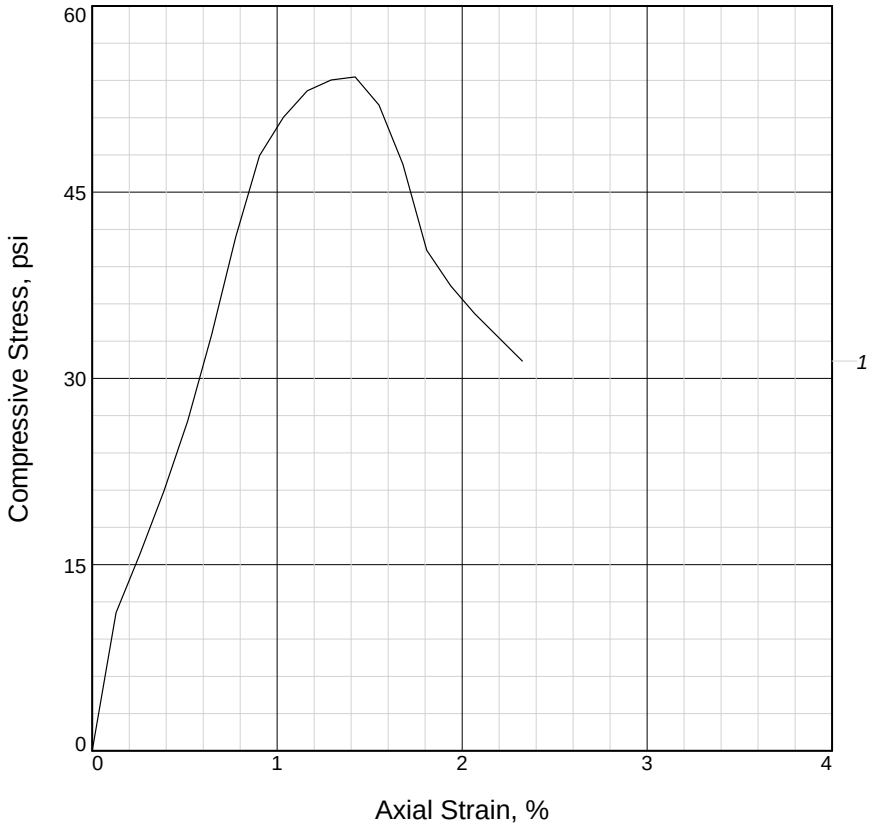


Computed Permeability

PERMEABILITY, K = 5.13E-007 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 5.13E-007 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	54.28			
Undrained shear strength, psi	27.14			
Failure strain,	1.4			
Strain rate, in./min.	0.050			
Water content, %	21.2			
Wet density, pcf	123.1			
Dry density, pcf	101.5			
Saturation, %	86.8			
Void ratio	0.6602			
Specimen diameter, in.	2.000			
Specimen height, in.	3.870			
Height/diameter ratio	1.94			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 04/29/2022

Remarks:
ASTM D-2166
7 Days

Figure M47D

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-4

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/04/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-4		Tested By	: MLB	
Fabrication Date	: 04/22/2022		Checked By	: JBJr	
Age , Days	: 7 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.20	Final Height (in)	: 5.18
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 2.97
Initial Wet Weight (g)	: 1203.60	Final Wet Weight (g)	: 1220.25
Wet Density (pcf)	: 124.63	Wet Density (pcf)	: 129.42
Moisture Content %	: 20.44	Moisture Content %	: 22.11
Dry Density (pcf)	: 103.48	Dry Density (pcf)	: 105.99
Initial Void Ratio	: 0.6402	Final Void Ratio	: 0.6014
Saturation ,%	: 86.9	Saturation ,%	: 100.0

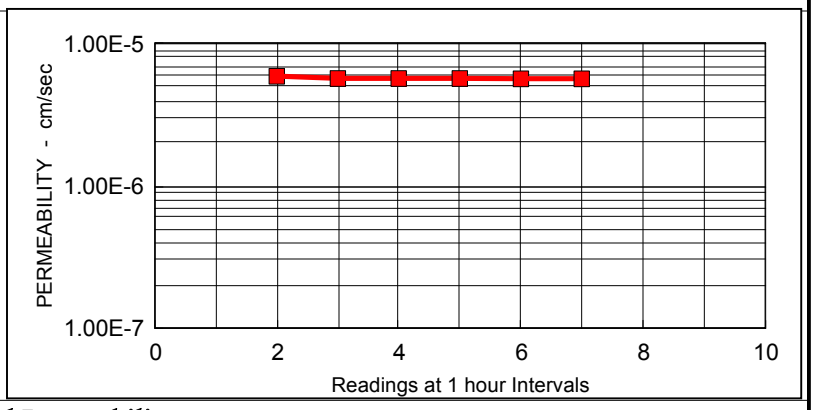
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.30	Gradient	: 24.51
Tail Water (psi)	: 52.70		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	: 22.4
Length, L	(in)	: 5.18
Area, A	(sqin)	: 6.93
Head, h	**(psi)**	: **4.60**
Time, t	(min)	: 60
Temp, T	(Deg C)	: 19.8

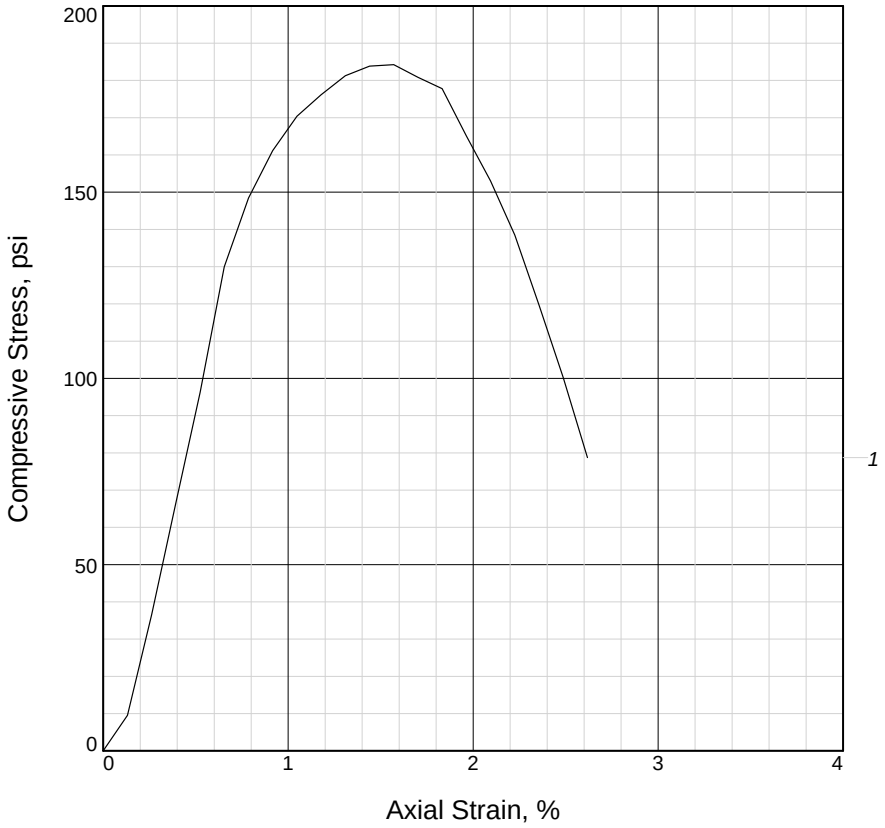


Computed Permeability

PERMEABILITY, K = 5.69E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 5.69E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	184.23			
Undrained shear strength, psi	92.11			
Failure strain,	1.6			
Strain rate, in./min.	0.050			
Water content, %	20.3			
Wet density, pcf	123.8			
Dry density, pcf	103.0			
Saturation, %	85.9			
Void ratio	0.6369			
Specimen diameter, in.	2.000			
Specimen height, in.	3.820			
Height/diameter ratio	1.91			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/09/2022

Remarks:
ASTM D-2166
14 Days

Figure M414D

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-4

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/11/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-4		Tested By	: MLB	
Fabrication Date	: 04/22/2022		Checked By	: JBJr	
Age , Days	: 14 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.50	Final Height (in)	: 5.48
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 2.99
Initial Wet Weight (g)	: 1258.00	Final Wet Weight (g)	: 1290.05
Wet Density (pcf)	: 123.16	Wet Density (pcf)	: 127.61
Moisture Content %	: 20.67	Moisture Content %	: 23.75
Dry Density (pcf)	: 102.06	Dry Density (pcf)	: 103.12
Initial Void Ratio	: 0.6630	Final Void Ratio	: 0.6459
Saturation ,%	: 84.8	Saturation ,%	: 100.0

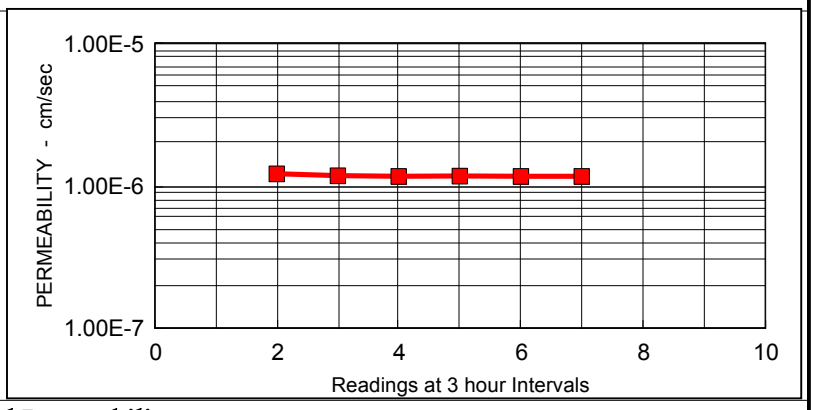
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.30	Gradient	: 23.17
Tail Water (psi)	: 52.70		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	: 13.2
Length, L	(in)	: 5.48
Area, A	(sqin)	: 7.02
Head, h	**(psi)**	: **4.60**
Time, t	(min)	: 180
Temp, T	(Deg C)	: 19.8

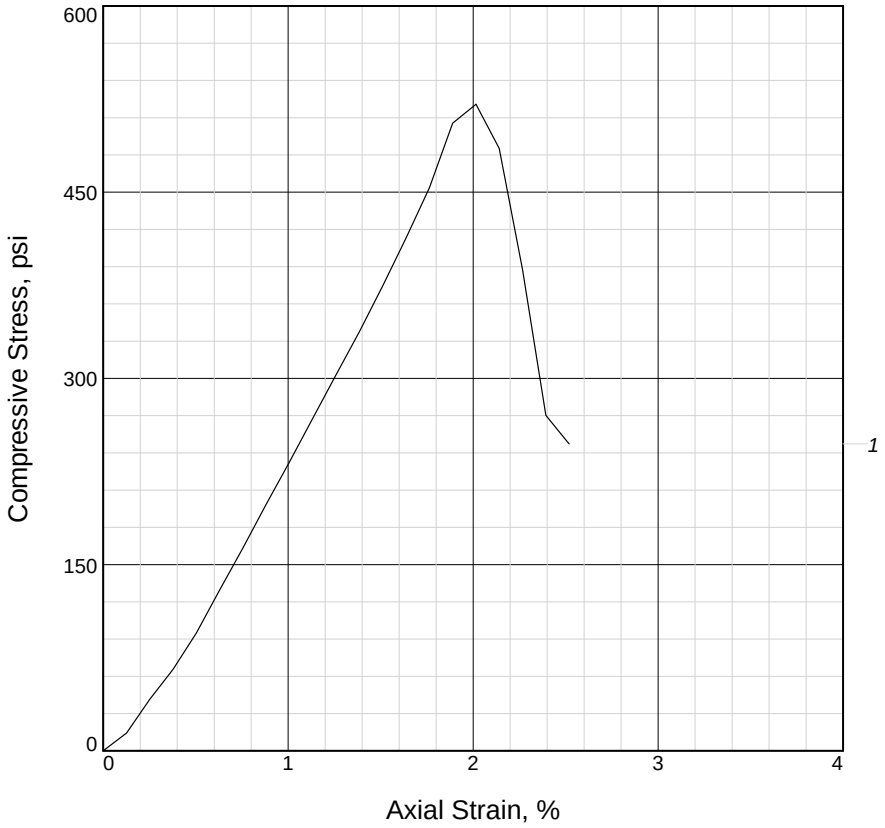


Computed Permeability

PERMEABILITY, K = 1.17E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 1.17E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	520.87			
Undrained shear strength, psi	260.43			
Failure strain,	2.0			
Strain rate, in./min.	0.500			
Water content, %	22.0			
Wet density, pcf	125.0			
Dry density, pcf	102.5			
Saturation, %	92.0			
Void ratio	0.6449			
Specimen diameter, in.	2.000			
Specimen height, in.	3.970			
Height/diameter ratio	1.99			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 06/06/2022

Remarks:
ASTM D-2166
38 Days

Figure M4D38

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-4

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 06/07/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-4		Tested By	: MLB	
Fabrication Date	: 04/22/2022		Checked By	: JBJr	
Age , Days	: 38 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	3.97	Final Height (in)	3.96
Initial Diameter (in)	2.00	Final Diameter (in)	2.00
Initial Wet Weight (g)	402.30	Final Wet Weight (g)	416.30
Wet Density (pcf)	122.77	Wet Density (pcf)	127.37
Moisture Content %	19.80	Moisture Content %	23.97
Dry Density (pcf)	102.48	Dry Density (pcf)	102.74
Initial Void Ratio	0.6562	Final Void Ratio	0.6521
Saturation ,%	82.1	Saturation ,%	100.0

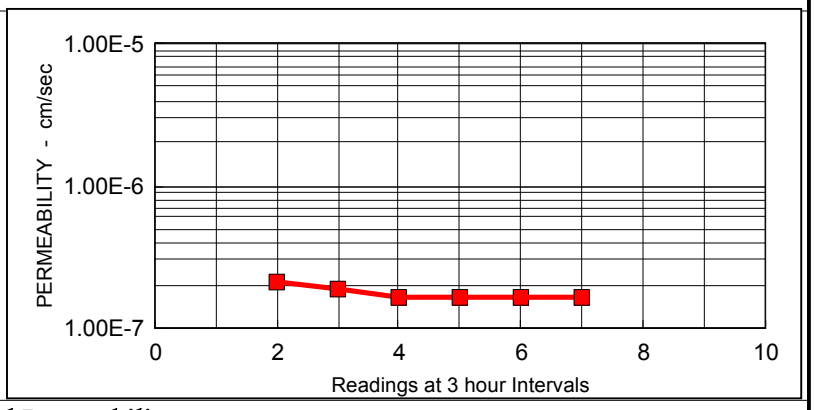
Test Parameters

Fluid	De-Aired Water	**Effective**	
Cell Pressure (psi)	65.00	**Confining Pressure (psi)**	**10**
Head Water (psi)	56.40	Gradient	19.52
Tail Water (psi)	53.60		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)		0.7
Length, L	(in)		3.96
Area, A	(sqin)		3.14
Head, h	**(psi)**		**2.80**
Time, t	(min)		180
Temp, T	(Deg C)		19.8

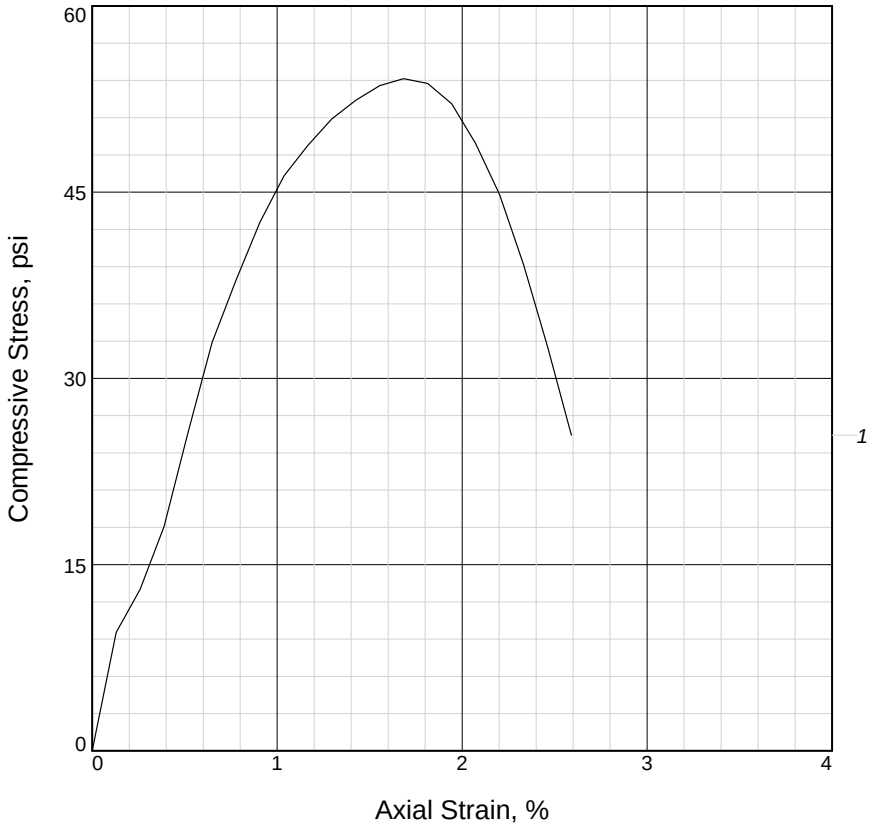


Computed Permeability

PERMEABILITY, K = 1.64E-007 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 1.64E-007 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	54.14			
Undrained shear strength, psi	27.07			
Failure strain,	1.7			
Strain rate, in./min.	0.500			
Water content, %	20.5			
Wet density, pcf	121.2			
Dry density, pcf	100.6			
Saturation, %	81.9			
Void ratio	0.6751			
Specimen diameter, in.	2.000			
Specimen height, in.	3.860			
Height/diameter ratio	1.93			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/20/2022
Remarks:
ASTM D-2166
7 Days

Figure M5D7

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-5

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/20/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-5		Tested By	: MLB	
Fabrication Date	: 05/04/2022		Checked By	: JBJr	
Age , Days	: 12 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	:	5.75	Final Height (in)	:	5.74
Initial Diameter (in)	:	3.00	Final Diameter (in)	:	3.00
Initial Wet Weight (g)	:	1312.30	Final Wet Weight (g)	:	1353.18
Wet Density (pcf)	:	122.89	Wet Density (pcf)	:	126.94
Moisture Content %	:	20.62	Moisture Content %	:	24.37
Dry Density (pcf)	:	101.89	Dry Density (pcf)	:	102.06
Initial Void Ratio	:	0.6658	Final Void Ratio	:	0.6629
Saturation ,%	:	84.2	Saturation ,%	:	100.0

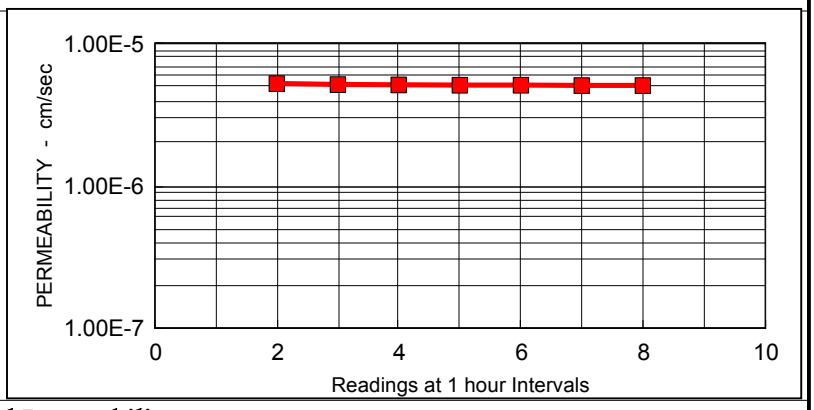
Test Parameters

Fluid	:	De-Aired Water	**Effective**		
Cell Pressure (psi)	:	65.00	**Confining Pressure (psi)**	:	**10**
Head Water (psi)	:	57.60	Gradient	:	25.00
Tail Water (psi)	:	52.40			

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	:	20.9
Length, L	(in)	:	5.74
Area, A	(sqin)	:	7.07
Head, h	**(psi)**	:	**5.20**
Time, t	(min)	:	60
Temp, T	(Deg C)	:	19.8

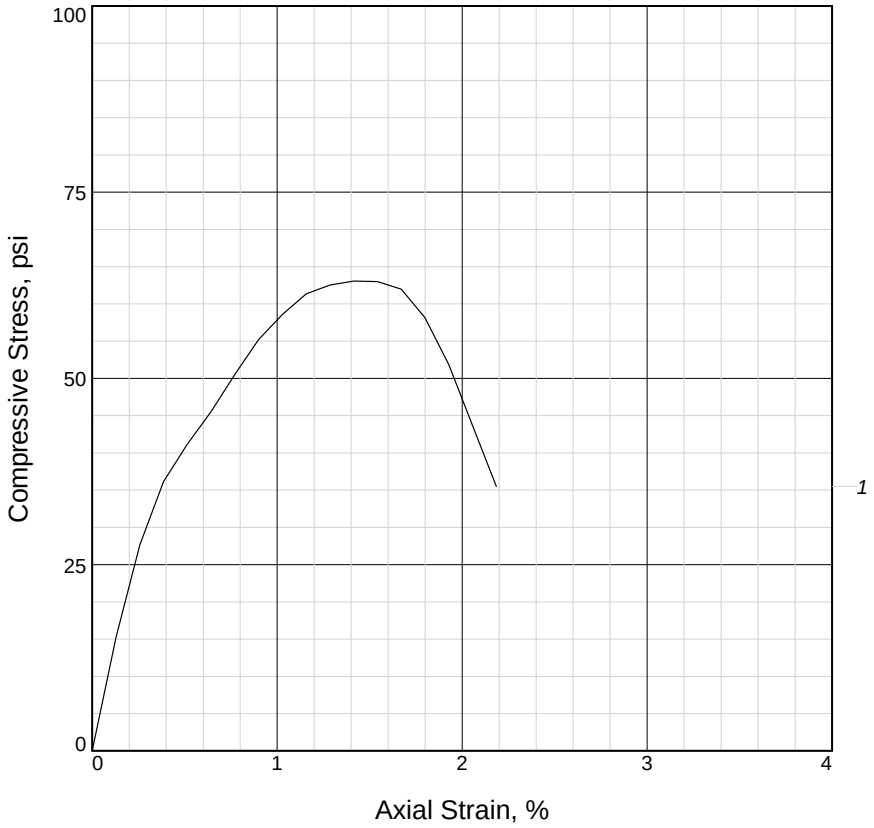


Computed Permeability

PERMEABILITY, K = 5.10E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 5.11E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	63.08			
Undrained shear strength, psi	31.54			
Failure strain,	1.4			
Strain rate, in./min.	0.500			
Water content, %	20.2			
Wet density, pcf	120.8			
Dry density, pcf	100.5			
Saturation, %	80.6			
Void ratio	0.6777			
Specimen diameter, in.	2.000			
Specimen height, in.	3.890			
Height/diameter ratio	1.95			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/23/2022

Remarks:
ASTM D-2166
14 Days

Figure M5D14

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-5

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/25/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-5		Tested By	: MLB	
Fabrication Date	: 05/04/2022		Checked By	: JBJr	
Age , Days	: 16 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.92	Final Height (in)	: 5.90
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 3.00
Initial Wet Weight (g)	: 1313.60	Final Wet Weight (g)	: 1374.38
Wet Density (pcf)	: 119.48	Wet Density (pcf)	: 125.43
Moisture Content %	: 20.27	Moisture Content %	: 25.84
Dry Density (pcf)	: 99.34	Dry Density (pcf)	: 99.68
Initial Void Ratio	: 0.7085	Final Void Ratio	: 0.7027
Saturation ,%	: 77.8	Saturation ,%	: 100.0

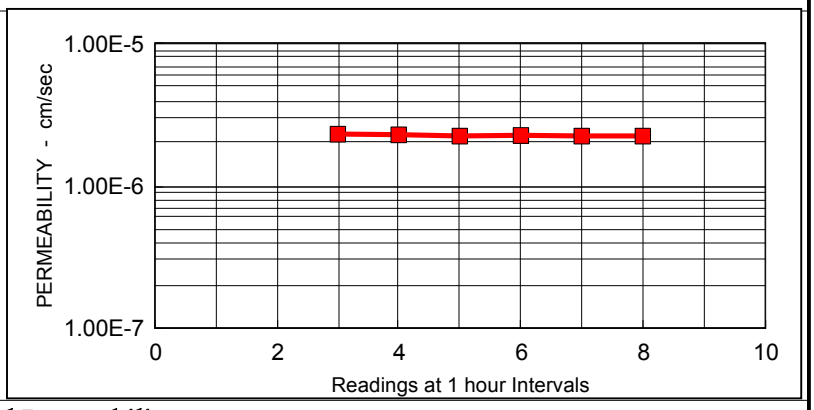
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.70	Gradient	: 25.26
Tail Water (psi)	: 52.30		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	: 9.3
Length, L	(in)	: 5.90
Area, A	(sqin)	: 7.07
Head, h	**(psi)**	: **5.40**
Time, t	(min)	: 60
Temp, T	(Deg C)	: 19.8

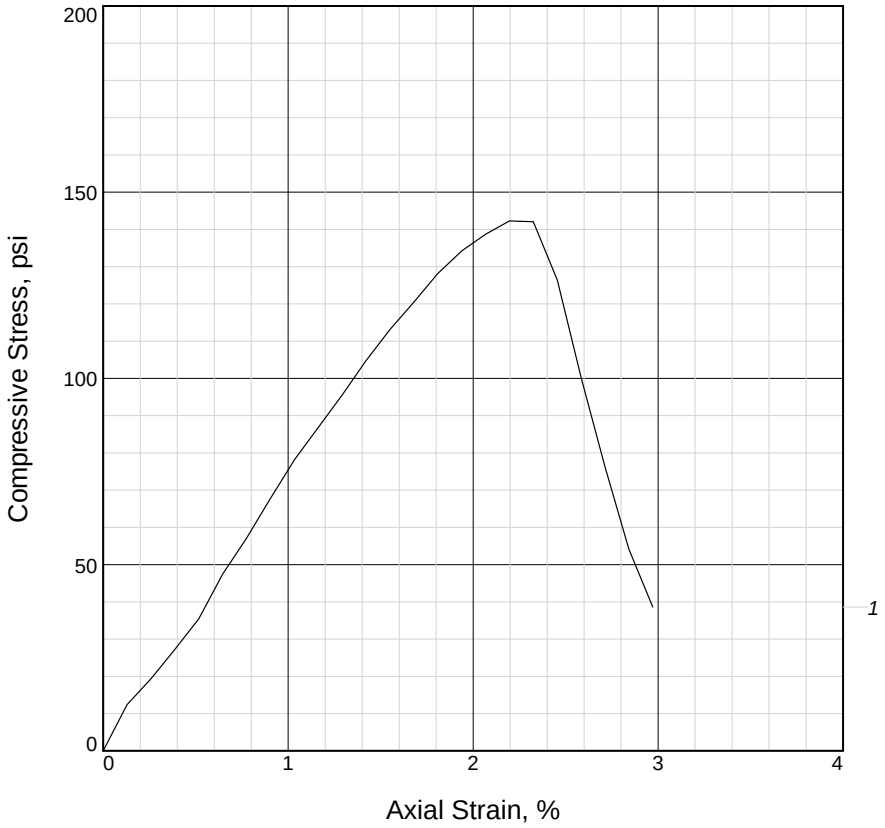


Computed Permeability

PERMEABILITY, K = 2.25E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 2.25E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	142.27			
Undrained shear strength, psi	71.14			
Failure strain,	2.2			
Strain rate, in./min.	0.500			
Water content, %	19.9			
Wet density, pcf	121.2			
Dry density, pcf	101.2			
Saturation, %	80.4			
Void ratio	0.6664			
Specimen diameter, in.	2.000			
Specimen height, in.	3.870			
Height/diameter ratio	1.94			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/20/2022

Remarks:
ASTM D-2166
7 Days

Figure M6D7

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: FLushing, NY
Sample Number: M-6

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/20/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-6		Tested By	: MLB	
Fabrication Date	: 05/04/2022		Checked By	: JBJr	
Age , Days	: 12 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	:	5.83	Final Height (in)	:	5.81
Initial Diameter (in)	:	3.00	Final Diameter (in)	:	3.00
Initial Wet Weight (g)	:	1317.70	Final Wet Weight (g)	:	1369.14
Wet Density (pcf)	:	121.70	Wet Density (pcf)	:	126.89
Moisture Content %	:	19.75	Moisture Content %	:	24.42
Dry Density (pcf)	:	101.63	Dry Density (pcf)	:	101.98
Initial Void Ratio	:	0.6700	Final Void Ratio	:	0.6643
Saturation ,%	:	80.2	Saturation ,%	:	100.0

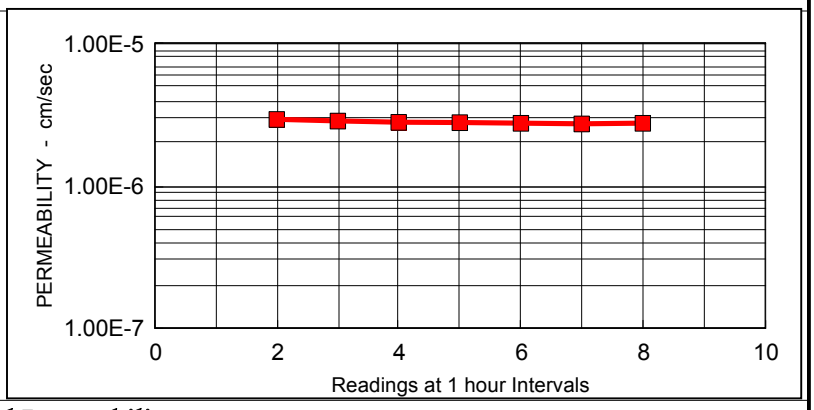
Test Parameters

Fluid	:	De-Aired Water	**Effective**		
Cell Pressure (psi)	:	65.00	**Confining Pressure (psi)**	:	**10**
Head Water (psi)	:	57.60	Gradient	:	24.70
Tail Water (psi)	:	52.40			

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	:	11.2
Length, L	(in)	:	5.81
Area, A	(sqin)	:	7.07
Head, h	**(psi)**	:	**5.20**
Time, t	(min)	:	60
Temp, T	(Deg C)	:	19.8

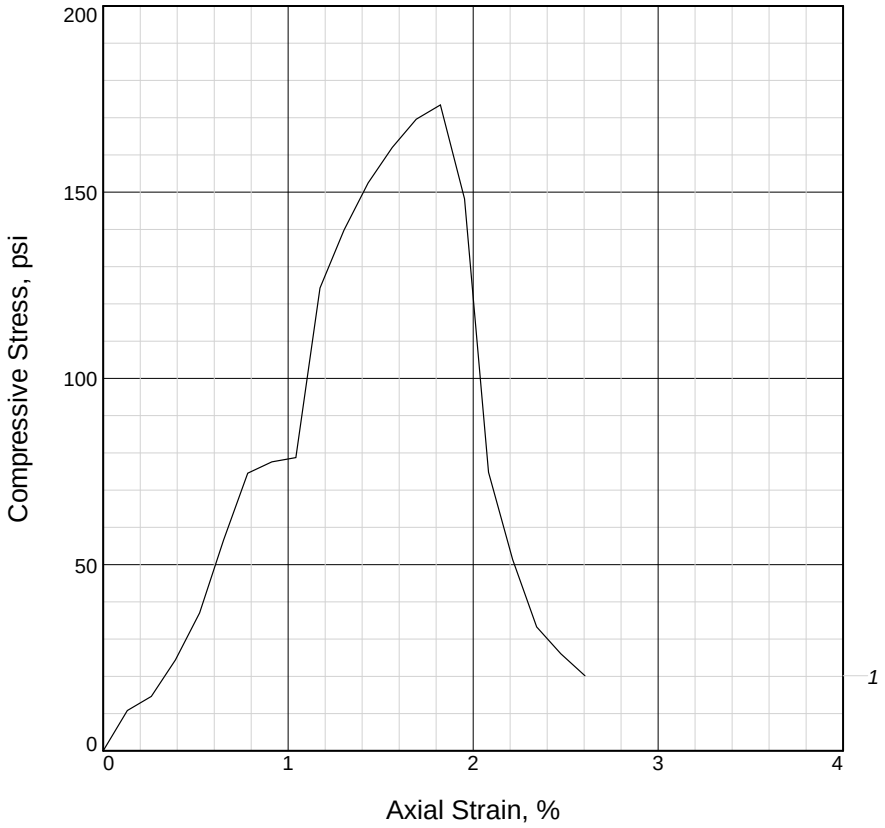


Computed Permeability

PERMEABILITY, K = 2.76E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 2.76E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	173.44			
Undrained shear strength, psi	86.72			
Failure strain,	1.8			
Strain rate, in./min.	0.500			
Water content, %	20.0			
Wet density, pcf	121.9			
Dry density, pcf	101.6			
Saturation, %	81.8			
Void ratio	0.6597			
Specimen diameter, in.	2.000			
Specimen height, in.	3.840			
Height/diameter ratio	1.92			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/23/2022

Remarks:
ASTM D-2166
14 Days

Figure M6D14

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-6

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/25/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-6		Tested By	: MLB	
Fabrication Date	: 05/04/2022		Checked By	: JBJr	
Age , Days	: 16 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.90	Final Height (in)	: 5.89
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 3.00
Initial Wet Weight (g)	: 1322.30	Final Wet Weight (g)	: 1381.57
Wet Density (pcf)	: 120.68	Wet Density (pcf)	: 126.30
Moisture Content %	: 19.62	Moisture Content %	: 24.98
Dry Density (pcf)	: 100.88	Dry Density (pcf)	: 101.06
Initial Void Ratio	: 0.6824	Final Void Ratio	: 0.6795
Saturation ,%	: 78.2	Saturation ,%	: 100.0

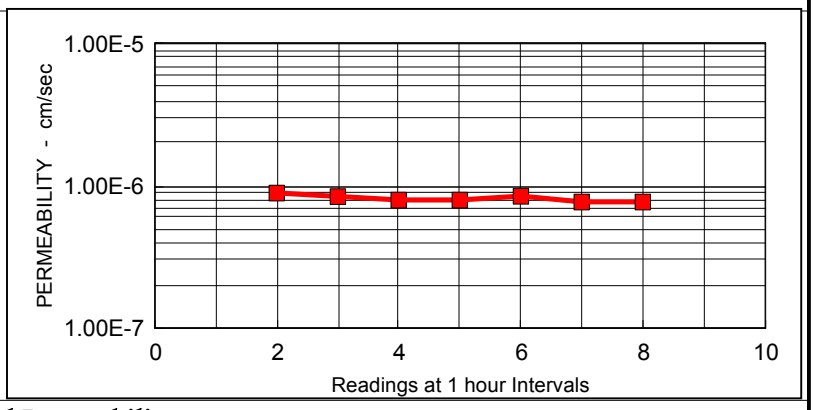
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.70	Gradient	: 25.30
Tail Water (psi)	: 52.30		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	: 3.2
Length, L	(in)	: 5.89
Area, A	(sqin)	: 7.07
Head, h	**(psi)**	: **5.40**
Time, t	(min)	: 60
Temp, T	(Deg C)	: 19.8

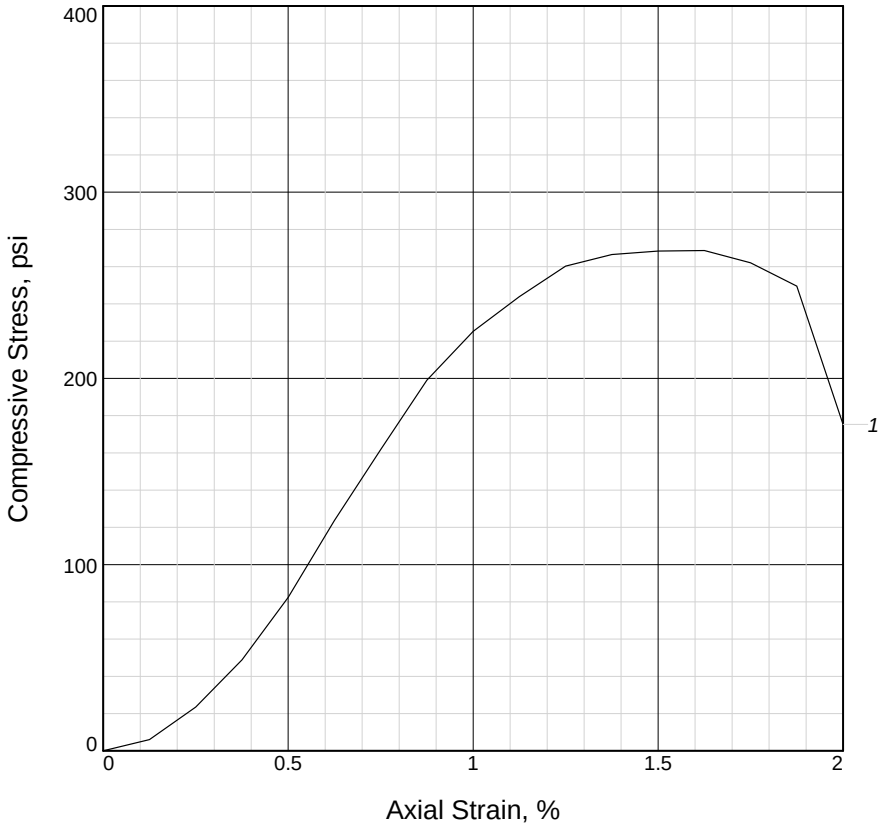


Computed Permeability

PERMEABILITY, K = 7.71E-007 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 7.97E-007 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	268.67			
Undrained shear strength, psi	134.34			
Failure strain,	1.6			
Strain rate, in./min.	0.500			
Water content, %	23.8			
Wet density, pcf	124.1			
Dry density, pcf	100.2			
Saturation, %	94.4			
Void ratio	0.6818			
Specimen diameter, in.	2.000			
Specimen height, in.	4.000			
Height/diameter ratio	2.00			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 06/10/2022

Remarks:
ASTM D-2166
28 Days

Figure M6D28

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-6

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 06/08/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-6		Tested By	: MLB	
Fabrication Date	: 05/04/2022		Checked By	: JBJr	
Age , Days	: 28 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 4.00	Final Height (in)	: 4.00
Initial Diameter (in)	: 2.00	Final Diameter (in)	: 2.00
Initial Wet Weight (g)	: 396.00	Final Wet Weight (g)	: 415.07
Wet Density (pcf)	: 119.94	Wet Density (pcf)	: 125.72
Moisture Content %	: 19.78	Moisture Content %	: 25.55
Dry Density (pcf)	: 100.13	Dry Density (pcf)	: 100.13
Initial Void Ratio	: 0.6950	Final Void Ratio	: 0.6950
Saturation ,%	: 77.4	Saturation ,%	: 100.0

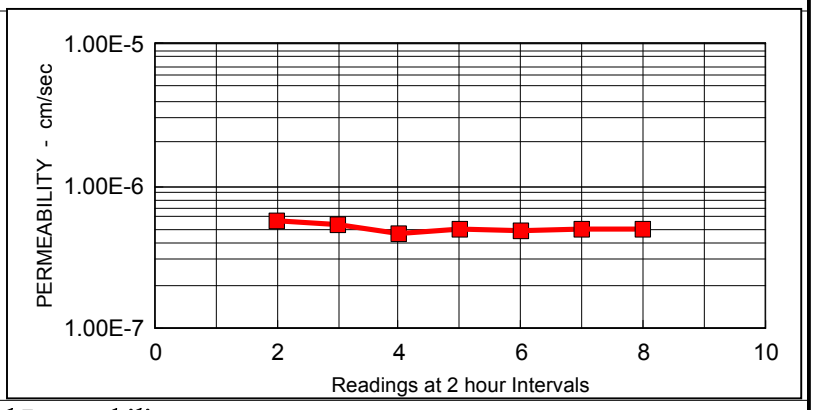
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 56.40	Gradient	: 19.32
Tail Water (psi)	: 53.60		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	: 1.4
Length, L	(in)	: 4.00
Area, A	(sqin)	: 3.14
Head, h	**(psi)**	: **2.80**
Time, t	(min)	: 120
Temp, T	(Deg C)	: 19.8

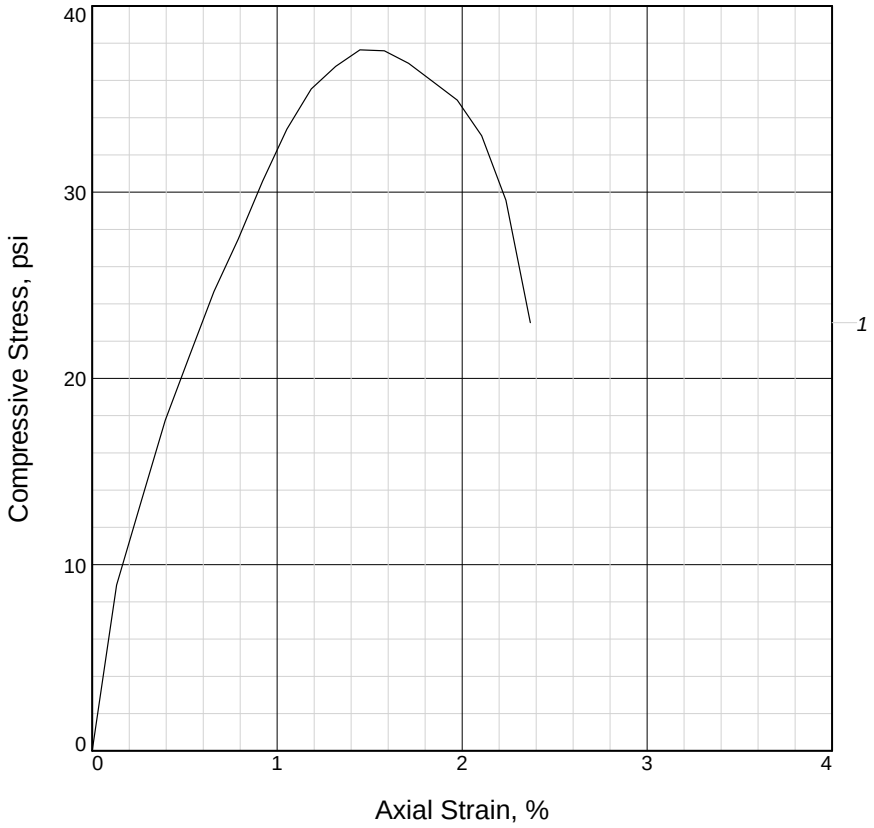


Computed Permeability

PERMEABILITY, K = 4.97E-007 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 4.92E-007 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	37.64			
Undrained shear strength, psi	18.82			
Failure strain,	1.4			
Strain rate, in./min.	0.500			
Water content, %	21.2			
Wet density, pcf	116.2			
Dry density, pcf	95.8			
Saturation, %	75.6			
Void ratio	0.7588			
Specimen diameter, in.	2.000			
Specimen height, in.	3.800			
Height/diameter ratio	1.90			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/20/2022

Remarks:
ASTM D-2166
7 Days

Figure M7D7

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-7

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/20/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-7		Tested By	: MLB	
Fabrication Date	: 05/04/2022		Checked By	: JBJr	
Age , Days	: 12 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	:	5.77	Final Height (in)	:	5.75
Initial Diameter (in)	:	3.00	Final Diameter (in)	:	2.99
Initial Wet Weight (g)	:	1227.00	Final Wet Weight (g)	:	1296.35
Wet Density (pcf)	:	114.51	Wet Density (pcf)	:	122.21
Moisture Content %	:	22.30	Moisture Content %	:	29.21
Dry Density (pcf)	:	93.63	Dry Density (pcf)	:	94.58
Initial Void Ratio	:	0.8128	Final Void Ratio	:	0.7945
Saturation ,%	:	74.6	Saturation ,%	:	100.0

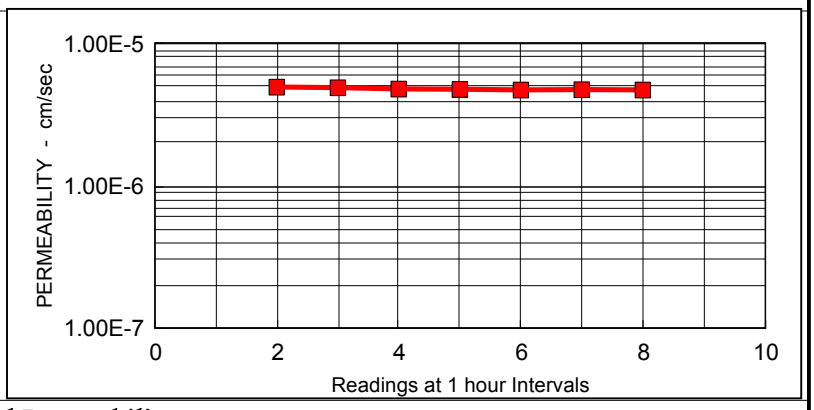
Test Parameters

Fluid	:	De-Aired Water	**Effective**		
Cell Pressure (psi)	:	65.00	**Confining Pressure (psi)**	:	**10**
Head Water (psi)	:	57.60	Gradient	:	24.96
Tail Water (psi)	:	52.40			

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	:	19.3
Length, L	(in)	:	5.75
Area, A	(sqin)	:	7.02
Head, h	**(psi)**	:	**5.20**
Time, t	(min)	:	60
Temp, T	(Deg C)	:	19.8

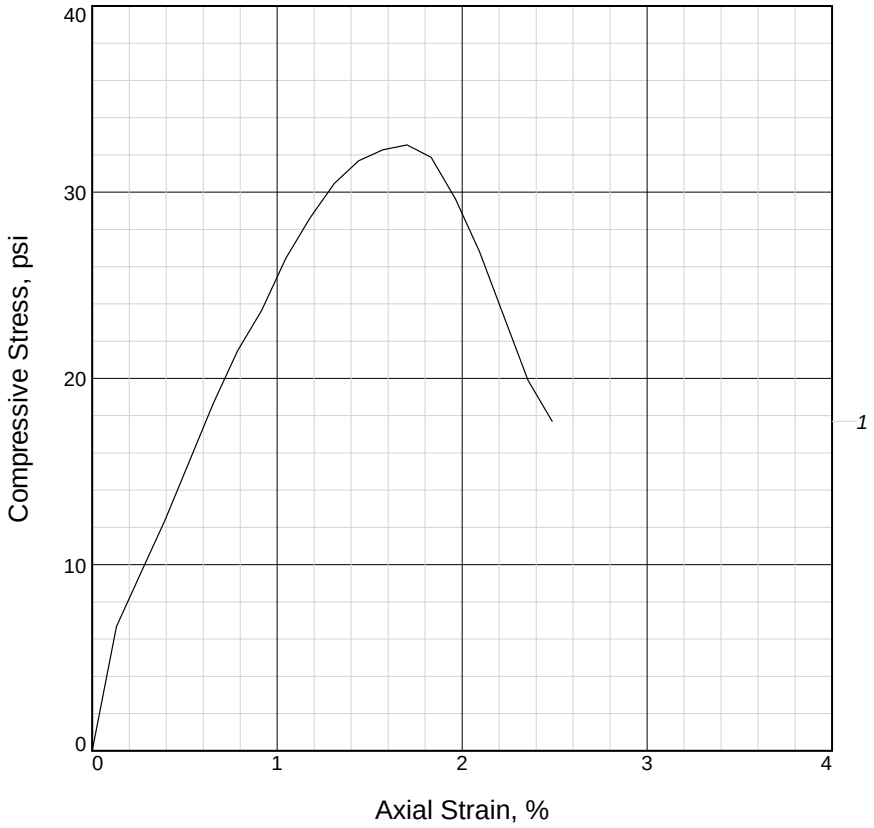


Computed Permeability

PERMEABILITY, K = 4.75E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 4.76E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	32.54			
Undrained shear strength, psi	16.27			
Failure strain,	1.7			
Strain rate, in./min.	0.500			
Water content, %	21.6			
Wet density, pcf	115.2			
Dry density, pcf	94.7			
Saturation, %	74.8			
Void ratio	0.7800			
Specimen diameter, in.	2.000			
Specimen height, in.	3.820			
Height/diameter ratio	1.91			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/23/2022
Remarks:
ASTM D-2166
14 Days

Figure M7D14

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-7

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/25/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-7		Tested By	: MLB	
Fabrication Date	: 05/04/2022		Checked By	: JBJr	
Age , Days	: 16 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.71	Final Height (in)	: 5.70
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 3.00
Initial Wet Weight (g)	: 1214.30	Final Wet Weight (g)	: 1291.13
Wet Density (pcf)	: 114.51	Wet Density (pcf)	: 121.97
Moisture Content %	: 21.77	Moisture Content %	: 29.48
Dry Density (pcf)	: 94.04	Dry Density (pcf)	: 94.20
Initial Void Ratio	: 0.8049	Final Void Ratio	: 0.8017
Saturation ,%	: 73.6	Saturation ,%	: 100.0

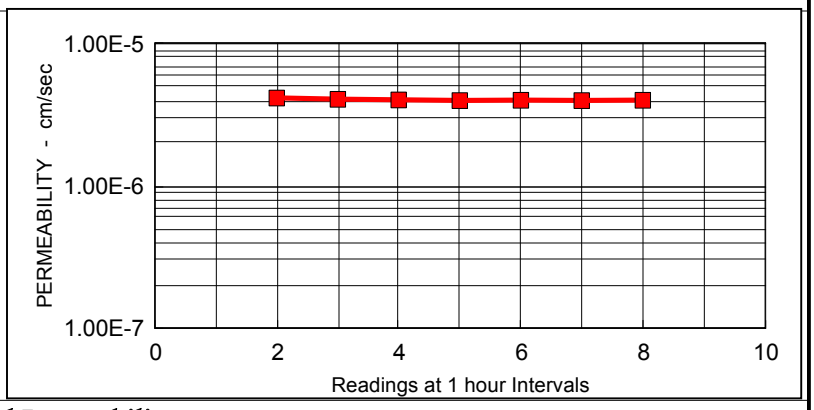
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.60	Gradient	: 25.18
Tail Water (psi)	: 52.40		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	:	16.6
Length, L	(in)	:	5.70
Area, A	(sqin)	:	7.07
Head, h	**(psi)**	:	**5.20**
Time, t	(min)	:	60
Temp, T	(Deg C)	:	19.8

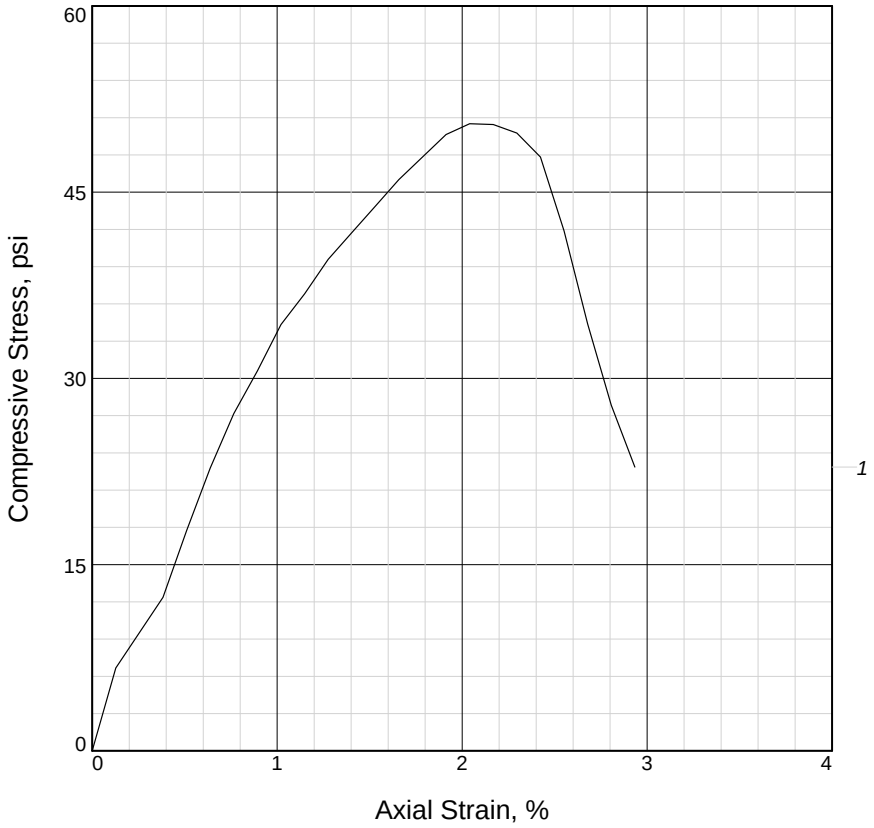


Computed Permeability

PERMEABILITY, K = 4.02E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 4.01E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	50.51			
Undrained shear strength, psi	25.26			
Failure strain,	2.0			
Strain rate, in./min.	0.500			
Water content, %	20.3			
Wet density, pcf	115.4			
Dry density, pcf	95.9			
Saturation, %	72.6			
Void ratio	0.7571			
Specimen diameter, in.	2.000			
Specimen height, in.	3.920			
Height/diameter ratio	1.96			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/20/2022

Remarks:
ASTM D-2166
7 Days

Figure M8D7

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-8

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/20/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-8		Tested By	: MLB	
Fabrication Date	: 05/04/2022		Checked By	: JBJr	
Age , Days	: 12 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.70	Final Height (in)	: 5.68
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 3.00
Initial Wet Weight (g)	: 1225.30	Final Wet Weight (g)	: 1298.61
Wet Density (pcf)	: 115.75	Wet Density (pcf)	: 123.11
Moisture Content %	: 20.99	Moisture Content %	: 28.23
Dry Density (pcf)	: 95.67	Dry Density (pcf)	: 96.00
Initial Void Ratio	: 0.7741	Final Void Ratio	: 0.7679
Saturation ,%	: 73.8	Saturation ,%	: 100.0

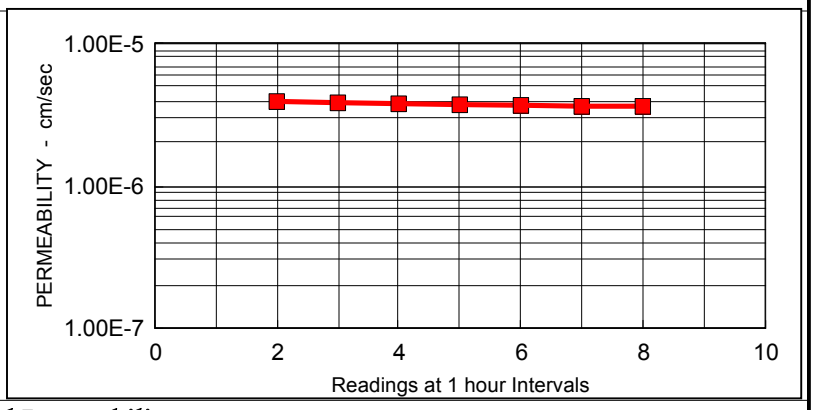
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.60	Gradient	: 25.27
Tail Water (psi)	: 52.40		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	:	15.1
Length, L	(in)	:	5.68
Area, A	(sqin)	:	7.07
Head, h	**(psi)**	:	**5.20**
Time, t	(min)	:	60
Temp, T	(Deg C)	:	19.8

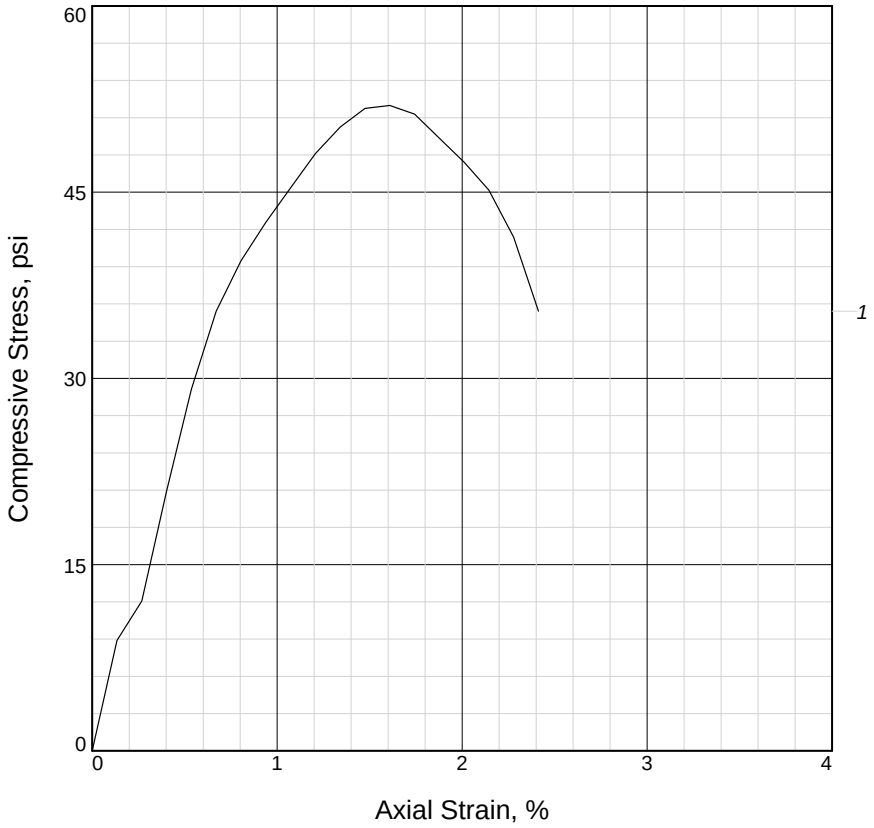


Computed Permeability

PERMEABILITY, K = 3.64E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 3.66E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	51.99			
Undrained shear strength, psi	25.99			
Failure strain,	1.6			
Strain rate, in./min.	0.500			
Water content, %	21.1			
Wet density, pcf	115.2			
Dry density, pcf	95.2			
Saturation, %	73.8			
Void ratio	0.7714			
Specimen diameter, in.	2.000			
Specimen height, in.	3.730			
Height/diameter ratio	1.86			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/23/2022

Remarks:
ASTM D-2166
14 Days

Figure M8D14

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-8

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/25/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-8		Tested By	: MLB	
Fabrication Date	: 05/04/2022		Checked By	: JBJr	
Age , Days	: 16 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.82	Final Height (in)	: 5.80
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 3.00
Initial Wet Weight (g)	: 1228.30	Final Wet Weight (g)	: 1316.50
Wet Density (pcf)	: 113.64	Wet Density (pcf)	: 122.22
Moisture Content %	: 20.54	Moisture Content %	: 29.20
Dry Density (pcf)	: 94.28	Dry Density (pcf)	: 94.60
Initial Void Ratio	: 0.8003	Final Void Ratio	: 0.7941
Saturation ,%	: 69.8	Saturation ,%	: 100.0

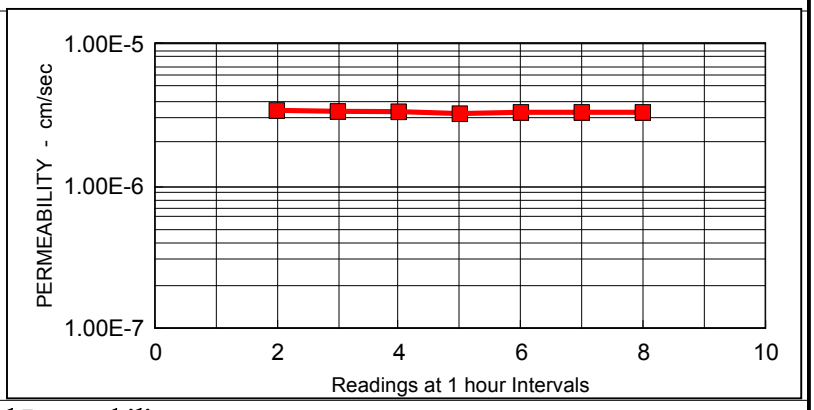
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.60	Gradient	: 24.74
Tail Water (psi)	: 52.40		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	:	13.4
Length, L	(in)	:	5.80
Area, A	(sqin)	:	7.07
Head, h	**(psi)**	:	**5.20**
Time, t	(min)	:	60
Temp, T	(Deg C)	:	19.8

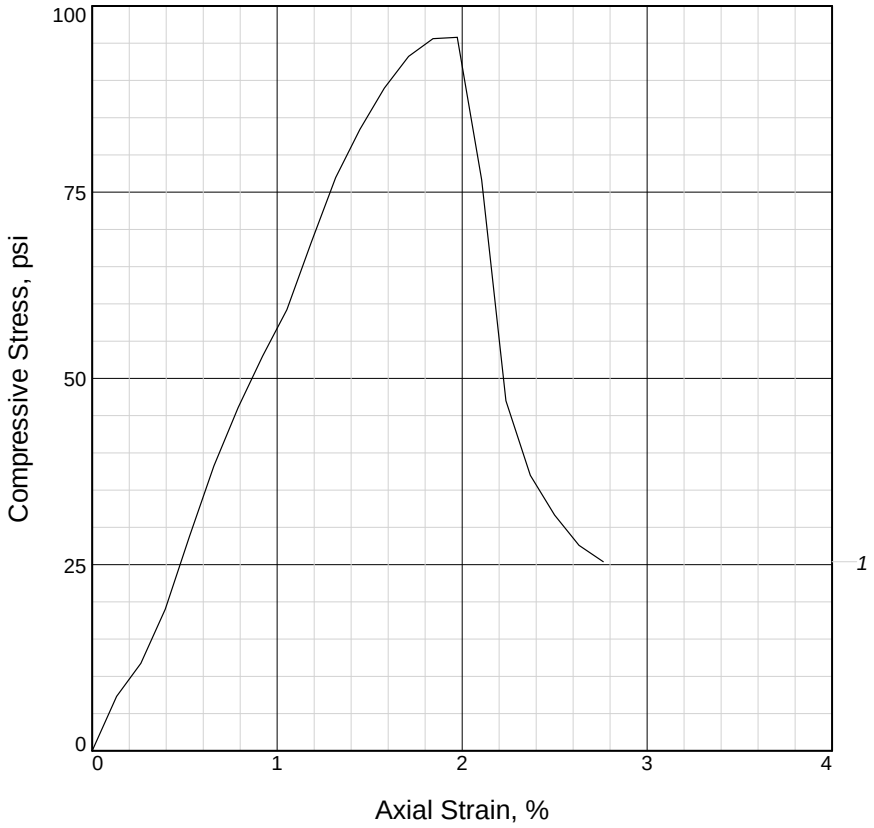


Computed Permeability

PERMEABILITY, K = 3.30E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 3.30E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	95.79			
Undrained shear strength, psi	47.90			
Failure strain,	2.0			
Strain rate, in./min.	0.500			
Water content, %	20.9			
Wet density, pcf	116.9			
Dry density, pcf	96.7			
Saturation, %	75.8			
Void ratio	0.7432			
Specimen diameter, in.	2.000			
Specimen height, in.	3.800			
Height/diameter ratio	1.90			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/20/2022

Remarks:
ASTM D-2166
7 Days

Figure M9D7

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-9

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/20/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-9		Tested By	: MLB	
Fabrication Date	: 05/06/2022		Checked By	: JBJr	
Age , Days	: 10 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	:	5.73	Final Height (in)	:	5.71
Initial Diameter (in)	:	3.00	Final Diameter (in)	:	3.00
Initial Wet Weight (g)	:	1246.40	Final Wet Weight (g)	:	1312.33
Wet Density (pcf)	:	117.13	Wet Density (pcf)	:	123.76
Moisture Content %	:	21.14	Moisture Content %	:	27.55
Dry Density (pcf)	:	96.69	Dry Density (pcf)	:	97.03
Initial Void Ratio	:	0.7554	Final Void Ratio	:	0.7493
Saturation ,%	:	76.1	Saturation ,%	:	100.0

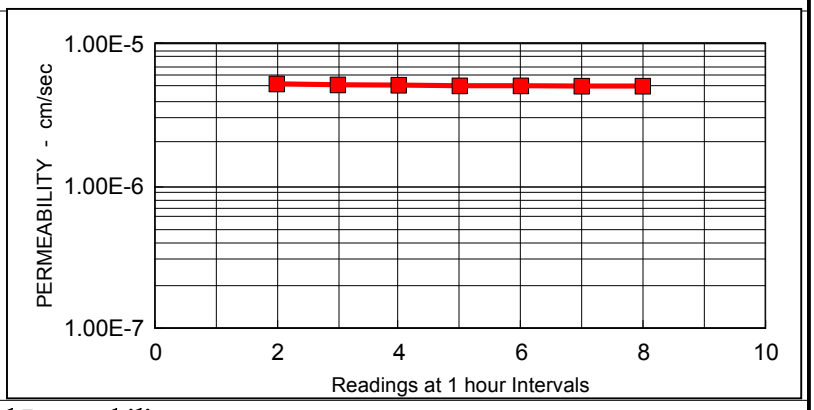
Test Parameters

Fluid	:	De-Aired Water	**Effective**		
Cell Pressure (psi)	:	65.00	**Confining Pressure (psi)**	:	**10**
Head Water (psi)	:	57.60	Gradient	:	25.13
Tail Water (psi)	:	52.40			

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	:	20.8
Length, L	(in)	:	5.71
Area, A	(sqin)	:	7.07
Head, h	**(psi)**	:	**5.20**
Time, t	(min)	:	60
Temp, T	(Deg C)	:	19.8

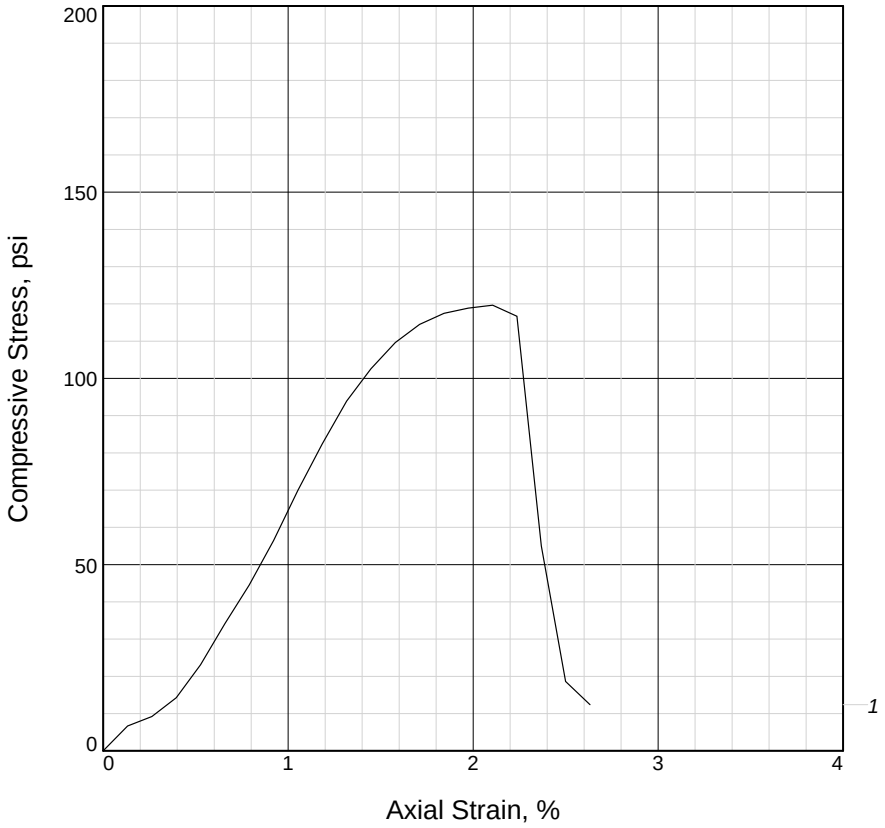


Computed Permeability

PERMEABILITY, K = 5.05E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 5.05E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	119.66			
Undrained shear strength, psi	59.83			
Failure strain,	2.1			
Strain rate, in./min.	0.500			
Water content, %	20.7			
Wet density, pcf	117.6			
Dry density, pcf	97.4			
Saturation, %	76.5			
Void ratio	0.7300			
Specimen diameter, in.	2.000			
Specimen height, in.	3.800			
Height/diameter ratio	1.90			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/23/2022

Remarks:
ASTM D-2166
14 Days

Figure M9D14

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-9

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/25/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-9		Tested By	: MLB	
Fabrication Date	: 05/06/2022		Checked By	: JBJr	
Age , Days	: 14 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.75	Final Height (in)	: 5.73
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 3.00
Initial Wet Weight (g)	: 1252.10	Final Wet Weight (g)	: 1318.76
Wet Density (pcf)	: 117.25	Wet Density (pcf)	: 123.93
Moisture Content %	: 20.93	Moisture Content %	: 27.37
Dry Density (pcf)	: 96.96	Dry Density (pcf)	: 97.30
Initial Void Ratio	: 0.7505	Final Void Ratio	: 0.7444
Saturation ,%	: 75.9	Saturation ,%	: 100.0

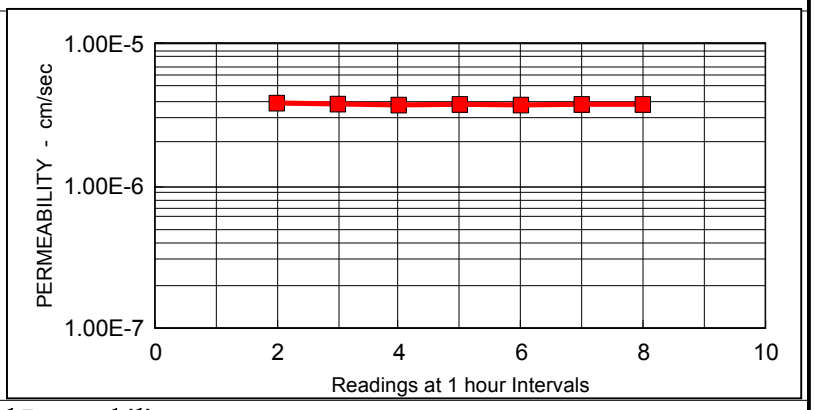
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.60	Gradient	: 25.05
Tail Water (psi)	: 52.40		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	:	15.4
Length, L	(in)	:	5.73
Area, A	(sqin)	:	7.07
Head, h	**(psi)**	:	**5.20**
Time, t	(min)	:	60
Temp, T	(Deg C)	:	19.8

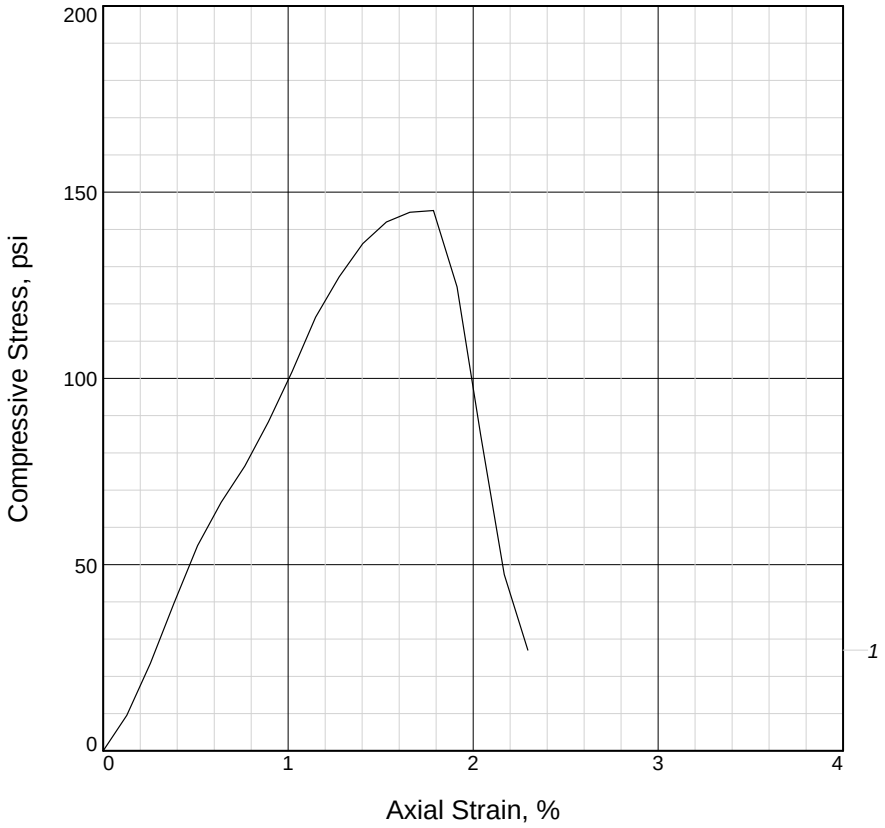


Computed Permeability

PERMEABILITY, K = 3.75E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 3.74E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	145.06			
Undrained shear strength, psi	72.53			
Failure strain,	1.8			
Strain rate, in./min.	0.500			
Water content, %	26.0			
Wet density, pcf	119.6			
Dry density, pcf	94.9			
Saturation, %	90.4			
Void ratio	0.7753			
Specimen diameter, in.	2.000			
Specimen height, in.	3.920			
Height/diameter ratio	1.96			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 06/10/2022

Remarks:
ASTM D-2166
28 Days

Figure M9D28

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-9

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 06/10/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-9		Tested By	: MLB	
Fabrication Date	: 05/06/2022		Checked By	: JBJr	
Age , Days	: 28 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 3.92	Final Height (in)	: 3.91
Initial Diameter (in)	: 2.00	Final Diameter (in)	: 2.00
Initial Wet Weight (g)	: 371.90	Final Wet Weight (g)	: 395.52
Wet Density (pcf)	: 114.94	Wet Density (pcf)	: 122.55
Moisture Content %	: 21.14	Moisture Content %	: 28.83
Dry Density (pcf)	: 94.88	Dry Density (pcf)	: 95.13
Initial Void Ratio	: 0.7888	Final Void Ratio	: 0.7842
Saturation ,%	: 72.9	Saturation ,%	: 100.0

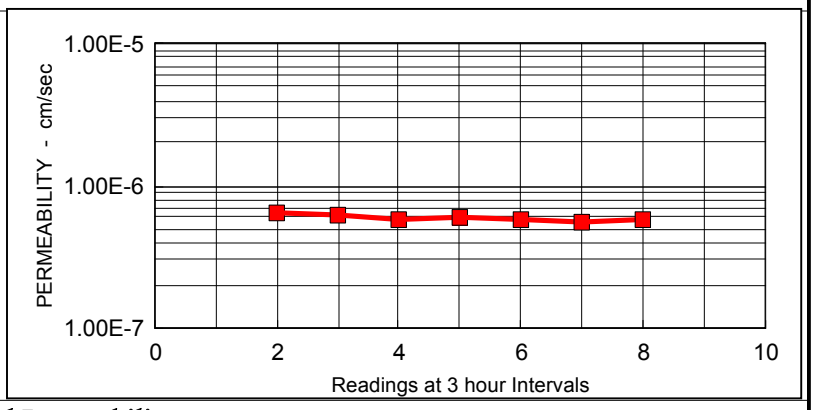
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 56.40	Gradient	: 19.76
Tail Water (psi)	: 53.60		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	:	2.5
Length, L	(in)	:	3.91
Area, A	(sqin)	:	3.14
Head, h	**(psi)**	:	**2.80**
Time, t	(min)	:	180
Temp, T	(Deg C)	:	19.8

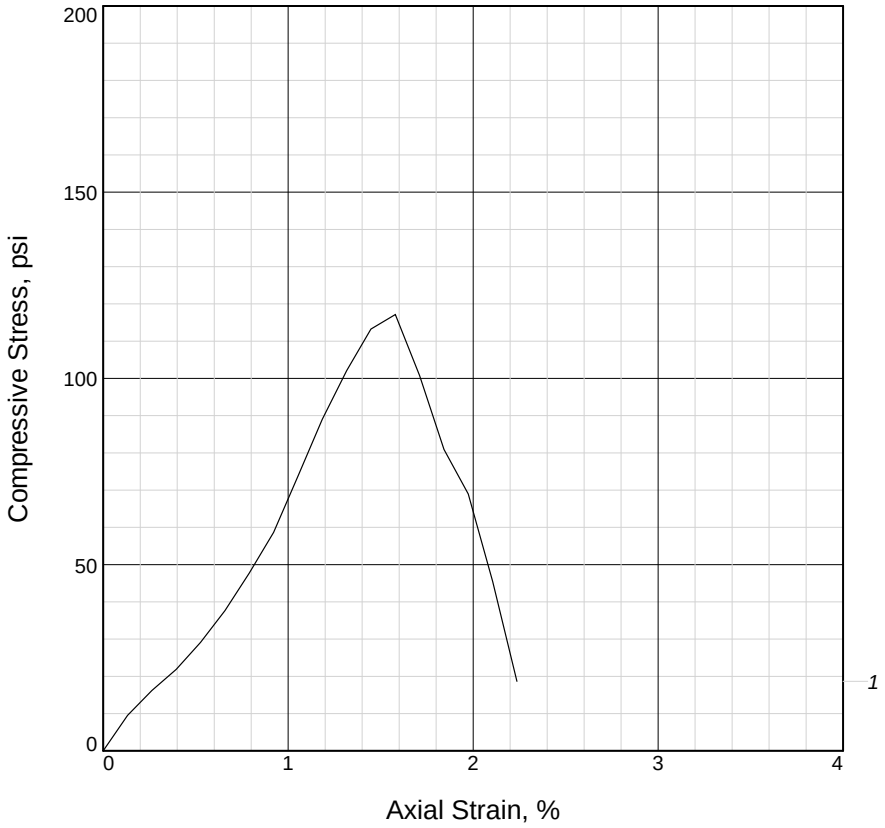


Computed Permeability

PERMEABILITY, K = 5.79E-007 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 5.71E-007 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	117.17			
Undrained shear strength, psi	58.58			
Failure strain,	1.6			
Strain rate, in./min.	0.500			
Water content, %	21.4			
Wet density, pcf	114.1			
Dry density, pcf	94.0			
Saturation, %	72.8			
Void ratio	0.7923			
Specimen diameter, in.	2.000			
Specimen height, in.	3.800			
Height/diameter ratio	1.90			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/20/2022

Remarks:
ASTM D-2166
7 Days

Figure M10D7

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-10

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/20/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-10		Tested By	: MLB	
Fabrication Date	: 05/06/2022		Checked By	: JBJr	
Age , Days	: 10 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.82	Final Height (in)	: 5.81
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 3.00
Initial Wet Weight (g)	: 1253.80	Final Wet Weight (g)	: 1333.34
Wet Density (pcf)	: 116.00	Wet Density (pcf)	: 123.57
Moisture Content %	: 20.12	Moisture Content %	: 27.74
Dry Density (pcf)	: 96.57	Dry Density (pcf)	: 96.74
Initial Void Ratio	: 0.7575	Final Void Ratio	: 0.7545
Saturation ,%	: 72.2	Saturation ,%	: 100.0

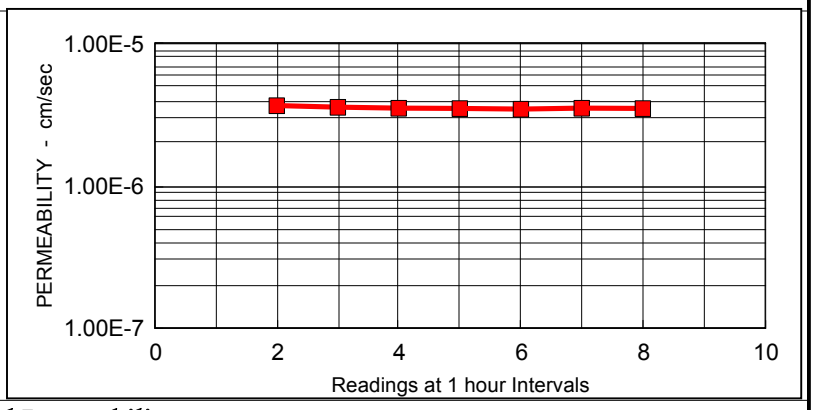
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.60	Gradient	: 24.70
Tail Water (psi)	: 52.40		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	: 14.2
Length, L	(in)	: 5.81
Area, A	(sqin)	: 7.07
Head, h	**(psi)**	: **5.20**
Time, t	(min)	: 60
Temp, T	(Deg C)	: 19.8

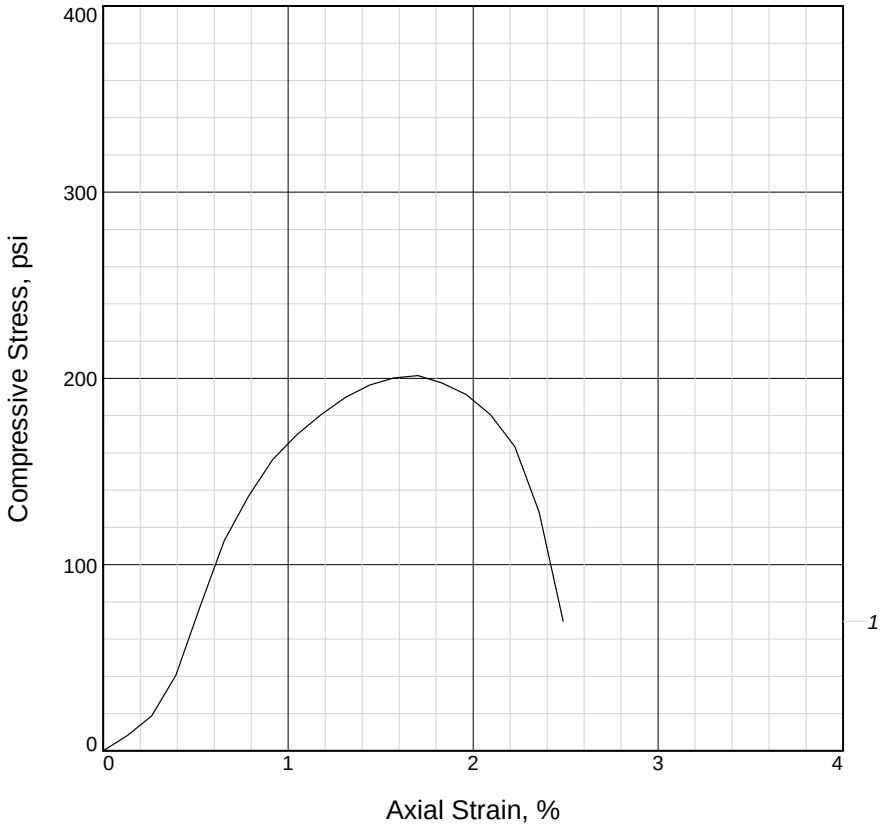


Computed Permeability

PERMEABILITY, K = 3.51E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 3.51E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	201.50			
Undrained shear strength, psi	100.75			
Failure strain,	1.7			
Strain rate, in./min.	0.500			
Water content, %	21.3			
Wet density, pcf	117.7			
Dry density, pcf	97.0			
Saturation, %	78.1			
Void ratio	0.7381			
Specimen diameter, in.	2.000			
Specimen height, in.	3.820			
Height/diameter ratio	1.91			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/23/2022

Remarks:
ASTM D-2166
14 Days

Figure M10D14

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-10

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/25/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-10		Tested By	: MLB	
Fabrication Date	: 05/06/2022		Checked By	: JBJr	
Age , Days	: 14 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.81	Final Height (in)	: 5.80
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 3.00
Initial Wet Weight (g)	: 1251.20	Final Wet Weight (g)	: 1349.07
Wet Density (pcf)	: 115.96	Wet Density (pcf)	: 125.25
Moisture Content %	: 16.88	Moisture Content %	: 26.02
Dry Density (pcf)	: 99.21	Dry Density (pcf)	: 99.38
Initial Void Ratio	: 0.7107	Final Void Ratio	: 0.7078
Saturation ,%	: 64.6	Saturation ,%	: 100.0

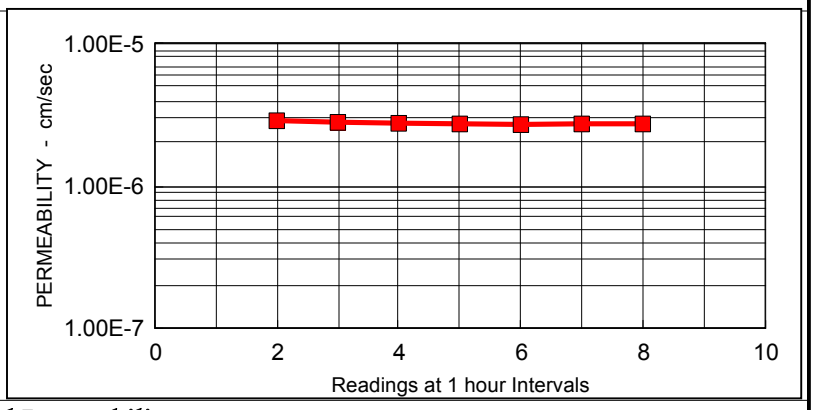
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.60	Gradient	: 24.74
Tail Water (psi)	: 52.40		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	:	11.1
Length, L	(in)	:	5.80
Area, A	(sqin)	:	7.07
Head, h	**(psi)**	:	**5.20**
Time, t	(min)	:	60
Temp, T	(Deg C)	:	19.8

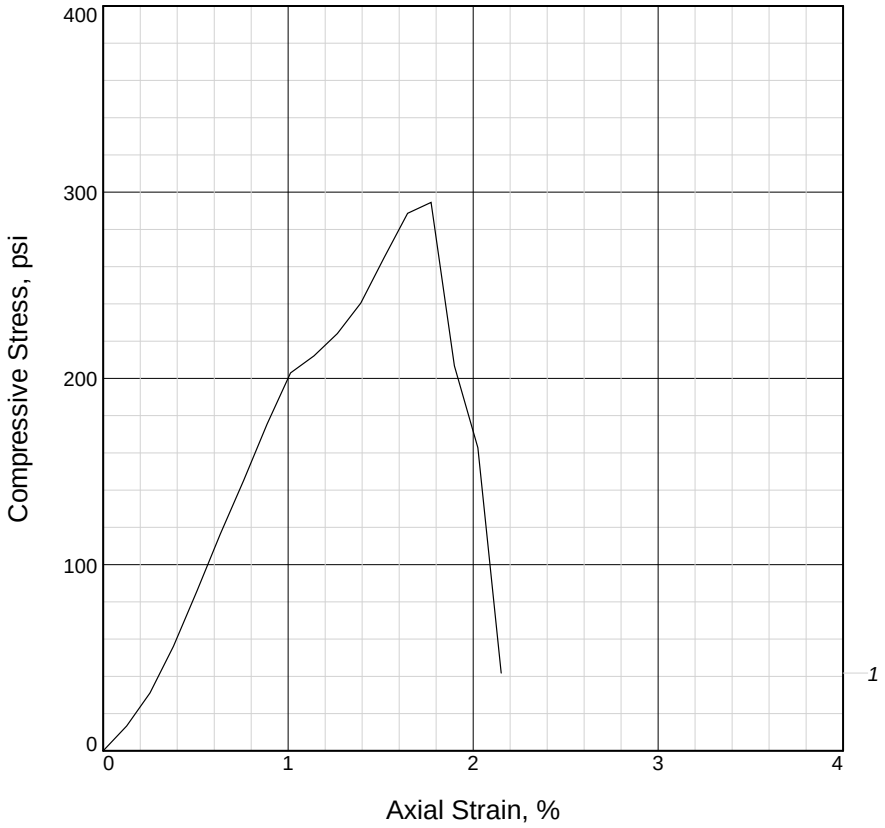


Computed Permeability

PERMEABILITY, K = 2.74E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 2.73E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	294.53			
Undrained shear strength, psi	147.27			
Failure strain,	1.8			
Strain rate, in./min.	0.500			
Water content, %	26.6			
Wet density, pcf	114.7			
Dry density, pcf	90.7			
Saturation, %	83.4			
Void ratio	0.8593			
Specimen diameter, in.	2.000			
Specimen height, in.	3.950			
Height/diameter ratio	1.98			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 06/10/2022

Remarks:
ASTM D-2166
28 Days

Figure M10D28

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-10

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 06/10/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-10		Tested By	: MLB	
Fabrication Date	: 05/06/2022		Checked By	: JBJr	
Age , Days	: 28 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 3.95	Final Height (in)	: 3.94
Initial Diameter (in)	: 2.00	Final Diameter (in)	: 2.00
Initial Wet Weight (g)	: 377.70	Final Wet Weight (g)	: 399.65
Wet Density (pcf)	: 115.85	Wet Density (pcf)	: 122.89
Moisture Content %	: 21.41	Moisture Content %	: 28.46
Dry Density (pcf)	: 95.42	Dry Density (pcf)	: 95.66
Initial Void Ratio	: 0.7787	Final Void Ratio	: 0.7742
Saturation ,%	: 74.8	Saturation ,%	: 100.0

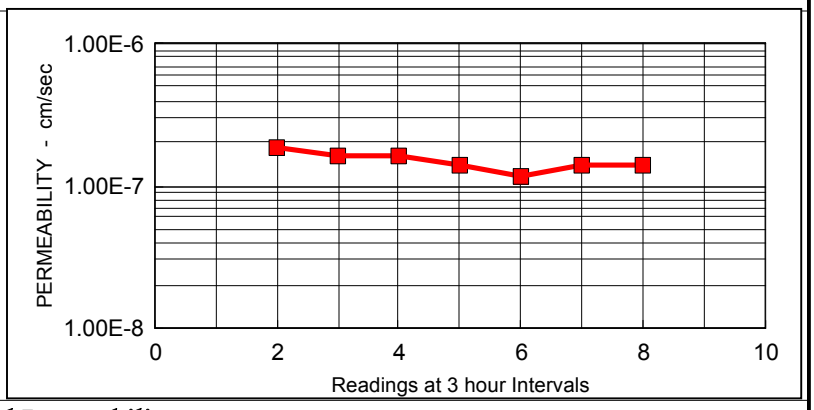
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 56.40	Gradient	: 19.61
Tail Water (psi)	: 53.60		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	: 0.6
Length, L	(in)	: 3.94
Area, A	(sqin)	: 3.14
Head, h	**(psi)**	: **2.80**
Time, t	(min)	: 180
Temp, T	(Deg C)	: 19.8

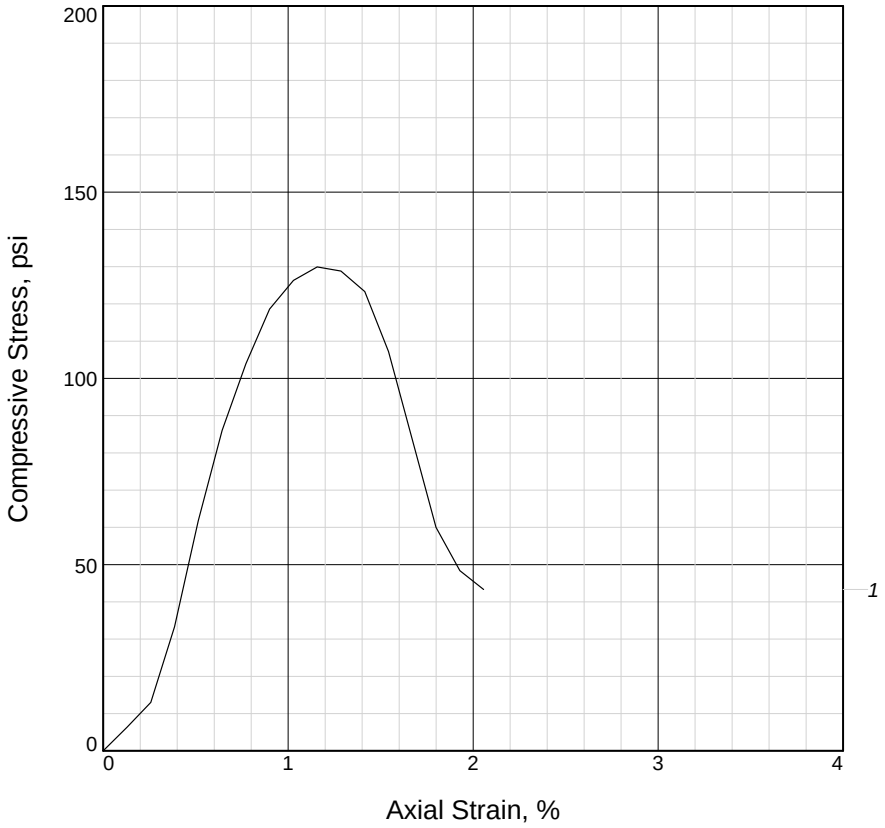


Computed Permeability

PERMEABILITY, K = 1.40E-007 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 1.32E-007 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	129.94			
Undrained shear strength, psi	64.97			
Failure strain,	1.2			
Strain rate, in./min.	0.500			
Water content, %	21.7			
Wet density, pcf	116.2			
Dry density, pcf	95.5			
Saturation, %	76.5			
Void ratio	0.7648			
Specimen diameter, in.	2.000			
Specimen height, in.	3.890			
Height/diameter ratio	1.95			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/20/2022

Remarks:
ASTM D-2166
7 Days

Figure M11D7

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-11

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/20/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-11		Tested By	: MLB	
Fabrication Date	: 05/06/2022		Checked By	: JBJr	
Age , Days	: 10 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.80	Final Height (in)	: 5.78
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 2.99
Initial Wet Weight (g)	: 1265.80	Final Wet Weight (g)	: 1325.09
Wet Density (pcf)	: 117.52	Wet Density (pcf)	: 124.27
Moisture Content %	: 21.33	Moisture Content %	: 27.01
Dry Density (pcf)	: 96.86	Dry Density (pcf)	: 97.85
Initial Void Ratio	: 0.7523	Final Void Ratio	: 0.7347
Saturation ,%	: 77.1	Saturation ,%	: 100.0

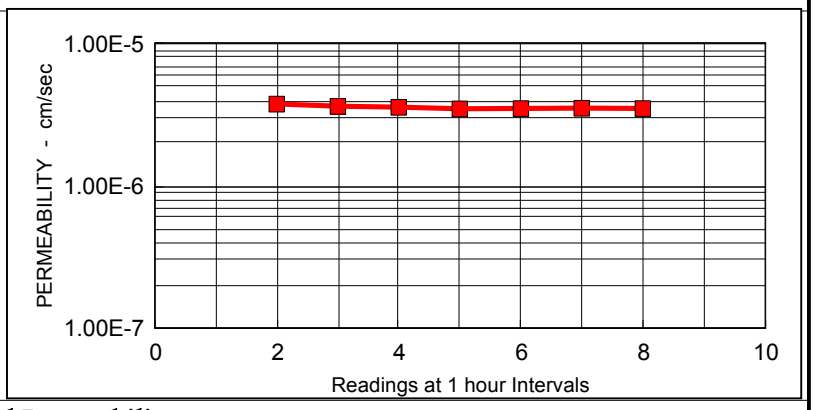
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.60	Gradient	: 24.83
Tail Water (psi)	: 52.40		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	: 14.6
Length, L	(in)	: 5.78
Area, A	(sqin)	: 7.02
Head, h	**(psi)**	: **5.20**
Time, t	(min)	: 60
Temp, T	(Deg C)	: 19.8

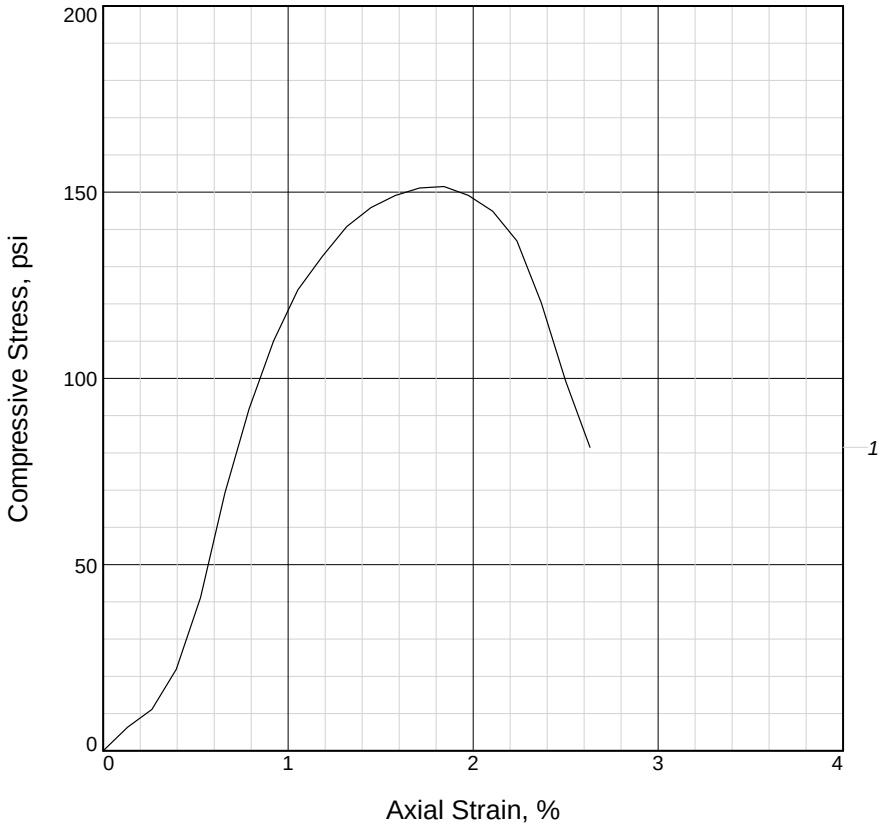


Computed Permeability

PERMEABILITY, K = 3.61E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 3.52E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	151.54			
Undrained shear strength, psi	75.77			
Failure strain,	1.8			
Strain rate, in./min.	0.500			
Water content, %	21.8			
Wet density, pcf	119.0			
Dry density, pcf	97.7			
Saturation, %	81.2			
Void ratio	0.7256			
Specimen diameter, in.	2.000			
Specimen height, in.	3.800			
Height/diameter ratio	1.90			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/23/2022
Remarks:
ASTM D-2166
14 Days

Figure M11D14

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-11

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/25/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-11		Tested By	: MLB	
Fabrication Date	: 05/06/2022		Checked By	: JBJr	
Age , Days	: 14 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.85	Final Height (in)	: 5.84
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 2.99
Initial Wet Weight (g)	: 1262.00	Final Wet Weight (g)	: 1334.28
Wet Density (pcf)	: 116.16	Wet Density (pcf)	: 123.85
Moisture Content %	: 20.55	Moisture Content %	: 27.45
Dry Density (pcf)	: 96.36	Dry Density (pcf)	: 97.17
Initial Void Ratio	: 0.7614	Final Void Ratio	: 0.7466
Saturation ,%	: 73.4	Saturation ,%	: 100.0

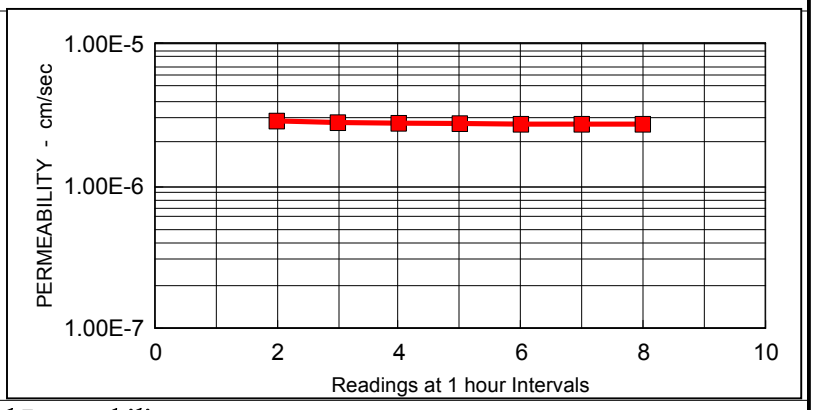
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.60	Gradient	: 24.58
Tail Water (psi)	: 52.40		

Permeability Input Data

For Last Data Point

Flow, Q (cc)	:	10.9
Length, L (in)	:	5.84
Area, A (sqin)	:	7.02
Head, h (psi)	:	**5.20**
Time, t (min)	:	60
Temp, T (Deg C)	:	19.8

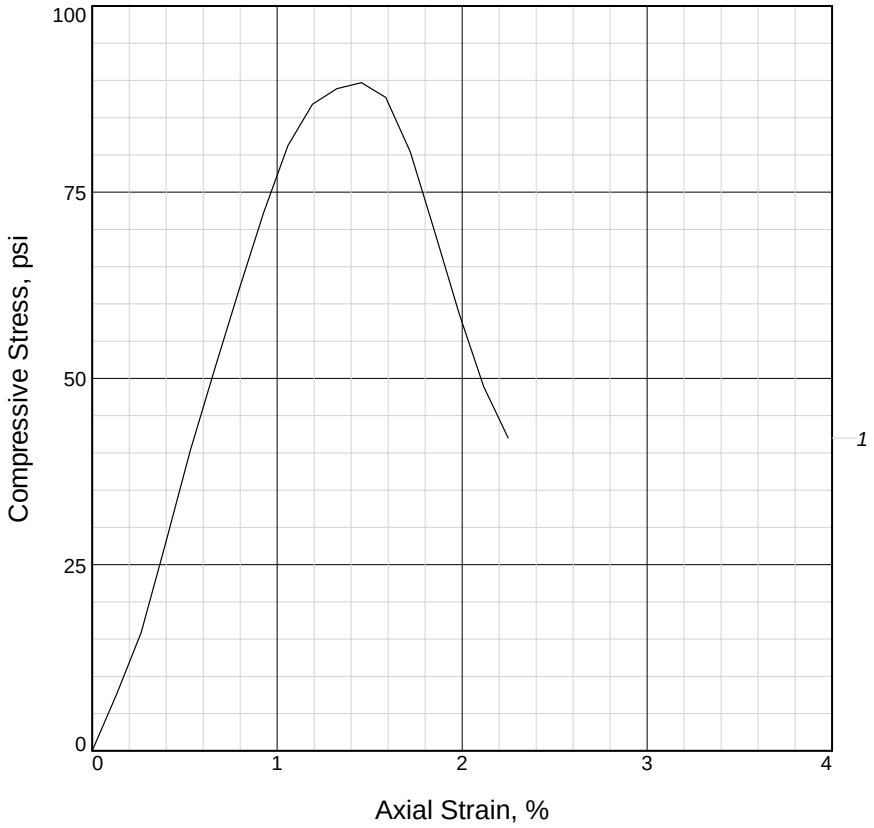


Computed Permeability

PERMEABILITY, K = 2.72E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 2.72E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	89.71			
Undrained shear strength, psi	44.86			
Failure strain,	1.5			
Strain rate, in./min.	0.500			
Water content, %	21.3			
Wet density, pcf	112.0			
Dry density, pcf	92.3			
Saturation, %	69.6			
Void ratio	0.8255			
Specimen diameter, in.	2.000			
Specimen height, in.	3.780			
Height/diameter ratio	1.89			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/20/2022
Remarks:
ASTM D-2166
7 Days

Figure M12D7

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-12

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/20/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-12		Tested By	: MLB	
Fabrication Date	: 05/06/2022		Checked By	: JBJr	
Age , Days	: 10 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.80	Final Height (in)	: 5.79
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 3.00
Initial Wet Weight (g)	: 1186.30	Final Wet Weight (g)	: 1287.58
Wet Density (pcf)	: 110.13	Wet Density (pcf)	: 119.74
Moisture Content %	: 21.66	Moisture Content %	: 32.05
Dry Density (pcf)	: 90.53	Dry Density (pcf)	: 90.68
Initial Void Ratio	: 0.8749	Final Void Ratio	: 0.8717
Saturation ,%	: 67.3	Saturation ,%	: 100.0

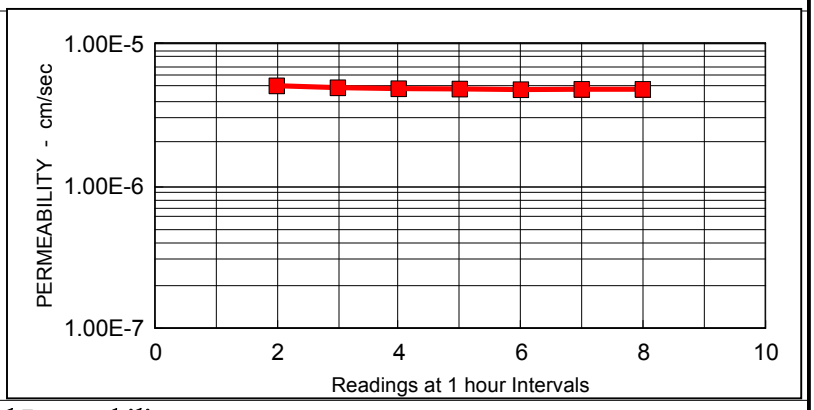
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.60	Gradient	: 24.79
Tail Water (psi)	: 52.40		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	: 19.5
Length, L	(in)	: 5.79
Area, A	(sqin)	: 7.07
Head, h	**(psi)**	: **5.20**
Time, t	(min)	: 60
Temp, T	(Deg C)	: 19.8

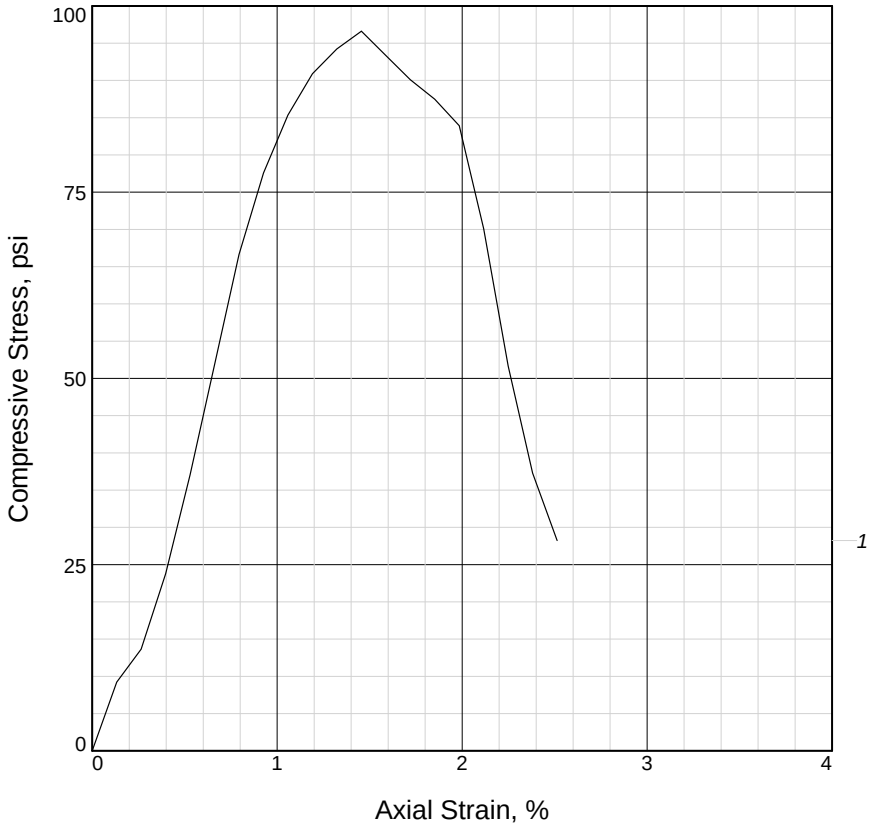


Computed Permeability

PERMEABILITY, K = 4.80E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 4.79E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	96.61			
Undrained shear strength, psi	48.31			
Failure strain,	1.5			
Strain rate, in./min.	0.500			
Water content, %	21.9			
Wet density, pcf	112.5			
Dry density, pcf	92.3			
Saturation, %	71.4			
Void ratio	0.8263			
Specimen diameter, in.	2.000			
Specimen height, in.	3.780			
Height/diameter ratio	1.89			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.70	**Type:** Cylinder

Project No.: 22LS3987
Date: 05/23/2022

Remarks:
ASTM D-2166
14 Days

Figure M12D14

Client: GeoSolutions

Project: 21-137 Flushing, NY

Location: Flushing, NY
Sample Number: M-12

UNCONFINED COMPRESSION TEST

JLT Laboratories, Inc.

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 05/25/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-12		Tested By	: MLB	
Fabrication Date	: 05/06/2022		Checked By	: JBJr	
Age , Days	: 14 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.88	Final Height (in)	: 5.86
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 3.00
Initial Wet Weight (g)	: 1193.90	Final Wet Weight (g)	: 1303.98
Wet Density (pcf)	: 109.33	Wet Density (pcf)	: 119.82
Moisture Content %	: 20.82	Moisture Content %	: 31.96
Dry Density (pcf)	: 90.50	Dry Density (pcf)	: 90.80
Initial Void Ratio	: 0.8755	Final Void Ratio	: 0.8692
Saturation ,%	: 64.7	Saturation ,%	: 100.0

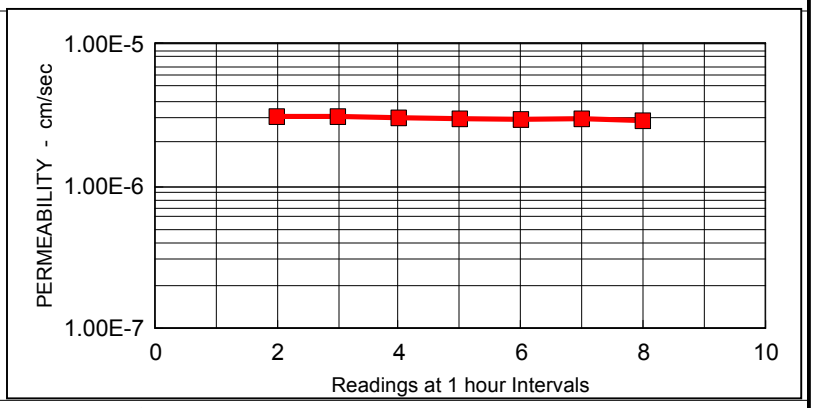
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.70	Gradient	: 25.43
Tail Water (psi)	: 52.30		

Permeability Input Data

For Last Data Point

Flow, Q (cc)	:	12.4
Length, L (in)	:	5.86
Area, A (sqin)	:	7.07
Head, h (psi)	:	**5.40**
Time, t (min)	:	60
Temp, T (Deg C)	:	19.8

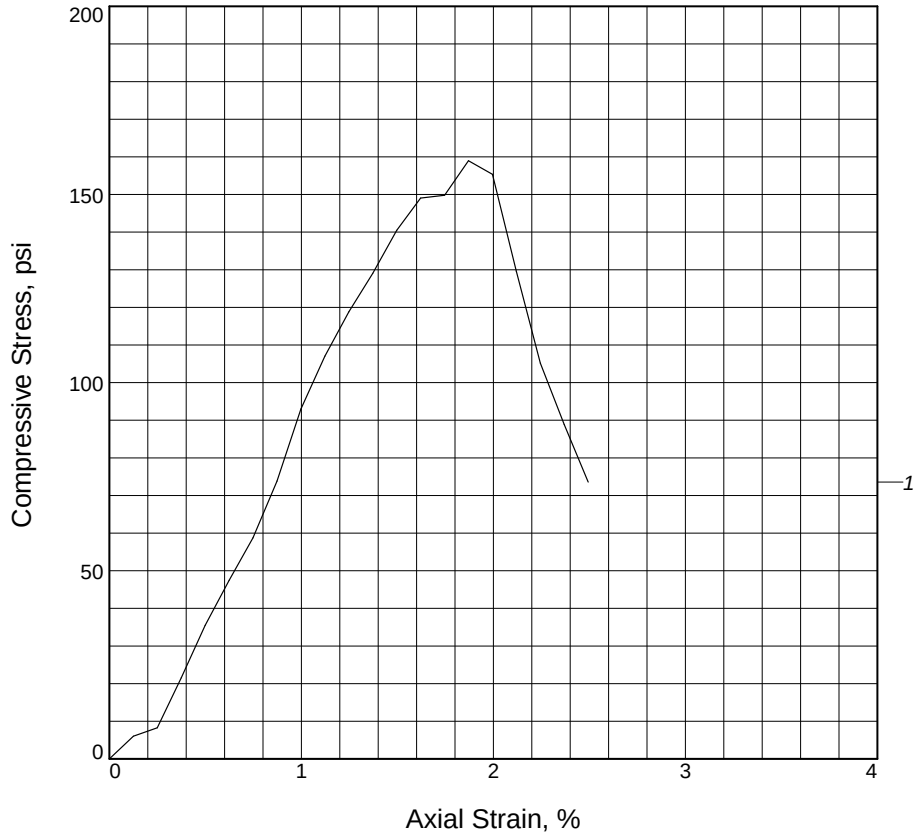


Computed Permeability

PERMEABILITY, K = 2.97E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 2.93E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	158.99			
Undrained shear strength, psi	79.49			
Failure strain, %	1.9			
Strain rate, in./min.	0.050			
Water content, %	20.6			
Wet density, pcf	124.0			
Dry density, pcf	102.8			
Saturation, %	85.8			
Void ratio	0.6516			
Specimen diameter, in.	2.00			
Specimen height, in.	4.01			
Height/diameter ratio	2.00			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.72	**Type:** Cylinder

Project No.: 22LS3987
Date Sampled: 06/14/2022
Remarks:
28 Days

Figure M13@28D

Client: GeoSolutions

Project: Flushing, NY
(21-137)
Location: Flushing, NY
Sample Number: M-13

UNCONFINED COMPRESSION TEST
JLT Laboratories, Inc.
Canonsburg, PA

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 07/18/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-13		Tested By	: MLB	
Fabrication Date	: 07/08/2022		Checked By	: JBJr	
Age , Days	: 28 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.00	Final Height (in)	: 5.00
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 3.00
Initial Wet Weight (g)	: 1140.00	Final Wet Weight (g)	: 1178.33
Wet Density (pcf)	: 122.77	Wet Density (pcf)	: 126.90
Moisture Content %	: 20.37	Moisture Content %	: 24.41
Dry Density (pcf)	: 102.00	Dry Density (pcf)	: 102.00
Initial Void Ratio	: 0.6641	Final Void Ratio	: 0.6641
Saturation ,%	: 83.4	Saturation ,%	: 100.0

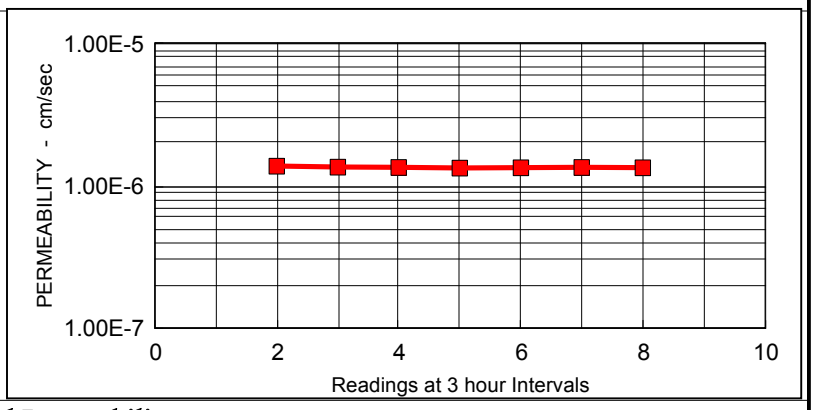
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.30	Gradient	: 25.39
Tail Water (psi)	: 52.70		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	:	16.8
Length, L	(in)	:	5.00
Area, A	(sqin)	:	7.07
Head, h	**(psi)**	:	**4.60**
Time, t	(min)	:	180
Temp, T	(Deg C)	:	19.8

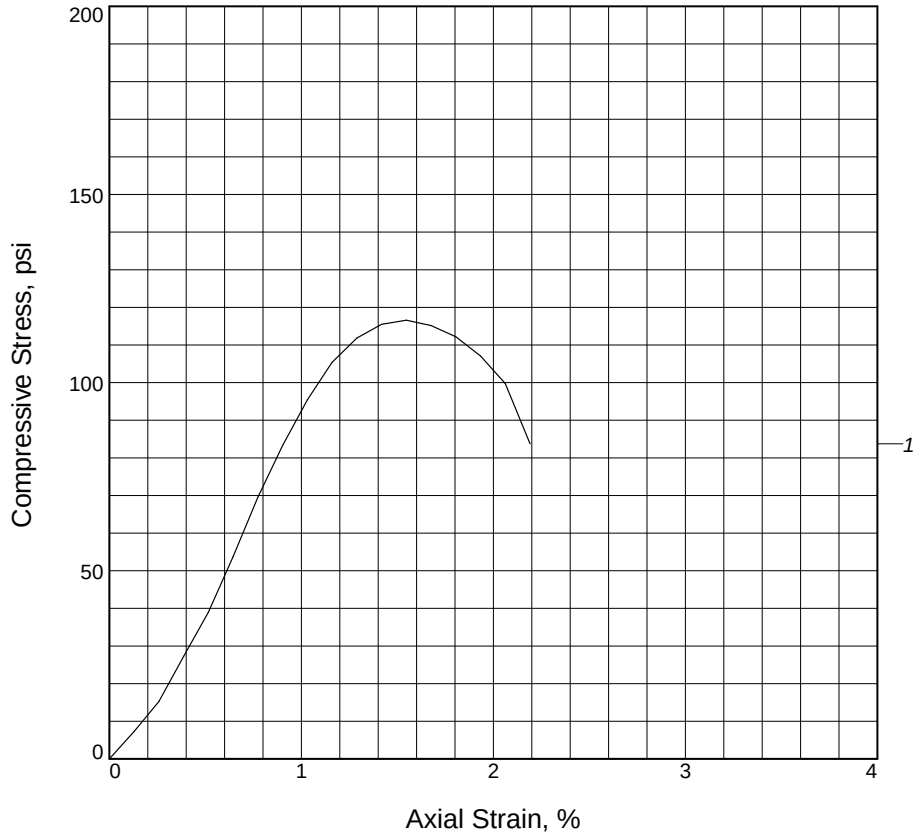


Computed Permeability

PERMEABILITY, K = 1.34E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 1.35E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	116.58			
Undrained shear strength, psi	58.29			
Failure strain, %	1.5			
Strain rate, in./min.	0.050			
Water content, %	22.7			
Wet density, pcf	122.8			
Dry density, pcf	100.1			
Saturation, %	88.5			
Void ratio	0.6962			
Specimen diameter, in.	2.00			
Specimen height, in.	3.88			
Height/diameter ratio	1.94			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.72	**Type:** Cylinder

Project No.: 22LS3987
Date Sampled: 06/14/2022
Remarks:
28 Days

Figure M14@28D

Client: GeoSolutions

Project: Flushing, NY
(21-137)
Location: Flushing, NY
Sample Number: M-14

UNCONFINED COMPRESSION TEST
JLT Laboratories, Inc.
Canonsburg, PA

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 07/18/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-14		Tested By	: MLB	
Fabrication Date	: 07/08/2022		Checked By	: JBJr	
Age , Days	: 28 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	:	5.00	Final Height (in)	:	5.00
Initial Diameter (in)	:	3.00	Final Diameter (in)	:	3.00
Initial Wet Weight (g)	:	1150.80	Final Wet Weight (g)	:	1170.80
Wet Density (pcf)	:	123.93	Wet Density (pcf)	:	126.09
Moisture Content %	:	23.05	Moisture Content %	:	25.19
Dry Density (pcf)	:	100.71	Dry Density (pcf)	:	100.71
Initial Void Ratio	:	0.6852	Final Void Ratio	:	0.6852
Saturation ,%	:	91.5	Saturation ,%	:	100.0

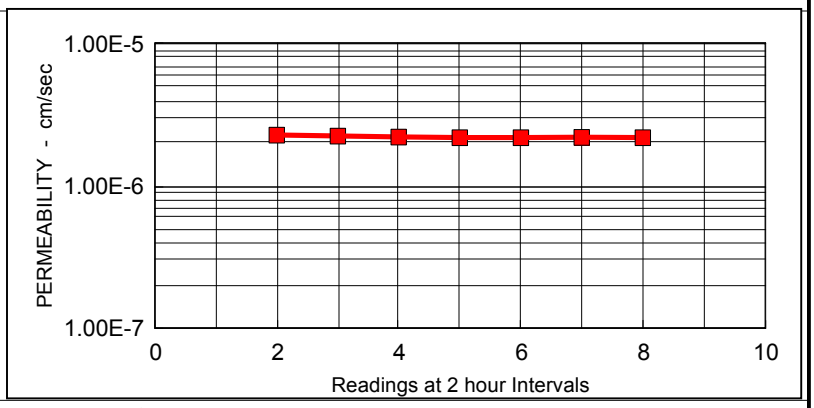
Test Parameters

Fluid	:	De-Aired Water	**Effective**		
Cell Pressure (psi)	:	65.00	**Confining Pressure (psi)**	:	**10**
Head Water (psi)	:	57.30	Gradient	:	25.39
Tail Water (psi)	:	52.70			

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	:	18.2
Length, L	(in)	:	5.00
Area, A	(sqin)	:	7.07
Head, h	**(psi)**	:	**4.60**
Time, t	(min)	:	120
Temp, T	(Deg C)	:	19.8

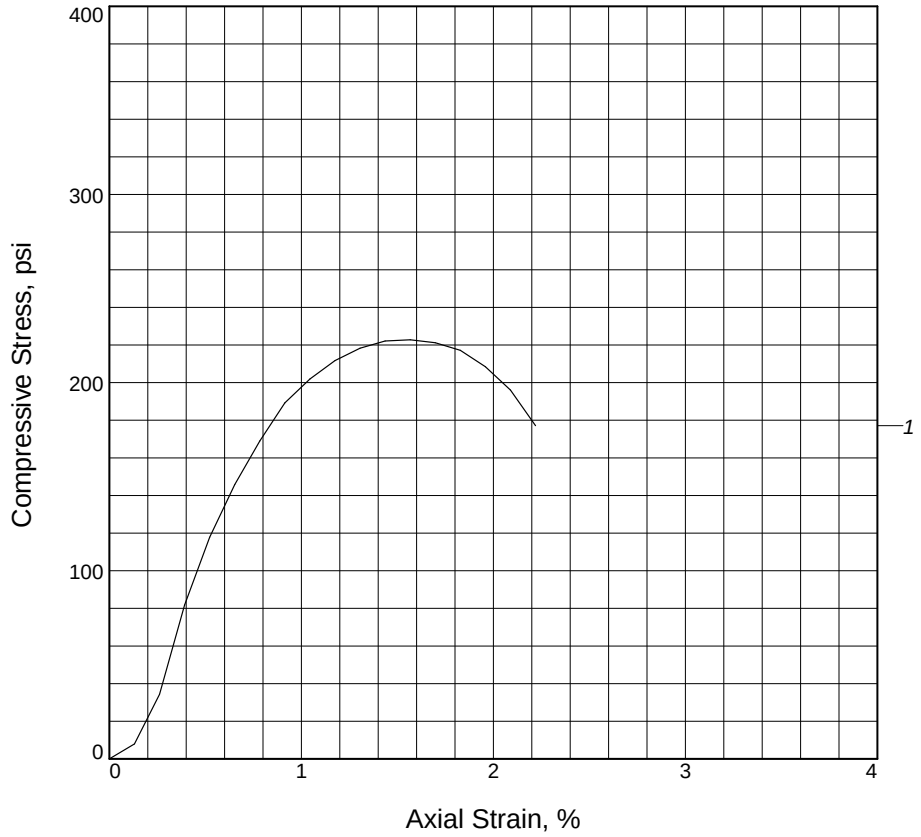


Computed Permeability

PERMEABILITY, K = 2.19E-006 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 2.19E-006 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	222.77			
Undrained shear strength, psi	111.39			
Failure strain, %	1.6			
Strain rate, in./min.	0.050			
Water content, %	22.3			
Wet density, pcf	125.1			
Dry density, pcf	102.3			
Saturation, %	91.9			
Void ratio	0.6604			
Specimen diameter, in.	2.00			
Specimen height, in.	3.83			
Height/diameter ratio	1.92			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.72	**Type:** Cylinder

Project No.: 22LS3987
Date Sampled: 06/14/2022
Remarks:
28 Days

Figure M15@28D

Client: GeoSolutions

Project: Flushing, NY
(21-137)
Location: Flushing, NY
Sample Number: M-15

UNCONFINED COMPRESSION TEST
JLT Laboratories, Inc.
Canonsburg, PA

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 07/18/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-15		Tested By	: MLB	
Fabrication Date	: 07/08/2022		Checked By	: JBJr	
Age , Days	: 28 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 5.05	Final Height (in)	: 5.04
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 3.00
Initial Wet Weight (g)	: 1159.60	Final Wet Weight (g)	: 1183.22
Wet Density (pcf)	: 123.64	Wet Density (pcf)	: 126.41
Moisture Content %	: 22.39	Moisture Content %	: 24.88
Dry Density (pcf)	: 101.03	Dry Density (pcf)	: 101.23
Initial Void Ratio	: 0.6800	Final Void Ratio	: 0.6767
Saturation ,%	: 89.5	Saturation ,%	: 100.0

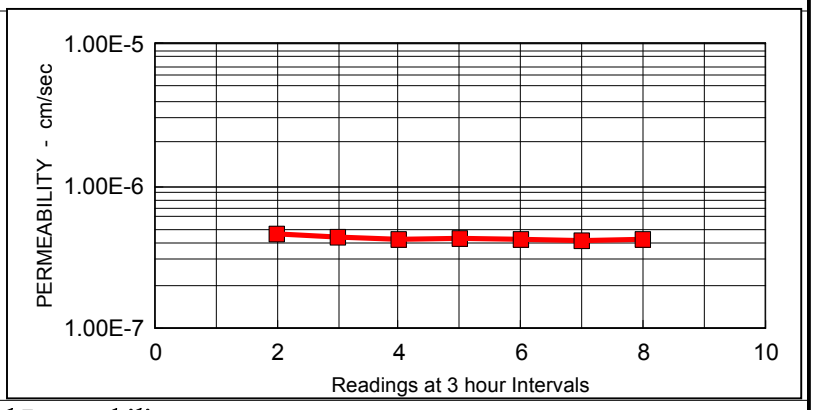
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.30	Gradient	: 25.19
Tail Water (psi)	: 52.70		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	: 5.2
Length, L	(in)	: 5.04
Area, A	(sqin)	: 7.07
Head, h	**(psi)**	: **4.60**
Time, t	(min)	: 180
Temp, T	(Deg C)	: 19.8

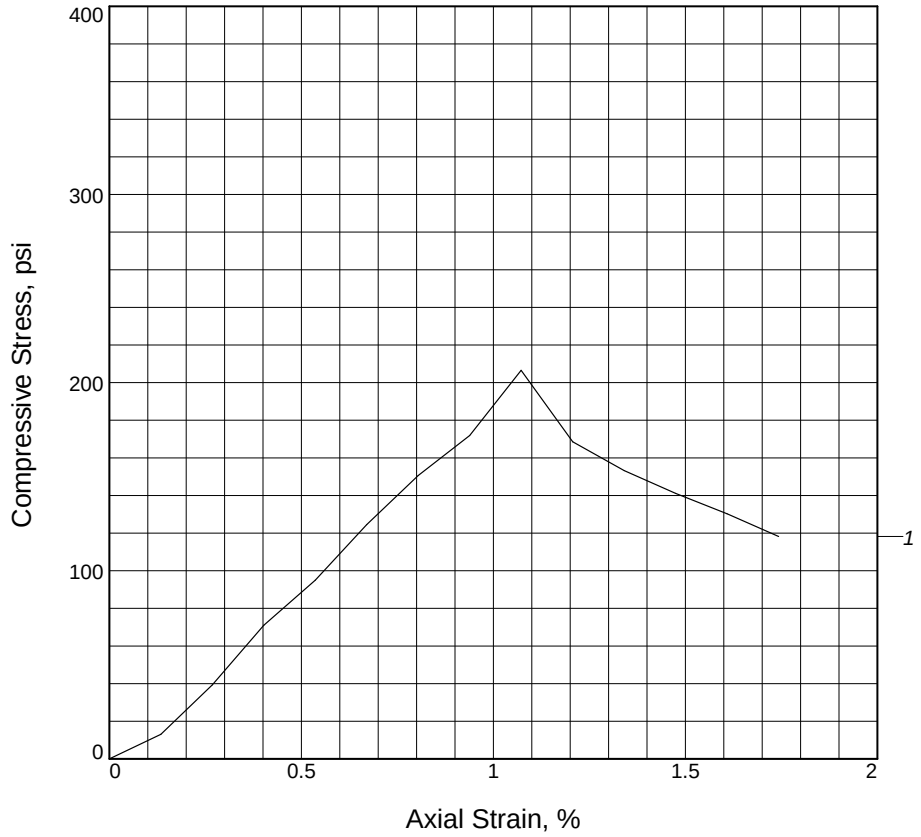


Computed Permeability

PERMEABILITY, K = 4.20E-007 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 4.17E-007 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	206.57			
Undrained shear strength, psi	103.29			
Failure strain, %	1.1			
Strain rate, in./min.	0.050			
Water content, %	22.5			
Wet density, pcf	125.0			
Dry density, pcf	102.0			
Saturation, %	92.2			
Void ratio	0.6645			
Specimen diameter, in.	2.00			
Specimen height, in.	3.73			
Height/diameter ratio	1.86			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.72	**Type:** Cylinder

Project No.: 22LS3987
Date Sampled: 06/14/2022
Remarks:
28 Days

Figure M16@28D

Client: GeoSolutions

Project: Flushing, NY
(21-137)
Location: Flushing, NY
Sample Number: M-16

UNCONFINED COMPRESSION TEST
JLT Laboratories, Inc.
Canonsburg, PA

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 07/18/2022	
Project Location	: 21-149 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-16		Tested By	: MLB	
Fabrication Date	: 07/08/2022		Checked By	: JBJr	
Age , Days	: 28 Days		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	: 4.90	Final Height (in)	: 4.90
Initial Diameter (in)	: 3.00	Final Diameter (in)	: 3.00
Initial Wet Weight (g)	: 1127.50	Final Wet Weight (g)	: 1148.15
Wet Density (pcf)	: 123.90	Wet Density (pcf)	: 126.17
Moisture Content %	: 22.86	Moisture Content %	: 25.11
Dry Density (pcf)	: 100.85	Dry Density (pcf)	: 100.85
Initial Void Ratio	: 0.6830	Final Void Ratio	: 0.6830
Saturation ,%	: 91.0	Saturation ,%	: 100.0

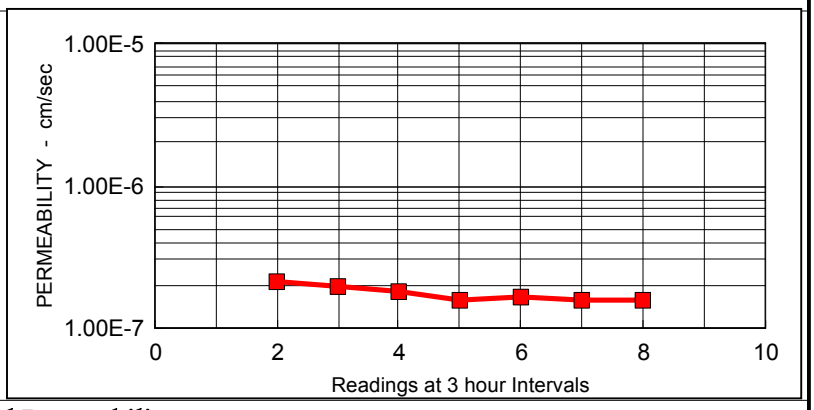
Test Parameters

Fluid	: De-Aired Water	**Effective**	
Cell Pressure (psi)	: 65.00	**Confining Pressure (psi)**	: **10**
Head Water (psi)	: 57.30	Gradient	: 25.91
Tail Water (psi)	: 52.70		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)	: 2.0
Length, L	(in)	: 4.90
Area, A	(sqin)	: 7.07
Head, h	**(psi)**	: **4.60**
Time, t	(min)	: 180
Temp, T	(Deg C)	: 19.8



Computed Permeability

PERMEABILITY, K = 1.57E-007 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 1.60E-007 **cm/sec**

JLT Laboratories, Inc.
Geotechnical, Geosynthetic and Materials Testing and Research

938 South Central Avenue
Canonsburg, Pennsylvania, 15317
Tel: 724-746-4441 Fax 724 -745-4261
e-mail: jboschuk@jltlabs.com
www.jltlabs.com

August 2, 2022
22LS3987

GeoSolutions
1250 Fifth Avenue
New Kensington, PA 15068

Attn: Nathan Coughenour

RE: UNCONFINED COMPRESSION & PERMEABILITY TEST RESULTS
FLUSHING, NY (21-137)

Submitted herein are the results of two (2) Unconfined Compression & two (2) Permeability tests performed on samples identified as M-17 & M-18 at 28 days from the above referenced project. All testing was performed per ASTM Standards while subject to JLT's internal QA / QC and data validation procedures.

We appreciate the opportunity of being of service to you and look forward to working with you again. Should you have any questions, comments or require additional information, please do not hesitate to call. Thank you.

Sincerely,

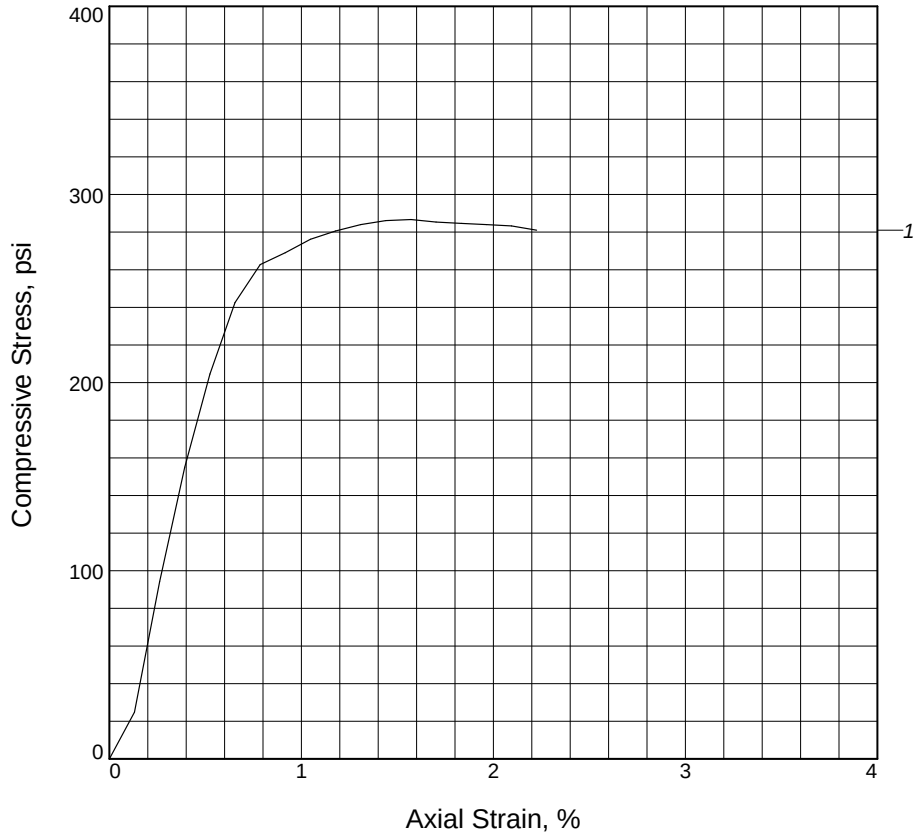
JLT LABORATORIES, INC.

John Boschuk, Jr., P.E., C.F.E.
President

cc: AP

Enclosures
JB\mlb
MSWord\letter\22168
Inv# 8132

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	286.68			
Undrained shear strength, psi	143.34			
Failure strain, %	1.6			
Strain rate, in./min.	0.500			
Water content, %	22.2			
Wet density, pcf	124.7			
Dry density, pcf	102.0			
Saturation, %	91.0			
Void ratio	0.6643			
Specimen diameter, in.	2.00			
Specimen height, in.	3.82			
Height/diameter ratio	1.91			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.72	**Type:** Cylinder

Project No.: 22LS3987
Date Sampled: 07/26/2022
Remarks:
28 Days

Figure M17@28D

Client: GeoSolutions

Project: Flushing, NY
(21-137)
Location: Flushing, NY
Sample Number: M-17

UNCONFINED COMPRESSION TEST
JLT Laboratories, Inc.
Canonsburg, PA

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 08/02/2022	
Project Location	: 21-137 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-17		Tested By	: MLB	
Fabrication Date	: 06/14/2022		Checked By	: JBJr	
Age , Days	:		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	5.10	Final Height (in)	5.00
Initial Diameter (in)	3.00	Final Diameter (in)	3.00
Initial Wet Weight (g)	1197.60	Final Wet Weight (g)	1235.81
Wet Density (pcf)	126.44	Wet Density (pcf)	133.09
Moisture Content %	15.38	Moisture Content %	19.06
Dry Density (pcf)	109.59	Dry Density (pcf)	111.79
Initial Void Ratio	0.5487	Final Void Ratio	0.5183
Saturation ,%	76.2	Saturation ,%	100.0

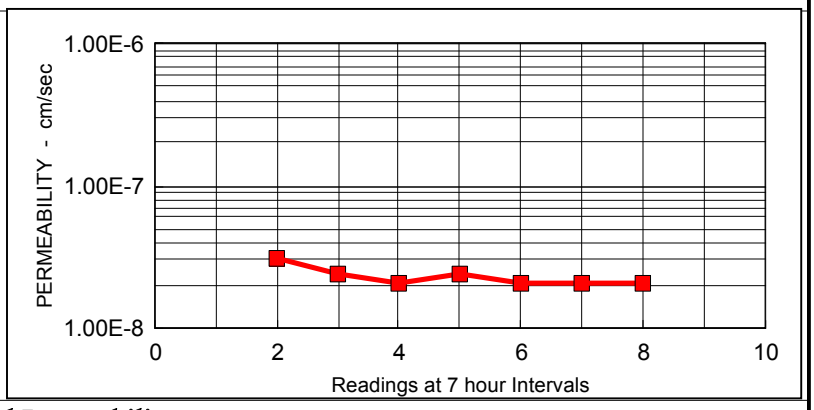
Test Parameters

Fluid	De-Aired Water	**Effective**	
Cell Pressure (psi)	65.00	**Confining Pressure (psi)**	**10**
Head Water (psi)	57.30	Gradient	25.39
Tail Water (psi)	52.70		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)		0.6
Length, L	(in)		5.00
Area, A	(sqin)		7.07
Head, h	**(psi)**		**4.60**
Time, t	(min)		420
Temp, T	(Deg C)		19.8

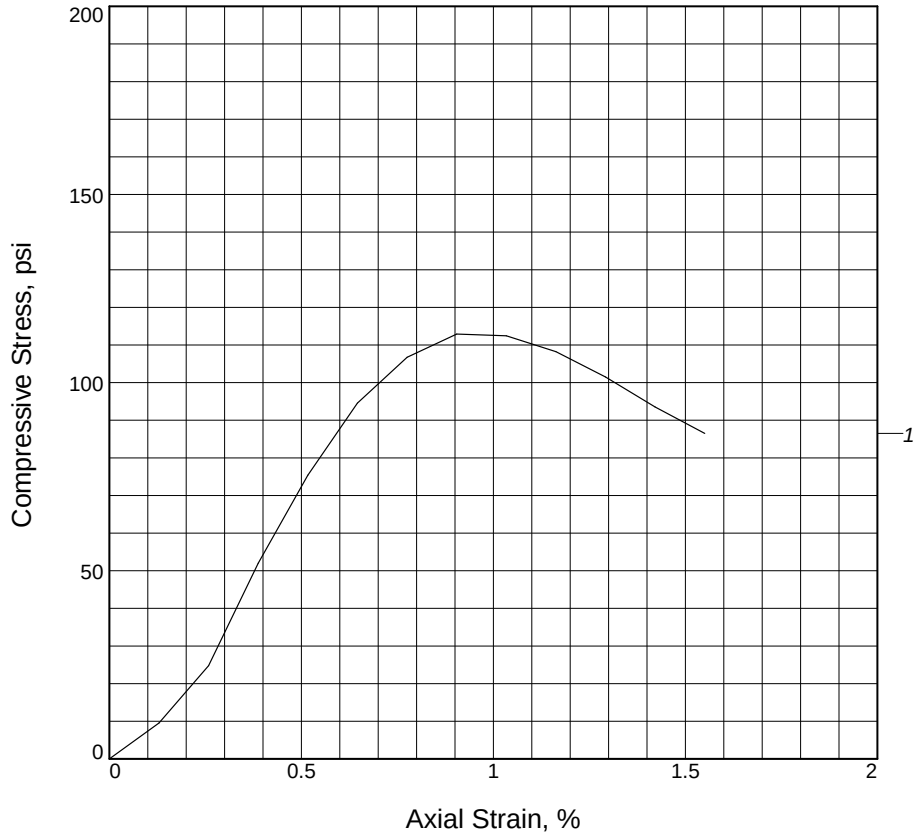


Computed Permeability

PERMEABILITY, K = 2.06E-008 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 2.06E-008 **cm/sec**

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psi	112.92			
Undrained shear strength, psi	56.46			
Failure strain, %	0.9			
Strain rate, in./min.	0.500			
Water content, %	22.7			
Wet density, pcf	125.1			
Dry density, pcf	102.0			
Saturation, %	92.8			
Void ratio	0.6645			
Specimen diameter, in.	2.00			
Specimen height, in.	3.87			
Height/diameter ratio	1.94			

Description:

LL =	**PL =**	**PI =**	**GS=** 2.72	**Type:** Cylinder

Project No.: 22LS3987
Date Sampled: 07/26/2022
Remarks:
28 Day

Figure M18@28

Client: GeoSolutions

Project: Flushing, NY
(21-137)
Location: Flushing, NY
Sample Number: M-18

UNCONFINED COMPRESSION TEST
JLT Laboratories, Inc.
Canonsburg, PA

Tested By: AE **Checked By:** JB

SUMMARY OF FLEX WALL PERMEABILITY TEST RESULTS

ASTM D-5084 (Method A)

Client	: GeoSolutions		Print Date	: 08/02/2022	
Project Location	: 21-137 Flushing NY		Job No.	: 21ls3922	
Sample Number	: M-18		Tested By	: MLB	
Fabrication Date	: 06/14/2022		Checked By	: JBJr	
Age , Days	:		Page 1 of 2	Optional	
Start Date	:		Spec. Gravity	: 2.72	Assumed

Physical Property Data

Initial Height (in)	4.95	Final Height (in)	4.90
Initial Diameter (in)	3.00	Final Diameter (in)	3.00
Initial Wet Weight (g)	1141.80	Final Wet Weight (g)	1180.02
Wet Density (pcf)	124.21	Wet Density (pcf)	129.67
Moisture Content %	17.94	Moisture Content %	21.89
Dry Density (pcf)	105.31	Dry Density (pcf)	106.39
Initial Void Ratio	0.6117	Final Void Ratio	0.5954
Saturation ,%	79.8	Saturation ,%	100.0

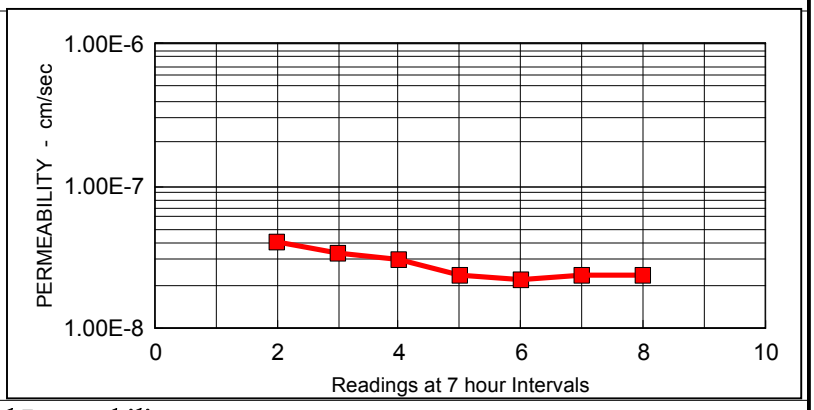
Test Parameters

Fluid	De-Aired Water	**Effective**	
Cell Pressure (psi)	65.00	**Confining Pressure (psi)**	**10**
Head Water (psi)	57.30	Gradient	25.91
Tail Water (psi)	52.70		

Permeability Input Data

For Last Data Point

Flow, Q	(cc)		0.7
Length, L	(in)		4.90
Area, A	(sqin)		7.07
Head, h	**(psi)**		**4.60**
Time, t	(min)		420
Temp, T	(Deg C)		19.8



Computed Permeability

PERMEABILITY, K = 2.35E-008 **(cm/sec) at 20 Degrees C**

Average of Last 3 Readings 2.30E-008 **cm/sec**

ISS TREABILITY STUDY
LABORATORY ANALYTICAL RESULTS

Appendix F
Summary of ISS Treatability Study Laboratory Analytical Data
Former Farrington Street Works Site Parcel 2 - Remedial Design Report
Queens, New York
Consolidated Edison Company of New York

Consolidated Edison Farrington Street Remedial Design ISS Treatability Study Analytical Data		NYSDEC Class GA AWQSGVs	Location ID Sample ID Matrix Lab Sample ID SDG	M-13 M-13-20220614 SO 460-262793-1 4602627931		M-14 M-14-20220614 SO 460-262793-2 4602627931		M-15 M-15-20220614 SO 460-262793-3 4602627931		M-16 M-16-20220614 SO 460-262793-4 4602627931	
CAS RN	Chemical Name		Unit								
	General Chemistry										
PH	pH	NS	ph units			12.2				6.4	
TEMP	Temperature for sample or purge water	NS	deg c			26				26	
	Polychlorinated Biphenyl (PCBs)										
	None Detected			ND		ND		ND		ND	
	SPLP Metals										
7429-90-5	Aluminum	0.1	mg/l	1.3		1.4		2.2		4.1	
7440-36-0	Antimony	0.003	mg/l	0.004	J	0.012	U	0.012	U	0.012	U
7440-39-3	Barium	1	mg/l	0.26		0.27		0.039		0.056	
7440-70-2	Calcium	NS	mg/l	240		224		79.5		97.8	
7440-47-3	Chromium, Total	0.05	mg/l	0.0066	J	0.0032	J	0.0021	J	0.0025	J
7440-50-8	Copper	0.2	mg/l	1.7		0.01	U	0.01	U	0.01	U
7439-89-6	Iron	0.3	mg/l	0.25		0.1	U	0.21		0.1	U
7440-02-0	Nickel	0.1	mg/l	0.017		0.0058	J	0.01	U	0.01	U
7440-09-7	Potassium	NS	mg/l	4.2		2.3		3.1		2.3	
7440-23-5	Sodium	20	mg/l	22.6		22.4		16	U	18.7	U
7440-62-2	Vanadium	NS	mg/l	0.01	U	0.01	U	0.007	J	0.0083	J
7440-66-6	Zinc	2	mg/l	2.2	J+	0.05	U	0.05	U	0.05	U
	Volatile Organic Compounds (VOCs)										
95-63-6	1,2,4-Trimethylbenzene	NS	ug/l	3.8		69		0.97	J	80	
108-67-8	1,3,5-Trimethylbenzene (Mesitylene)	NS	ug/l	1.4		20		0.81	J	25	
67-64-1	Acetone	50	ug/l	1300		490	J	10	U	10	U
71-43-2	Benzene	1	ug/l	7.5		1.2		0.38	J	1	U
75-15-0	Carbon Disulfide	60	ug/l	0.62	J	1.2	J	1.8	J	2.6	
156-59-2	Cis-1,2-Dichloroethylene	5	ug/l	0.81	J	1	U	1	U	1	U
99-87-6	Cymene	NS	ug/l	1	U	3		1	U	4.3	
100-41-4	Ethylbenzene	5	ug/l	10		57		1	U	82	
98-82-8	Isopropylbenzene (Cumene)	5	ug/l	0.8	J	5.4		1	U	8	
179601-23-1	m,p-Xylene	NS	ug/l	36		71		1	U	85	
103-65-1	N-Propylbenzene	NS	ug/l	0.51	J	3		1	U	3	
95-47-6	O-Xylene (1,2-Dimethylbenzene)	NS	ug/l	15		57		1	U	71	
135-98-8	Sec-Butylbenzene	NS	ug/l	1	U	1.1		1	U	0.97	J
100-42-5	Styrene	5	ug/l	1	U	1.9		1	U	2.5	
108-88-3	Toluene	5	ug/l	69		97		1	U	10	
79-01-6	Trichloroethylene (TCE)	5	ug/l	0.85	J	1	U	1	U	1	U
	Semi-Volatile Organic Compounds (SVOCs)										
90-12-0	1-Methylnaphthalene	NS	ug/l	5.3	U	13		5.3	U	12	
91-57-6	2-Methylnaphthalene	NS	ug/l	5.3	U	8.3		5.3	U	7.6	
83-32-9	Acenaphthene	20	ug/l	5.3	U	4.9	J	5.3	U	4.3	J
208-96-8	Acenaphthylene	NS	ug/l	5.3	U	3.8	J	5.3	U	5.3	U
86-74-8	Carbazole	NS	ug/l	5.3	U	24		5.3	U	24	
91-20-3	Naphthalene	10	ug/l	5.3	U	110		5.3	U	100	
85-01-8	Phenanthrene	50	ug/l	5.3	U	1.4	J	5.3	U	1.3	J
108-95-2	Phenol	1	ug/l	5.3	UJ	5.6	UJ	5.3	UJ	5.3	UJ

APPENDIX G

COMMUNITY AIR MONITORING PLAN

COMMUNITY AIR MONITORING PLAN

FOR THE FORMER FARRINGTON STREET GAS WORKS SITE

PARCEL 2

REMEDIAL ACTION

QUEENS, NY

(Site No. V00560)

Prepared for:

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
31-01 20th Avenue
Long Island City, NY 11105

Prepared by:

PARSONS
301 Plainfield Road, Suite 350
Syracuse, NY 13212

SEPTEMBER 2022

TABLE OF CONTENTS

Page

SECTION 1 - INTRODUCTION 1-1
SECTION 2 - BASIS FOR CAMP 2-1
2.1 Purpose and Objectives 2-1
2.2 Target Compounds 2-1
2.3 Action Levels 2-2
SECTION 3 - SCOPE OF WORK 3-1
3.1 Overview and Schedule 3-1
3.2 Monitoring Locations 3-1
3.3 Real-Time Monitoring 3-1
3.4 Monitoring Personnel 3-2
SECTION 4 - DATA COLLECTION METHODOLOGIES 4-1
4.1 VOCs, H_2S, and HCN 4-1
4.2 Particulate Matter (PM_{10}) 4-1
SECTION 5 - ACTION LEVELS AND PROCEDURES 5-1
5.1 VOCs, H_2S, and HCN 5-1
5.2 Particulate Matter (PM_{10}) 5-1
SECTION 6 - QUALITY ASSURANCE 6-1
6.1 Equipment Calibration 6-1
6.2 Preventive Maintenance Procedures 6-1

LIST OF TABLES

Table 1 Action Levels and Procedures

LIST OF APPENDICES

Appendix A NYSDOH Generic Community Air Monitoring Plan
Appendix B Field Equipment Data Sheets

LIST OF ACRONYMS

ACGIH	American Conference of Government Industrial Hygienists
CAMP	Community Air Monitoring Plan
Con Edison	Consolidated Edison Company of New York, Inc.
ISS	In situ stabilization/solidification
MGP	Manufactured Gas Plant
NAPL	Non-Aqueous Phase Liquid
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OSHA	Occupational Safety and Health Administration
PAH	Polyaromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PEL	Permissible Exposure Limit
PM	Particulate Matter
ppm	parts per million
Site	Former Farrington Street Gas Works
SVOC	Semi-Volatile Organic Compounds
TLV	Threshold Limit Value
ug/l	Micrograms per liter
VOC	Volatile organic carbon

SECTION 1 - INTRODUCTION

Consolidated Edison Company of New York, Inc. (Con Edison) will be performing targeted excavation to remove and dispose of soil impacted with polychlorinated biphenyls (PCBs) at concentrations greater than 1 part per million (ppm) and targeted excavation to accommodate implementation of *in-situ* stabilization/solidification (ISS) of nonaqueous phase liquid (NAPL)-impacted soils within Parcel 2 of the Farrington Street Former Gas Works Site (the "Site") located at 31-24 Farrington Street in Queens, New York. Work will be performed within an approximately 1.9-acre parcel currently utilized as a Con Edison service yard.

Parcel 2 is bound to the north by 31st Drive and the adjacent supermarket building, to the east by Farrington Street and the adjacent commercial buildings, to the south by 32nd Avenue and the adjacent commercial buildings, and to the west by Byrds Alley and the adjacent commercial buildings. Parcel 2 historically contained manufactured gas plant (MGP) structures which contributed to presence of NAPL-impacted soils in the subsurface.

Given that the scope of work includes excavations and other dust and/or volatiles generating activities, a Community Air Monitoring Plan (CAMP) is required for intrusive activities at the Site. This CAMP is not intended for use in establishing action levels for worker respiratory protection; rather, it is intended to provide a measure of protection from potential airborne contaminants for the downwind community, including on-site workers not directly involved with the intrusive field activities, abutting commercial businesses and their customers, and the public in general. The action levels and procedures specified herein require continued and increased monitoring, corrective actions to better control emissions, and/or temporary work activity shutdown. Implementation of this CAMP also serves to document that field activities did not expose the public to airborne contamination emanating from the intrusive field activities performed at the Site.

SECTION 2 - BASIS FOR CAMP

2.1 Purpose and Objectives

The New York State Department of Health (NYSDOH) Generic CAMP requires real-time monitoring for volatile organic compounds (VOCs) and particulates (dust) at the upwind and downwind perimeter of work areas when intrusive field activities are conducted at contaminated sites. In general, the purpose of this CAMP is to comply with the NYSDOH Generic CAMP to ensure that the community and public are not exposed to hazardous constituents at levels above accepted guidance and reference limits during the intrusive field activities being conducted at the Site.

Specific objectives of the Site CAMP are as follows:

- Provide an early warning system to alert Con Edison's field team that concentrations of target compounds in ambient air are approaching action levels due to intrusive field activities;

- Assess and monitor whether vapor and dust emission control measures are effective in maintaining or reducing ambient air levels of target compounds below action levels, allowing appropriate adjustments to be made (if necessary); and

- Develop a comprehensive and permanent record of all air monitoring and sampling results, equipment calibration and maintenance records, daily Site log notes and other pertinent information related to the CAMP.

2.2 Target Compounds

The target compounds for this CAMP are those contaminants known or suspected to be present in MGP source materials generated during former MGP operations in the vicinity of the Site and have the potential to be released into the ambient air during intrusive field activities. Also included are contaminants generated by the intrusive field activities that have the potential to be released to the air and to migrate beyond the Site perimeter (i.e., dust). The target compounds will consist of total VOCs, H_2S, HCN, and dust (particulate matter [PM_{10}]).

2.3 Action Levels

The following action levels have been established for the CAMP.

Target Compound	Action Level
Total VOCs	5 ppm (primary) 25 ppm (secondary)
PM_{10}	100 ug/m^3 (primary) or visible dust migration 150 ug/m^3(secondary) or visible dust migration

Action levels are further detailed in Table 1. Action levels for total VOCs and PM_{10} are based on those presented in NYSDOH's generic CAMP, included in Appendix A. Action levels for H_2S and HCN are based on Permissible Exposure Limits (PELs) or Threshold Limit Values (TLVs) specified by the Occupational Safety and Health Administration (OSHA) and the American Conference of Government Industrial Hygienists (ACGIH).

SECTION 3 - SCOPE OF WORK

3.1 Overview and Schedule

The key elements proposed to meet the objectives of this CAMP consist of the following:

- Data collection in at least three (3) location stations in a configuration that accounts for upwind/downwind prevailing wind direction patterns relative to the primary areas of intrusive field activities. The proposed locations will be configured such that for each major prevailing wind sector, one measurement point will be in an upwind location and one measurement point will be in a downwind location;

- Data collection during the full duration of intrusive field activities. Data collection during the intrusive work will allow monitoring for action levels and will document air quality during the intrusive field activities at the perimeter of the Site, and

- Primary monitoring by real-time methods of the target compounds. Real-time monitoring data will be made available to Con Edison's field team, the New York State Department of Environmental Conservation (NYSDEC), and the NYSDOH.

The CAMP will be approved and implemented before intrusive field activities begin, and once monitoring commences, it will be continuous for the full duration of intrusive work.

3.2 Monitoring Locations

At least three (3) portable monitoring station locations are being proposed for the Site. The number and location of these stations were selected based on several factors summarized as follows:

- The overall size of the Site and lateral extent of the intrusive work area; and
- The location of the commercial businesses adjacent to the Site.

The intrusive work area will be limited to Parcel 2 area and will include the specific locations where excavation activities and ISS implementation will occur. Coverage is accomplished by placing one monitoring station directly upwind, and at least two monitoring station downwind of the prevailing wind direction. The locations of the monitoring stations will be adjusted as necessary to account for upwind/downwind prevailing wind direction patterns relative to the areas of intrusive activities.

3.3 Real-Time Monitoring

Real-time monitoring utilizing a conventional air monitoring system is the primary measurement for this CAMP. Real-time monitoring will be performed for total VOCs and PM_{10} at both locations for the duration of intrusive work activities.

Each air monitoring station will be equipped with a MiniRAE 3000s to monitor total VOCs and a dust meter configured for PM_{10} (DustTrak). Each meter will be equipped with data logging capabilities. Air monitoring equipment will be contained in a "case like" enclosure mounted on a tripod. The data collection will consist of total VOCs and dust (PM_{10}) at each monitoring station.

Each monitoring station will be equipped with visual alarms. Visual alarms will consist of flashing lights mounted on top of the air monitoring stations. The visual alarms will be triggered when a primary action level is exceeded for any of the target compounds.

3.4 Monitoring Personnel

Monitoring activities will be performed by appropriately trained and experienced individuals. Training shall include completion of a 40-hour hazardous waste activities training course in compliance with OSHA Standard 29 CFR 1910, as well as an 8-hour refresher course within the last year. Monitoring personnel will also be experienced or trained in the calibration, operation, and routine maintenance of the specific monitoring equipment being utilized for the CAMP.

SECTION 4 - DATA COLLECTION METHODOLOGIES

For this CAMP, data collection methodologies for the target compounds consist of real-time monitoring methods. The real-time monitoring system will be equipped with data logging capabilities capable of calculating 15-minute running average concentrations and storing of a minimum of 24 hours of data.

4.1 VOCs

A MiniRAE 3000 will be utilized for the real-time total VOC measurement portion of the CAMP. MiniRAE 3000 technology allows dependable, linear, part-per-million range readings for VOCs. MiniRAE 3000-based measurements are easy to perform, accurate, and a proven monitoring approach. Appendix B includes a data sheet for the MiniRAE 3000.

4.2 Particulate Matter (PM_{10})

A DustTrak Aerosol Monitor 8530 (or equivalent) will be employed for the real-time total PM_{10} measurement portion of the CAMP. This instrument is capable of measuring PM_{10} in a range including the action levels (100 – 150 micrograms per cubic meter [$ug/m^{3]}$) and with appropriate resolution (1 ug/m^3 or better). The DustTrak is a light-scattering photometer that uses optical measurement techniques, a commonly used, widely available, and versatile monitoring approach. Photometer-based PM_{10} measurements are easy to perform, accurate, and a time-proven monitoring approach. Appendix B includes a data sheet for the DustTrak Aerosol Monitor 8530.

SECTION 5 - ACTION LEVELS AND PROCEDURES

Action levels for the target compounds are defined in Section 2.3. How the action levels are triggered and their associated procedures are described below and summarized in Table 1. There are two types of action levels, and action levels for VOCs and PM_{10} are assessed on a relative basis (i.e., a downwind concentration is compared to an upwind concentration to see if the action level is triggered).

5.1 VOCs

The primary action level for total VOCs is 5 ppm based on a 15-minute averaging period and is assessed on a relative basis between downwind and upwind measurements. This action level will be reached if a 15-minute average total VOCs level measured at the downwind stations exceeds the action level for the same 15-minute period at the designated upwind station by 5 ppm for VOCs. If the action level is triggered, then work activities must be temporarily halted and monitoring continued. However, once triggered, if downwind total measured concentrations rapidly decrease to below action levels relative of the upwind concentrations, then work activities can resume with continued monitoring.

If downwind total VOC levels persist at concentrations between 5 - 25 ppm above the upwind level, then:

- Work activities must be halted;
- The source of vapors identified;
- Corrective actions implemented to abate emissions; and
- Monitoring continued.

Following completion of these steps, work activities will resume provided that total concentrations of target compounds 200 feet downwind of the work area, or half the distance to the nearest potential receptor, whichever is less, are below specified action levels over the background for the 15-minute average.

After the implementation of vapor control measures or at any time, if downwind total VOC levels exceed the secondary action level of 25 ppm over the upwind level, then work must be stopped and a meeting will be held with Con Edison's field team to re-evaluate work activities, vapor control measures, and recommend further corrective actions.

Work can only resume if vapor control measures are successful in reducing downwind total VOC concentration levels to less than 5 ppm above the upwind level.

5.2 Particulate Matter (PM_{10})

The primary action level for PM_{10} is 100 ug/m^3 based on a 15-minute averaging period and it is assessed on a relative basis between downwind and upwind measurements. This action level will be reached if a 15-minute average PM_{10} level measured at the downwind

station exceeds the PM_{10} level for the same 15-minute period at the upwind station by 100 ug/m^3. Additionally, the action level will also be reached if visible emissions of airborne dust are observed migrating beyond the Site perimeter. If the PM_{10} action level is triggered by either of these events, then dust suppression techniques must be employed and monitoring continued.

If downwind PM_{10} levels persist at readings between 100 - 150 ug/m^3 above the upwind level for 45 minutes (three measurement cycles), work activities may resume with dust suppression techniques in place, but only if no visible emissions of dust are observed migrating beyond the Site perimeter.

After the implementation of dust control measures, if downwind PM_{10} levels continue to persist above the secondary action level of 150 ug/m^3 over the upwind level or 100 ug/m^3 over the upwind level with visible emissions present, then work must be stopped and a meeting will be held with Con Edison's field team to re-evaluate work activities, dust suppression measures, and recommend further corrective actions.

Work can resume once dust control measures are successful in reducing downwind PM_{10} levels to less than 150 ug/m^3 above the upwind level and there is no visible dust migration beyond the perimeter of the Site.

SECTION 6 - QUALITY ASSURANCE

6.1 Equipment Calibration

Field analytical equipment will be calibrated immediately prior to each day's use. The calibration procedures will conform to manufacturer's standard instructions. This calibration will ensure that the equipment is functioning within the allowable tolerances established by the manufacturer and required by the CAMP. Records of all instrument calibration and instrument manuals will be maintained on-site.

6.2 Preventive Maintenance Procedures

Equipment, instruments, tools, gauges, and other items requiring preventive maintenance will be serviced in accordance with the manufacturer's specified recommendations and written procedures developed by the CAMP operator. A list of critical spare parts will be established, and these spare parts will be available for use in order to avoid downtime. A service contract for rapid instrument repair or backup instruments may be substituted for the spare part inventory.

All maintenance records will be documented and traceable to the specific equipment, instruments, tools, and gauges. Records produced shall be reviewed and maintained at the Site.

TABLES

Table 1
Action Levels and Procedures

Contaminant	Action Level	Action Taken
VOCs	< 5 ppm above background	None
	5 - 25 ppm above background	Temporarily halt work and continue monitoring. If levels decrease to < 5 ppm above background, resume work. If levels persist for 30 minutes, hold Site meeting with field personnel to review work activities. If levels persist for 45 minutes, stop work, identify source, implement corrective action, and continue monitoring.
	> 25 ppm above background	Stop work and hold meeting. Resume work only if levels are reduced to < 5 ppm above background.
Particulate Matter (PM_{10})	<100 ug/m^3 above background and no visible off-site dust migration	None
	100–150 ug/m^3 above background or visible off-site dust migration	Employ dust suppression techniques and continue monitoring. If levels persist for 45 minutes, continue work with dust suppression only if no visible off-site dust migration. If visible off-site dust migration persists for 45 minutes, stop work, identify source, implement corrective action, and continue monitoring. Resume work only if no visible off-site dust migration.
	>150 ug/m^3 above background	Stop work and hold site meeting. Resume work only if levels are reduced to < 150 ug/m^3 above background and no visible off-site dust migration.

APPENDIX A

NYSDOH GENERIC COMMUNITY AIR MONITORING PLAN

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

Appendix 1B
Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

(a) Objects to be measured: Dust, mists or aerosols;
(b) Measurement Ranges: 0.001 to 400 mg/m3 (1 to 400,000 :ug/m3);
(c) Precision (2-sigma) at constant temperature: +/- 10 :g/m3 for one second averaging; and +/- 1.5 g/m3 for sixty second averaging;
(d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);
(e) Resolution: 0.1% of reading or 1g/m3, whichever is larger;
(f) Particle Size Range of Maximum Response: 0.1-10;
(g) Total Number of Data Points in Memory: 10,000;
(h) Logged Data: Each data point with average concentration, time/date and data point number
(i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;
(j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;
(k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
(l) Operating Temperature: -10 to 50^{o} C (14 to 122^{o} F);
(m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.

5. The action level will be established at 150 ug/m3 (15 minutes average). While conservative,

this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m3, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

(a) Applying water on haul roads;
(b) Wetting equipment and excavation faces;
(c) Spraying water on buckets during excavation and dumping;
(d) Hauling materials in properly tarped or watertight containers;
(e) Restricting vehicle speeds to 10 mph;
(f) Covering excavated areas and material after excavation activity ceases; and
(g) Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150ug/m3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

APPENDIX B

FIELD EQUIPMENT DATA SHEETS

RAE SYSTEMS by Honeywell

MiniRAE 3000

Portable Handheld VOC Monitor

The MiniRAE 3000 is a comprehensive handheld VOC (Volatile Organic Compound) monitor that uses a third-generation patented PID technology to accurately measure more ionizable chemicals than any other device on the market. It provides full-range measurement from 0 to 15,000 ppm of VOCs.

The MiniRAE 3000 has a built-in wireless modem that allows real-time data connectivity with the ProRAE Guardian command center located up to 2 miles (3 km) away through a Bluetooth connection to a RAELink 3* portable modem or optionally via Mesh Network.

- **Highly accurate VOC maeasurements**
- **Patented PID sensor**
- **Low maintenance—easy access to lamp and sensor**
- **Low cost of ownership**
- **3-year 10.6eV lamp warranty**

KEY FEATURES

- Third-generation patented PID technology
- VOC detection range from 0 to 15,000 ppm
- 3-second response time
- Humidity compensation with built-in humidity and temperature sensors
- Six-month datalogging
- Real-time wireless built-in – Bluetooth (and optional RAELink3 portable modem) or Mesh Network support
- Large graphic display with integrated flashlight
- Multi-language support with 10 languages encoded
- IP- 67 waterproof design

APPLICATIONS

- Oil and Gas
- HazMat
- Industrial Safety
- Civil Defense
- Environmental and Indoor Air Quality

Workers can quickly measure VOCs and wirelessly transmit data via Bluetooth or optional Mesh radio.

*RAELink 3 modem is sold separately.

Wireless | AutoRAE 2 Compatible | ATEX | ISO 9001 CERTIFIED

MiniRAE 3000

Portable Handheld VOC Monitor

SPECIFICATIONS

Instrument Specifications

Size	10" L x 3.0" W x 2.5" H (25.5 cm x 7.6 cm x 6.4 cm)
Weight	26 oz (738 g)
Sensors	Photoionization sensor with standard 10.6 eV or optional 9.8 eV or 11.7 eV lamp
Battery	• Rechargeable, external field-replaceable Lithium-Ion battery pack • Alkaline battery adapter
Running time	16 hours of operation (12 hours with alkaline battery adapter)
Display Graphic	4 lines, 28 x 43 mm, with LED backlight for enhanced display readability
Keypad	1 operation and 2 programming keys, 1 flashlight on/off
Direct Readout	Instantaneous reading • VOCs as ppm by volume (mg/m3) • High values • STEL and TWA • Battery and shutdown voltage • Date, time, temperature
Alarms	95dB at 12" (30 cm) buzzer and flashing red LED to indicate exceeded preset limits • High: 3 beeps and flashes per second • Low: 2 beeps and flashes per second • STEL and TWA: 1 beep and flash per second • Alarms latching with manual override or automatic reset • Additional diagnostic alarm and display message for low battery and pump stall
EMC/RFI	Compliant with EMC directive (2004/108/EC) EMI and ESD test: 100MHz to 1GHz 30V/m, no alarm Contact: ±4kV Air: ±8kV, no alarm
IP Rating	• IP-67 unit off and without flexible probe • IP-65 unit running
Datalogging	Standard 6 months at one-minute intervals
Calibration	Two-point or three-point calibration for zero and span. Calibration memory for 8 calibration gases, alarm limits, span values and calibration dates
Sampling Pump	• Internal, integrated flow rate at 500 cc/mn • Sample from 100' (30m) horizontally or vertically
Low Flow Alarm	Auto pump shutoff at low-flow condition
Communication & Data Download	• Download data and upload instrument set-up from PC through charging cradle or optional Bluetooth™ • Wireless data transmission through built-in RF modem
Wireless Network	Mesh RAE Systems Dedicated Wireless Network
Wireless Range (Typical)	EchoView Host: LOS > 660 ft (200 m) ProRAE Guardian & RAEMesh Reader: LOS > 660 ft (200 m) ProRAE Guardian & RAELink3 Mesh: LOS > 330 ft (100 m)
Safety Certifications	**US and Canada**: CSA, Classified as Intrinsically Safe for use in Class I, Division 1 Groups A, B, C, D **Europe**: ATEX II 2G EEx ia IIC T4
Temperature	-4° to 122° F (-20° to 50° C)
Humidity	0% to 95% relative humidity (non-condensing)

[1] Contact RAE Systems for country-specific wireless approvals and certificates.

Specifications are subject to change.

Attachments	Durable bright yellow rubber boot
Warranty	3 years for 10.6 eV lamp, 1 year for pump, battery, sensor and instrument
Wireless Frequency	ISM license-free band. IEEE 802.15.4 Sub 1GHz
Wireless Approvals	FCC Part 15, CE R&TTE, Others[1]
Radio Module	Supports Bluetooth or RM900

Sensor Specifications

Gas Monitor	Range	Resolution	Response Time T90
VOCs	0 to 999.9 ppm 1,000 to 15,000 ppm	0.1 ppm 1 ppm	< 3 s < 3 s

MONITOR ONLY INCLUDES:

- MiniRAE 3000 Monitor, Model PGM-7320
- Wireless communication module built in, as specified
- Datalogging with ProRAE Studio II Package
- Charging/download adapter
- RAE UV lamp, as specified
- Flex-I-Probe™
- External filter
- Rubber boot
- Alkaline battery adapter
- Lamp-cleaning kit
- Tool kit
- Operation CD-ROM
- Operation and Maintenance manual
- Soft leather case

OPTIONAL CALIBRATION KIT ADDS:

- 100 ppm isobutylene calibration gas, 34L
- Calibration regulator and flow controller

OPTIONAL GUARANTEED COST-OF-OWNERSHIP PROGRAM:

- 4-year repair and replacement guarantee
- Annual maintenance service

CORPORATE HEADQUARTERS

RAE Systems by Honeywell
3775 North First Street
San Jose, CA 95134 USA
RAE-InsideSales@honeywell.com

DS-1018-05 02/16

WORLDWIDE SALES OFFICES

USA/Canada	1.877.723.2878
Europe	+800.333.222.44/+41.44.943.4380
Middle East	+971.4.450.5852
China	+86.10.5885.8788-3000
Asia Pacific	+852.2669.0828

HEALTH AND SAFETY

Exposure Monitoring

Features and Benefits

- Easy to program, easy to operate
- New graphical user interface with color touch-screen
- Perform in-line gravimetric analysis for custom reference calibrations
- Automatic zeroing (with optional zero module) minimizes the effect of zero drift
- Measure aerosol concentrations corresponding to PM_1, $PM_{2.5}$, PM_{10}, or Respirable size fractions

DustTrak™ II Aerosol Monitor

Models 8530, 8531, and 8532

Desktop or Handheld Units for Any Environment, Any Application

The new DustTrak II Aerosol Monitors are battery-operated, data-logging, light-scattering laser photometers that give you real-time aerosol mass readings. They use a sheath air system that isolates the aerosol in the optics chamber to keep the optics clean for improved reliability and low maintenance. Suitable for clean office settings as well as harsh industrial workplaces, construction and environmental sites and other outdoor applications. DustTrak II monitors measure aerosol contaminants such as dust, smoke, fumes and mists.

Applications

- Industrial/occupational hygiene surveys
- Indoor air quality investigations
- Outdoor environmental monitoring
- Baseline trending and screening
- Point source monitoring
- Engineering control evaluations
- Engineering studies
- Remote monitoring
- Process monitoring
- Emissions monitoring
- Aerosol research studies

TRUST. SCIENCE. INNOVATION.

Easy to Program and Operate

The new graphical user interface with color touch-screen puts everything at your fingertips. The easy-to-read display shows real-time mass concentration and graphical data as well as other statistical information along with instrument pump, laser and flow status, and much more. Perform quick walk-through surveys or program the instrument's advanced logging modes for long-term sampling investigations. Program start times, total sampling times, logging intervals, alarm setpoints and many other parameters. You can even set up the instrument for continuous unattended operation.

Desktop Models: Ideal for Long-Term Surveys and Remote Monitoring Applications

Manual and programmable data logging functions also make DustTrak II desktop monitors ideal for unattended applications. They come with USB (device and host), Ethernet, and analog and alarm outputs allowing remote access to data. User adjustable alarm setpoints for instantaneous or 15-minute short-term excursion limit (STEL) are available on desktop models. The alarm output with user-defined setpoint alerts you when upset or changing conditions occur.

All DustTrak II desktop monitors have three unique features:

- Gravimetric sampling capability using a 37-mm filter cassette which can be inserted in-line with the aerosol stream allowing you to perform an integral gravimetric analysis for custom reference calibrations.
- They can be zeroed automatically using the external zeroing module. This optional accessory is used when sampling over extended periods of time. By zeroing the monitor during sampling, the effect of zero drift is minimized.
- STEL alarm feature for tracking 15-minute average mass concentrations when alarm setpoint has been reached for applications like monitoring fugitive emissions at hazardous waste sites.

Handheld Models: Perfect for Walk-Through Surveys and Single-Point Data Collection Applications

DustTrak II handheld models are lightweight and portable. They're perfect for industrial hygiene surveys, point source location monitoring, indoor air quality investigations, engineering control evaluations/validation, and for baseline trending and screening. Like desktop models, they have manual and programmable data logging functions. In addition, they have single-point data logging capability. Single-point data collection is used for walk-through industrial hygiene surveys and indoor air quality investigations.

New Software Makes Monitoring Easier than Ever

TrakPro™ Data Analysis Software allows you to set up and program directly from a PC. A new feature is the ability for remote programming and data acquisition from your PC via wireless (922 MHz or 2.4 GHz) communications or over an Ethernet network. As always, you can print graphs, raw data tables, and statistical and comprehensive reports for recordkeeping purposes.

DustTrak II Aerosol Monitor Features

All Models

- Li-Ion rechargeable batteries
- Internal and external battery charging capabilities
- Outlet port for isokinetic sampling applications
- User serviceable sheath flow and pump filters
- Logged test pause and restart feature
- Logged test programming
  - – Color touch screen—either manual mode or program mode
  - – TrakPro™ Data Analysis Software via a PC
- User adjustable custom calibration settings
- Instantaneous alarm settings with visual and audible warnings
- Real-time graph display
- View statistical information during and after sampling
- On-screen instrument status indicators: FLOW, LASER and FILTER
- Filter service indicator for user preventative maintenance

All Desktop Models

- Hot swappable batteries
- Gravimetric reference sample capability
- Long life 10,000-hour internal pump
- TrakPro Data Analysis Software
- Auto zeroing module (optional accessory)
- STEL alarm setpoint

All Handheld Models

- Long life 2,500-hour internal pump
- Single-point data collection for walk through surveys
- TrakPro Data Analysis Software

Battery Performance

Models 8530/8531 (typical) 6600 mAH Li-Ion Battery Pack (P/N 801680)	1 Battery	2 Batteries
Battery Runtime (hours)	up to 6	up to 12
Charge Time * (hours) in DustTrak	4	8
Charge Time* (hours) in external battery charger (P/N 801685)	4	8

Model 8532 (typical) 3600 mAH Li-Ion Battery Pack (P/N 801681)	Battery
Battery Runtime (hours)	up to 6
Charge Time * (hours) in DustTrak	4
Charge Time* (hours) in external battery charger (P/N 801686)	4

*of a fully depleted battery

Specifications

Models 8530, 8531, and 8532
DustTrak™ II Aerosol Monitor

Sensor Type
90° light scattering

Particle Size Range
0.1 to 10 µm

Aerosol Concentration Range

8530 Desktop	0.001 to 150 mg/m^3
8531 Desktop High Conc.	0.001 to 400 mg/m^3
8532 Handheld	0.001 to 150 mg/m^3

Resolution
±0.1% of reading or 0.001 mg/m^3, whichever is greater

Zero Stability
±0.002 mg/m^3 per 24 hours at 10 sec time constant

Flow Rate
3.0 L/min set at factory, 1.40 to 3.0 L/min, user adjustable

Flow Accuracy
±5% of factory set point, internal flow controlled

Temperature Coefficient
+0.001 mg/m^3 per °C

Operational Temp
32 to 120°F (0 to 50°C)

Storage Temp
-4 to 140°F (-20 to 60°C)

Operational Humidity
0 to 95% RH, non-condensing

Time Constant
User adjustable, 1 to 60 seconds

Data Logging
5 MB of on-board memory (>60,000 data points)
45 days at 1 minute logging interval

Log Interval
User adjustable, 1 second to 1 hour

Physical Size (HWD)

Handheld	4.9 x 4.8 x 12.5 in. (12.5 x 12.1 x 31.6 cm)
Desktop	5.3 x 8.5 x 8.8 in. (13.5 x 21.6 x 22.4 cm)

Weight

Handheld	2.9 lb (1.3 kg), 3.3 lb (1.5 kg) with battery
Desktop	3.5 lb (1.6 kg), 4.5 lb (2.0 kg)–1 battery, 5.5 lb (2.5 kg)–2 batteries

Communications

8530/31	USB (host and device) and Ethernet. Stored data accessible using flash memory drive
8532	USB (Hose and device). Stored data accessible using flash memory drive

Power–AC
Switching AC power adapter with universal line cord included, 115–240 VAC

Analog Out

8530/31	User selectable output, 0 to 5 V or 4 to 20 mA User selectable scaling range

Alarm Out

8530/31	Relay or audible buzzer Relay Non-latching MOSFET switch User selectable set point –5% deadband Connector 4-pin, Mini-DIN connectors
8532	Audible buzzer

Screen

8530/31	5.7 in. VGA color touchscreen
8532	3.5 in. VGA color touchscreen

Gravimetric Sampling

8530/31	Removable 37 mm cartridge (user supplied)

CE Rating

Immunity	EN61236-1:2006
Emissions	EN61236-1:2006

Specifications are subject to change without notice. TSI, the TSI logo, DustTrak, and TrakPro are trademarks of TSI Incorporated. Microsoft and Windows are trademarks of Microsoft Corporation.

TSI Incorporated - 500 Cardigan Road, Shoreview, MN 55126-3996 USA

USA	**Tel:** +1 800 874 2811	**E-mail:** info@tsi.com	**Website:** www.tsi.com
UK	**Tel:** +44 149 4 459200	**E-mail:** tsiuk@tsi.com	**Website:** www.tsiinc.co.uk
France	**Tel:** +33 491 95 21 90	**E-mail:** tsifrance@tsi.com	**Website:** www.tsiinc.fr
Germany	**Tel:** +49 241 523030	**E-mail:** tsigmbh@tsi.com	**Website:** www.tsiinc.de
India	**Tel:** +91 80 41132470	**E-mail:** tsi-india@tsi.com	
China	**Tel:** +86 10 8260 1595	**E-mail:** tsibeijing@tsi.com	

TRUST. SCIENCE. INNOVATION.

Contact your local TSI Distributor or visit our website **www.tsi.com** for more detailed specifications.

P/N 6001987 Rev C (A4) Copyright © 2009 by TSI Incorporated Printed in U.S.A.

APPENDIX H

TECHNICAL SPECIFICATIONS

(TO BE PROVIDED IN A SUBSEQUENT DESIGN SUBMITTAL)

65% DESIGN TECHNICAL SPECIFICATIONS
TABLE OF CONTENTS

DIVISION 01 – GENERAL REQUIREMENTS

SECTION 01010, GENERAL REQUIREMENTS
SECTION 01025, MEASUREMENT AND PAYMENT
SECTION 01050, SURVEYING
SECTION 01110, ENVIRONMENTAL PROTECTION PROCEDURES
SECTION 01140, OPERATIONS AND WORK RESTRICTIONS
SECTION 01310, PROGRESS SCHEDULES
SECTION 01322 CONSTRUCTION PROGRESS DOCUMENTATION
SECTION 01350, SUBMITTALS
SECTION 01354, MATERIALS MANAGEMENT
SECTION 01412, PERMITS
SECTION 01450, QUALITY CONTROL
SECTION 01500, TEMPORARY FACILITIES AND CONTROL
SECTION 01560, SECURITY
SECTION 01660, STORAGE OF MATERIALS
SECTION 01670, PHOTOGRAPHS AND VIDEOS
SECTION 01700, PROJECT CLOSEOUT REQUIREMENTS
SECTION 01713, MOBILIZATION
SECTION 01721, PROTECTION OF WORK AND PROPERTY
SECTION 01732, SELECTIVE DEMOLITION
SECTION 01780, DEMOBILIZATION AND SITE RESTORATION

DIVISION 02 – SITE CONSTRUCTION

SECTION 02070, GEOTEXTILES
SECTION 02100, SITE PREPARATION
SECTION 02110, REMOVAL OF CONTAMINATED MATERIALS
SECTION 02120, OFF SITE TRANSPORT AND DISPOSAL
SECTION 02125, DECONTAMINATION
SECTION 02160, IN SITU STABILIZATION
SECTION 02240, CONSTRUCTION WATER MANAGEMENT
SECTION 02310, ROUGH GRADING AND BACKFILL
SECTION 02315, EXCAVATION

APPENDIX I

STORMWATER POLLUTION PREVENTION PLAN

STORMWATER POLLUTION PREVENTION PLAN FOR CONSTRUCTION ACTIVITY AT THE FORMER FARRINGTON STREET GAS WORKS SITE, QUEENS, NEW YORK

Prepared For:

Consolidated Edison Company of New York, Inc.

31-01 20th Avenue
Long Island City, NY 11105

Prepared By:

301 Plainfield Road, Suite 350
Syracuse, New York 13212

September 2022

TABLE OF CONTENTS

1 Introduction 1-1
1.1 Summary of Remedial Activities 1-1
1.2 Revisions 1-2
1.3 SWPPP Organization 1-2
2 Site Background 2-1
2.1 Site Location 2-1
2.2 Land Use 2-1
2.3 Site Soils 2-1
3 Erosion and Sediment Control Measures 3-1
3.1 Temporary Erosion Control Practices 3-1
3.2 Permanent Erosion Control Practices 3-2
3.3 Inspection & Maintenance Requirements 3-2
3.3.1 Trained Contractor 3-2
3.3.2 Inspections 3-2
4 Pollution Prevention Practices 4-1
4.1 Solid Waste 4-1
4.2 Waste, Construction Materials, and Debris 4-1
4.3 Temporary Sanitary Facilities 4-1
4.4 Dust Control Plan 4-1
4.5 Spill Prevention/Contingency Plan 4-1
4.5.1 Spill Prevention 4-2
4.5.2 Spill Control and Response 4-2
4.6 Security Plan 4-3
5 Contractor Certification 5-1
6 Post-Construction Stormwater Management 6-1
7 References 7-1

LIST OF TABLES

Table 1 Site Soils

LIST OF ATTACHMENTS

ATTACHMENT A GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES GP-0-20-001

ATTACHMENT B NOTICE OF INTENT (RESERVED)

ATTACHMENT C SOIL REPORT

ATTACHMENT D 75% REMEDIAL DESIGN REPORT FARRINGTON STREET DRAWINGS & SPECIFICATIONS (RESERVED)

ATTACHMENT E CONSTRUCTION LOG & INSPECTION TEMPLATE

LIST OF ACRONYMS

ACRONYM	Definition
bgs	Below ground surface
BMP	Best Management Practice
ConEd	Consolidated Edison Company of New York
CPESC	Certified Professional in Erosion and Sediment Control
General Permit GP-0-20-001	General Permit for Stormwater Discharges from Construction Activities Permit No. GP-0-20-001
ISS	In situ soil stabilization
NAPL	Nonaqueous phase liquid
NOI	Notice of Intent
NYSDEC	New York State Department of Environmental Conservation
NYSDOT	New York State Department of Transportation
PCB	Polychlorinated biphenyl
Site	Parcel 2 area of the former Farrington Street Gas Works property located at 31-24 Farrington Street
SPDES	State Pollution Discharge Elimination System
SWPPP	Stormwater Pollution Prevention Plan
USDA	U.S. Department of Agriculture

1 Introduction

This Stormwater Pollution Prevention Plan (SWPPP) describes actions to be taken as part of the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity, Permit No. GP-0-20-001 (General Permit GP-0-20-001) to support implementation of the remedial construction at the Consolidated Edison Company of New York (ConEd) former Farrington Street Gas Works site (Site) located in Queens, New York. All project activities will be performed in substantive compliance with the requirements of General Permit GP-0-20-001 (**Attachment A**).

This SWPPP was developed in accordance with General Permit GP-0-20-001 and generally accepted engineering practices. It describes the erosion and sediment control practices that will be used to minimize sediment in stormwater discharges during construction activities, offers protective measures to minimize sediment transport, and identifies potential sources of sediment that may affect the quality of stormwater discharges.

The Notice of Intent (NOI) for the General Permit GP-0-20-001 for the project is included as **Attachment B**. Other forms referenced within this SWPPP are also included as attachments. This SWPPP has been prepared to meet the substantive requirements of the General Permit GP-0-20-001.

Since the larger common plan of development exceeds 1 acre in area of disturbance, the project meets the requirements under the NYSDEC SPDES General Permit GP-0-20-001.

1.1 Summary of Remedial Activities

The project is a remediation project that will be performed in accordance with the NYSDEC-approved Remedial Design Report (Parsons, 2022). In general, the remedial activities to be performed at the Site consist of excavation of soils from the limits shown on the Design Drawings (**Attachment D**). Approximately 10,149 cubic yards (neat line, in situ) of material impacted with polychlorinated biphenyls (PCBs) and nonaqueous phase liquid (NAPL) will be removed prior to performing in situ soil stabilization (ISS) of the remaining soils. The remaining soils will receive ISS treatment to sequester any remaining soil impacts in order to prevent the off-site migration of contamination. The total area of soil disturbance is 2.16 acres.

The sequence of operations will proceed, as follows:

1. Mobilization
2. Site preparation
    a. Installation of temporary facilities and controls
    b. Installation of soil erosion and sediment control measures
3. Site demolition
    a. Selective demolition of existing fencing in work areas
    b. Removal of existing above and below ground structures
4. Excavation
    a. Soil excavation (top 4 feet)
    b. Installation of temporary shoring to support trench excavation

5. In Situ Stabilization of Soils

   Perform in situ stabilization mixing operations to solidify site soils

6. Off-Site Transportation and Disposal
   a. Material management and stockpiling
   b. Waste characterization sampling
   c. Transport and off-site disposal of excavated material
7. Restoration
   a. Placement of imported backfill material
   b. Restoration of service to buildings
   c. Restoration of existing concrete, asphalt pavement, and markings
   d. Restoration of fenced areas
   e. Fencing repair and installation
8. Decontamination and Demobilization

Additional details regarding remedial activities are provided in the NYSDEC-approved Remedial Design Report (Parsons, 2022).

1.2 Revisions

This SWPPP will be kept up to date so that at all times it accurately documents the erosion and sediment control practices that are being used or will be used during construction. At a minimum, this SWPPP will be amended:

1. Whenever the current provisions prove to be ineffective at minimizing pollutants in stormwater discharges from the Site.
2. Whenever there is a change in design, construction, operation, or maintenance at the Site that has or could have an effect on the discharge of pollutants.
3. To address issues or deficiencies identified during an inspection by the Contractor's qualified inspector, NYSDEC, or other regulatory authority having jurisdiction.

1.3 SWPPP Organization

The remainder of this SWPPP is organized into six sections as follows:

Section 2 **Site Background** – Presents the general information regarding the existing (pre-construction) conditions at the Site.

Section 3 **Erosion and Sediment Control Measures** – Summarizes the means and methods that will be used to control erosion, sediment, and turbidity during the remedial construction activities.

Section 4 **Pollution Prevention Practices** – Summarizes the pollution prevention and control measures that will be implemented during the remedial construction activities.

Section 5 **Contractor Certification** – Provides the certification statement for Contractor and Subcontractors compliance with the SWPPP.

Section 6 **Post-Construction Stormwater Management** – Summarizes the post-construction stormwater management controls for the project.

Section 7 **References** – Presents a list of documents used in the preparation of this SWPPP.

2 Site Background

2.1 Site Location

The former Farrington Street Gas Works site is located at 31-06 and 31-24 Farrington Street in Queens, New York (**Cover Sheet, Attachment D**). For the purposes of describing the former Gas Works site, it has been divided into Parcel 1, the Market Area, and Parcel 2. The Remedial Design Report (Parsons, 2022) presents the remedial action to be completed within the Parcel 2 area of the Site, located at 31-24 Farrington Street.

The Site is approximately 2.16 acres, located on a portion of Tax Block 4406 Lot 30, and consists of a gravel, asphalt, and concrete yard utilized by ConEd as an equipment, storage, and lay down area. The Site is bordered to the north by 31st Drive, to the east by Farrington Street, to the south by 32nd Avenue, and to the west by Byrds Alley. The Site is located approximately 2,000 feet northeast of Flushing Creek, 1,200 feet southwest of Mill Creek, and 4,000 feet east of Flushing Bay.

2.2 Land Use

According to the New York City Department of City Planning, the Site and northwestern, western, southwestern, and southern abutting properties are zoned as M2-1, which are defined as medium manufacturing districts (medium performance). The abutting properties east of Farrington Street are zoned as M1-1, which are defined as light manufacturing districts (high performance).

2.3 Site Soils

Soil borings completed during investigation activities at the Site show three separate lithologies (peat, clay, and sands) present below urban fill found at the surface. Urban fill material, generally consisting of sand, gravel, and silt with various debris including cobbles, cement, brick, metal, wood fragments, and slag, ranges in thickness from 5 to 17 feet.

Fill material in Parcel 1 is predominantly underlain by peat and/or clays. This peat/clay confining layer is encountered at depths ranging from 13.5 to 37 feet below ground surface (bgs), with the top of the confining layer encountered between 13 to 19 feet bgs. Sands with varying amounts of silts and gravels ranging in thickness from 2 to 7 feet are encountered above the confining layer in the southern portion of the Parcel 1 parking lot. In the portions of Parcel 1 where a relatively thin confining layer is observed, an underlying sand unit is encountered.

Fill material in Parcel 2 is generally underlain by native sands, with finer grained silts and sands being observed in select borings. No bedrock was encountered during investigation activities; therefore, the bottom of the sand layer cannot be bound. However, observed sand thicknesses in soil borings ranged from at least 14 to 50 feet. These thick accumulations of sands are also observed in adjacent sidewalk areas. Complete boring logs from investigation activities may be found in the Remedial Design Report (Parsons, 2022).

Based on information obtained from the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service Web Soil Survey, the following soil groups are present on the Site (**Table 1**). A detailed soil report is provided in **Attachment C**.

TABLE 1. SITE SOILS

Soils Map Unit Symbol	Soils Map Unit Name	Description	Hydrologic Soils Group
UmA	Urban land – Tidal marsh substratum	0 to 3 percent slopes	–
UoA	Urban land – Outwash substratum	0 to 3 percent slopes	–

3 Erosion and Sediment Control Measures

This section presents the means and methods for erosion and sediment control measures to be utilized as part of remedial construction activities.

A qualified inspector will inspect the proposed erosion and sediment control measures and disturbed areas of the Site for compliance with this SWPPP. Inspections will be completed at least two times every seven calendar days.

3.1 Temporary Erosion Control Practices

Temporary erosion and sedimentation controls will be installed prior to start of construction to prevent off-site transport of soil erosion and sedimentation. These controls are a dynamic project element, requiring modification as the construction needs change over time. The three main erosion control methods will include installation of sediment barriers, inlet protection, and stabilized construction entrance(s). Proposed temporary erosion and sediment control locations and details are provided on **Drawings C-005 and D-002**, respectively, of (**Attachment D**). The primary erosion control methods and additional select Site practices are outlined below:

Sediment barrier:

Straw bale and silt fence, or silt fence only, barrier will be constructed around active work phases. Straw bales will be placed in a row with ends tightly abutting the adjacent bales. Straw bales and silt fence will be removed/properly disposed of and replaced when damaged, collapsed, or decomposed. Accumulated silt will be removed and disposed of when silt has built up to a depth of one-half the straw bale or silt fence height.

Inlet protection:

Temporary fabric inlet protection will be installed at existing inlet/catch basins. Storm drain inlets will be installed in drainage devices per manufacturer recommendations.

Stabilized construction entrance:

Temporary gravel construction entrances will be installed prior to the start of construction activities. During wet weather it may be necessary to wash vehicle tires at this location. The entrance will be graded so that runoff water will be directed to a dewatering system. A woven geotextile fabric will be underlain over the area prior to placing of 2½-inch minimum D_{50} crushed stone.

Land grading:

Minimum grading will be required for site restoration and anticipated site use.

Dust control:

Fugitive dust will be controlled using water trucks to wet the Site.

The erosion and sediment control measures described in this SWPPP will conform to the latest version of the NYSDEC's "New York State Standards and Specifications for Erosion and Sediment Control," also known as the Blue Book (NYSDEC, 2016).

3.2 Permanent Erosion Control Practices

Permanent erosion controls will be installed following project completion. These controls include restoration of the Site consistent with surrounding areas (i.e., re-installation of gravel parking surfaces). Final proposed Site topography and drainage features are shown on **Drawing C-010** (**Attachment D**).

3.3 Inspection & Maintenance Requirements

Erosion and sediment control and stormwater management practices identified in the SWPPP will be inspected and maintained in effective operating condition. Inspections will be performed by a qualified inspector.

If soil disturbance activities are temporarily suspended and temporary stabilization measures have been applied to disturbed areas, the inspections may be stopped. Inspections will re-start once soil disturbance activities resume.

If soil disturbance activities have been shut down with partial project completion, maintenance inspections may be stopped if areas disturbed as of the project shutdown date have achieved final stabilization.

3.3.1 TRAINED CONTRACTOR

In accordance with General Permit GP-0-20-001, the Contractor implementing the SWPPP must meet the definition of a "Trained Contractor." By definition, a Trained Contractor means that the construction company implementing the SWPPP will have an employee on-site who has received four hours of NYSDEC-endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC-endorsed entity. After receiving the initial training, the Trained Contractor will be required to receive four hours of training every three years.

The Trained Contractor may be a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or a person working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four hours of NYSDEC-endorsed training. The Trained Contractor will be responsible for the day-to-day implementation of the SWPPP including inspection and maintenance of temporary and permanent erosion and sediment and stormwater control measures.

3.3.2 INSPECTIONS

When soil disturbance activities are on-going, the qualified inspector will conduct site inspections at least two times every seven calendar days (inspections will be separated by a minimum of two full calendar days). A qualified inspector is a person as defined in Appendix A of General Permit GP-0-20-001. The Trained Contractor, as described in Section 3.3.1, cannot perform the role of qualified inspector unless the Trained Contractor also meets the qualified inspector qualifications included in Part IV.C. of General Permit GP-0-20-001.

At a minimum, the qualified inspector will inspect:

1. Erosion and sediment control practices to ascertain integrity and effectiveness
2. Stormwater management practices to ensure that they are constructed in conformance with the design
3. Areas of disturbance that have not achieved final stabilization
4. Points of discharge to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site, and points of discharge from the construction site

The qualified inspector will also:

5. Prepare an inspection report after each inspection. At a minimum, the inspection report will include and/or address the following:
    a. Date and time of inspection.
    b. Name and title of person(s) performing inspection.
    c. A description of the weather and soil conditions (e.g., dry, wet, saturated) at the time of the inspection.
    d. A description of the condition of the runoff at points of discharge from the construction site. This shall include identification of any discharges of sediment from the construction site. Include discharges from conveyance systems (i.e., pipes, culverts, ditches) and overland flow.
    e. A description of the condition of natural surface water bodies located within, or immediately adjacent to, the property boundaries of the construction site that receive runoff from disturbed areas. This shall include identification of any discharges of sediment to the surface water body.
    f. Identification of erosion and sediment control practices and pollution prevention measures in need of repair or maintenance.
    g. Identification of erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced.
    h. Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection.
    i. Current phase of construction of post-construction stormwater management practices and identification of construction that is not in conformance with the SWPPP and technical standards.
    j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures to correct deficiencies identified with the construction of the post-construction stormwater management practice(s).
    k. Identification and status of corrective actions that were required by previous inspection.
    l. Digital photographs, with date stamp, that clearly show the condition of practices that have been identified as needing corrective actions. The qualified inspector shall attach paper color copies of the digital photographs to the inspection report being maintained on-site within seven calendar days of the date of the inspection. The qualified inspector shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The qualified inspector shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven calendar days of that inspection.
6. Notify the Contractor within one business day of any corrective actions that need to be taken. The corrective actions will be initiated within one business day of this notification and be completed in a reasonable time frame.
7. Sign all inspection reports.

The inspection reports will be maintained in the on-site field office with the SWPPP and will be made available to the permitting authority upon request. A summary of the Site inspection activities will be posted monthly at the Site field office. A typical Construction Log and Inspection Report Form are included in **Attachment E**.

A Site sketch map will be maintained in the on-site field office indicating the extent of disturbed on-site areas and drainage ways throughout the duration of construction. The Site sketch map will identify areas expected to undergo initial disturbance or significant site work within every 14-day period. The sketch will indicate areas of the Site that have undergone temporary or permanent stabilization. Disturbed areas that have not undergone active site work during the previous 14-day inspection period will be noted.

Sediment control measures will be inspected and the degree of accumulation as a percentage of the sediment storage volume will be recorded. Maintenance required for installed erosion and sediment control structures will be noted, and documentation of areas where adjustments are needed to those measures will be provided. Deficiencies identified with the implementation of the SWPPP will be recorded.

4 Pollution Prevention Practices

The following pollution prevention practices will be implemented during construction to control litter and prevent construction-related materials and debris from becoming a pollutant source in stormwater discharges from the Site.

4.1 Solid Waste

Solid waste will be collected and placed in appropriate containers on-site to prevent discharge with stormwater. Solid waste containers will be emptied periodically and disposed by the Contractor. The Contractor will be required to maintain the work area(s) daily and collect any solid waste or litter for disposal.

4.2 Waste, Construction Materials, and Debris

Any excess construction materials will be completely disposed of in accordance with all local, state, and federal requirements.

4.3 Temporary Sanitary Facilities

Temporary sanitary facilities sufficient for on-site crew size will be provided and maintained by the Contractor throughout construction.

4.4 Dust Control Plan

The primary concern for pollution from the proposed construction activities is dust generated from the removal and storage of contaminated materials. Dust controls will be used to prevent surface and air movement of dust from disturbed or open-soil areas and material staging areas that may cause off-site damage, health hazards, and traffic safety problems. Dust controls will be proactively employed by the Contractor in accordance with Specification Section 01500 (Temporary Facilities and Control), and may include one or more of the following practices:

- Excavating, loading, handling, and backfill materials in a manner that minimizes the generation of dust.
- Hauling excavated materials and clean backfill materials in properly tarped/covered transport vehicles.
- Restricting vehicle speeds on temporary access roads and active haul routes.
- Wetting roads and other work areas, as needed.
- Covering excavations and temporary stockpiles with 10-mil polyethylene liners (anchored appropriately to resist wind forces) before extended work breaks and at the end of each workday.

A Dust Control Plan will be submitted by the Contractor and attached to this SWPPP once it has been developed.

4.5 Spill Prevention/Contingency Plan

The Contractor will prepare a Spill Prevention/Contingency Plan in accordance with the Specification Section 01350 (Submittals). The Spill Prevention/Contingency Plan will include the procedures for spill prevention practices, spill control, and spill response.

4.5.1 SPILL PREVENTION

The Contractor's spill prevention practices will include, at a minimum, the following:

1. Performing regular inspections of construction vehicles, equipment, and portable fuel tanks to check for leaks.
2. Performing routine maintenance on construction vehicles and equipment in accordance with the manufacturer's specifications.
3. Promptly repairing or replacing damaged or defective construction vehicles and equipment.
4. Storing on-site fuel tanks within a secondary containment area or providing alternate secondary containment (e.g., double-walled fuel tanks, containment dikes).
5. Re-fueling vehicles on level ground within a designated area away from steep slopes and stormwater run-off conveyance features (e.g., ditches/diversions, storm sewers).
6. Attending to construction vehicles and equipment while re-fueling.
7. Turning off internal combustion engines before re-fueling with a flammable liquid.
8. Replacing the cap on vehicle fuel tanks before starting the engine.
9. Securing/locking fuel pump dispensers when not in use to avoid accidental fuel release.
10. Storing construction vehicles and equipment away from site hazards and sensitive resources, to the extent practicable.

4.5.2 SPILL CONTROL AND RESPONSE

The Contractor will maintain on-site sufficient fire extinguishers, spill kits, and oil-absorbent pads, rolls, and booms as required to contain spills (should they occur) and prevent the potential migration of pollutants beyond the work area. In the event of a spill, the Contractor will immediately notify ConEd and implement the following response measures:

Stop/Isolate Source:

As conditions allow, the Contractor will attempt to stop or isolate the source of the spill by closing valves and/or shutting down affected vehicles or equipment.

Containment:

If the spilled material sinks below the water surface, a dam, weir, or other containment method will be used to stop the flow of the spilled material. If the spill occurs on land, a containment unit will be constructed to stop the flow of the spilled material and sorbents will be applied, as necessary. If the spilled material is floating on a water surface, spill-absorbent pads/booms will be placed across the path of the floating spill.

Clean-Up:

Spills on land will be recovered using pumps, sorbents, and heavy equipment, as necessary, until the spilled material is recovered. Spills in water will be recovered using pumps and sorbents, as necessary, until the spilled material is recovered and no sheen or other evidence of the spill is observed on the water surface. Construction vehicles and equipment used in the clean-up, or otherwise affected by the spill will also be cleaned/decontaminated.

Collection, Storage, and Disposal:

Impacted materials, sorbents, and other wastes will be collected and stored in New York State Department of Transportation (NYSDOT)- approved containers. The containers will be labeled with the waste type and date of accumulation and will be transported off-site for disposal at a permitted facility in accordance with all applicable laws and regulations.

Post-Spill Maintenance:

Following the clean-up of the spill, the Contractor will verify that all impacted materials, vehicles, and equipment have either been transported off-site for disposal, or decontaminated, as appropriate. The vehicle or piece of equipment that may have caused the spill will also be repaired. If the vehicle or piece of equipment cannot be repaired, it will be removed from the site and replaced.

Spill notifications and reporting to the necessary agencies will be coordinated by ConEd and/or the Engineer. Appropriate emergency response groups, including the local fire department, NYSDEC, and National Response Center, will be contacted immediately if the spill or material release has impacted soil, groundwater, or surface water, or is beyond the capabilities of on-site personnel to control using the methods described above.

4.6 Security Plan

To prevent unauthorized access a Security Plan will be submitted by the Contractor and attached to this SWPPP once it has been developed.

5 Contractor Certification

All Contractors and Subcontractors agree to the following certification statement referenced from General Permit GP-0-20-001:

Certification Statement

"I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations."

Contractor: _____

Contact Person (Print): _____

Contact Person (Signature): _____ Date: _____

Address: _____

_____

_____

Phone: _____

Fax: _____

Subcontractor: _____

Contact Person (Print): _____

Contact Person (Signature): _____ Date: _____

Address: _____

_____

_____

Phone: _____

Fax: _____

Subcontractor: _____

Contact Person (Print): _____

Contact Person (Signature): _____ Date: _____

Address: _____

_____

_____

Phone: _____

Fax: _____

Subcontractor: _____

Contact Person (Print): _____

Contact Person (Signature): _____ Date: _____

Address: _____

_____

_____

Phone: _____

Fax: _____

Subcontractor: _____

Contact Person (Print): _____

Contact Person (Signature): _____ Date: _____

Address: _____

_____

_____

Phone: _____

Fax: _____

6 Post-Construction Stormwater Management

Due to the nature of the work being performed (i.e., removal of impacted material under a NYSDEC-approved Remedial Design), post-construction water quality and quantity controls are not required. Additionally, in accordance with Appendix B, Table 1 of General Permit GP-0-20-001 (NYSDEC, 2020), slope flattening that changes the grade of the site but does not significantly change the runoff characteristics are classified as construction activities that require the preparation of a SWPPP that only includes erosion and sedimentation controls. Consequently, post-construction stormwater management practices are not required for the Site.

7 References

NYSDEC. 2016. *New York State Standards and Specifications for Erosion and Sediment Control.* November 2016.

NYSDEC. 2020. *SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-20-001).* January 2020.

Parsons. 2017. *Remedial Investigation Report for the Former Farrington Street Gas Works Site – Queens, New York*. Parsons, May 2017.

Parsons. 2022. *Remedial Design Report for the Former Farrington Street Gas Works Site, Parcel 2, Queens, New York, Site No. V00560.* September 2022.

ATTACHMENT A GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES GP-0-20-001

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP- 0-20-001

Issued Pursuant to Article 17, Titles 7, 8 and Article 70

of the Environmental Conservation Law

Effective Date: January 29, 2020

Expiration Date: January 28, 2025

John J. Ferguson

Chief Permit Administrator

1-23-20

Authorized Signature

Date

Address: NYS DEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act ("CWA"), stormwater *discharges* from certain *construction activities* are unlawful unless they are authorized by a *National Pollutant Discharge Elimination System ("NPDES")* permit or by a state permit program. New York administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7, 8 and Article 70.

An *owner or operator* of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of "*construction activity*", as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a *point source* and therefore, pursuant to ECL section 17-0505 and 17-0701, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

Table of Contents

Part 1. PERMIT COVERAGE AND LIMITATIONS 1
A. Permit Application 1
B. Effluent Limitations Applicable to Discharges from Construction Activities 1
C. Post-construction Stormwater Management Practice Requirements 4
D. Maintaining Water Quality 8
E. Eligibility Under This General Permit 9
F. Activities Which Are Ineligible for Coverage Under This General Permit 9
Part II. PERMIT COVERAGE 12
A. How to Obtain Coverage 12
B. Notice of Intent (NOI) Submittal 13
C. Permit Authorization 13
D. General Requirements For Owners or Operators With Permit Coverage 15
E. Permit Coverage for Discharges Authorized Under GP-0-15-002 17
F. Change of Owner or Operator 17
Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) 18
A. General SWPPP Requirements 18
B. Required SWPPP Contents 20
C. Required SWPPP Components by Project Type 24
Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS 24
A. General Construction Site Inspection and Maintenance Requirements 24
B. Contractor Maintenance Inspection Requirements 24
C. Qualified Inspector Inspection Requirements 25
Part V. TERMINATION OF PERMIT COVERAGE 29
A. Termination of Permit Coverage 29
Part VI. REPORTING AND RETENTION RECORDS 31
A. Record Retention 31
B. Addresses 31
Part VII. STANDARD PERMIT CONDITIONS 31
A. Duty to Comply 31
B. Continuation of the Expired General Permit 32
C. Enforcement 32
D. Need to Halt or Reduce Activity Not a Defense 32
E. Duty to Mitigate 33
F. Duty to Provide Information 33
G. Other Information 33
H. Signatory Requirements 33
I. Property Rights 35
J. Severability 35

K. Requirement to Obtain Coverage Under an Alternative Permit....35
L. Proper Operation and Maintenance....36
M. Inspection and Entry....36
N. Permit Actions....37
O. Definitions....37
P. Re-Opener Clause....37
Q. Penalties for Falsification of Forms and Reports....37
R. Other Permits....38
APPENDIX A – Acronyms and Definitions....39
Acronyms....39
Definitions....40
APPENDIX B – Required SWPPP Components by Project Type....48
Table 1....48
Table 2....50
APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal....52
APPENDIX D – Watersheds with Lower Disturbance Threshold....58
APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)....59
APPENDIX F – List of NYS DEC Regional Offices....65

Part 1. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

This permit authorizes stormwater *discharges* to *surface waters of the State* from the following *construction activities* identified within 40 CFR Parts 122.26(b)(14)(x), 122.26(b)(15)(i) and 122.26(b)(15)(ii), provided all of the eligibility provisions of this permit are met:

1. *Construction activities* involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a *larger common plan of development or sale* that will ultimately disturb one or more acres of land; excluding *routine maintenance activity* that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;

2. *Construction activities* involving soil disturbances of less than one (1) acre where the Department has determined that a *SPDES* permit is required for stormwater *discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of *pollutants* to *surface waters of the State.*

3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

B. Effluent Limitations Applicable to Discharges from Construction Activities

*Discharge*s authorized by this permit must achieve, at a minimum, the effluent limitations in Part I.B.1. (a) – (f) of this permit. These limitations represent the degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement and maintain control measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part I.B.1.(a) – (f) of this permit and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in the *Stormwater Pollution Prevention Plan* (“SWPPP”) the reason(s) for the

deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

a. **Erosion and Sediment Controls.** Design, install and maintain effective erosion and sediment controls to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such controls must be designed, installed and maintained to:

   (i) *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharge*s;

   (ii) Control stormwater *discharge*s, including both peak flowrates and total stormwater volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points;

   (iii) *Minimize* the amount of soil exposed during *construction activity*;

   (iv) *Minimize* the disturbance of *steep slopes*;

   (v) *Minimize* sediment *discharge*s from the site;

   (vi) Provide and maintain *natural buffer*s around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce *pollutant discharge*s, unless *infeasible*;

   (vii) *Minimize* soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted;

   (viii) Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and

   (ix) *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of pollutants that could be discharged from the site.

b. **Soil Stabilization**. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased. For construction sites that *directly discharge* to one of the 303(d) segments

listed in Appendix E or is located in one of the watersheds listed in Appendix C, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. See Appendix A for definition of *Temporarily Ceased*.

c. **Dewatering**. *Discharge*s from *dewatering* activities, including *discharge*s from *dewatering* of trenches and excavations, must be managed by appropriate control measures.

d. **Pollution Prevention Measures**. Design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be designed, installed, implemented and maintained to:

(i) *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. This applies to washing operations that use clean water only. Soaps, detergents and solvents cannot be used;

(ii) *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation and to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use) ; and

(iii) Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

e. **Prohibited *Discharges*.** The following *discharge*s are prohibited:

(i) Wastewater from washout of concrete;

(ii) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

(iii) Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance;

(iv) Soaps or solvents used in vehicle and equipment washing; and

(v) Toxic or hazardous substances from a spill or other release.

f. Surface Outlets. When discharging from basins and impoundments, the outlets shall be designed, constructed and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-construction Stormwater Management Practice Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must select, design, install, and maintain the practices to meet the *performance criteria* in the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015, using sound engineering judgment. Where post-construction stormwater management practices ("SMPs") are not designed in conformance with the *performance criteria* in the Design Manual, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must design the practices to meet the applicable *sizing criteria* in Part I.C.2.a., b., c. or d. of this permit.

a. Sizing Criteria for New Development

(i) Runoff Reduction Volume ("RRv"): Reduce the total Water Quality Volume ("WQv") by application of RR techniques and standard SMPs with RRv capacity. The total WQv shall be calculated in accordance with the criteria in Section 4.2 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: Construction activities that cannot meet the criteria in Part I.C.2.a.(i) of this permit due to site limitations shall direct runoff from all newly constructed impervious areas to a RR technique or standard SMP with RRv capacity unless infeasible. The specific site limitations that prevent the reduction of 100% of the WQv shall be documented in the SWPPP.

For each impervious area that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered infeasible.

In no case shall the runoff reduction achieved from the newly constructed impervious areas be less than the Minimum RRv as calculated using the criteria in Section 4.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume ("Cpv"): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
(1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
(2) The site discharges directly to tidal waters, or fifth order or larger streams.

(iv) *Overbank* Flood Control Criteria ("Qp"): Requires storage to attenuate the post-development 10-year, 24-hour peak discharge rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
(1) the site discharges directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

(v) Extreme Flood Control Criteria ("Qf"): Requires storage to attenuate the post-development 100-year, 24-hour peak discharge rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
(1) the site discharges directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

b. *Sizing Criteria* for *New Development* in Enhanced Phosphorus Removal Watershed

(i) Runoff Reduction Volume (RRv): Reduce the total Water Quality Volume (WQv) by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24 hour design storm over the post-developed watershed and shall be

calculated in accordance with the criteria in Section 10.3 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part I.C.2.b.(i) of this permit due to *site limitations* shall direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv shall be documented in the SWPPP. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 10.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume (Cpv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
(1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
(2) The site *discharge*s directly to tidal waters, or fifth order or larger streams.

(iv) *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
(1) the site *discharge*s directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

(v) Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
(1) the site *discharge*s directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

c. Sizing Criteria for Redevelopment Activity

(i) Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* shall be addressed by one of the following options. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C of this permit) shall calculate the WQv in accordance with Section 10.3 of the Design Manual. All other *redevelopment activities* shall calculate the WQv in accordance with Section 4.2 of the Design Manual.

(1) Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the Design Manual must be applied to all newly created pervious areas, or

(2) Capture and treat a minimum of 25% of the WQv from the disturbed, *impervious area* by the application of standard SMPs; or reduce 25% of the WQv from the disturbed, *impervious area* by the application of RR techniques or standard SMPs with RRv capacity., or

(3) Capture and treat a minimum of 75% of the WQv from the disturbed, *impervious area* as well as any additional runoff from tributary areas by application of the alternative practices discussed in Sections 9.3 and 9.4 of the Design Manual., or

(4) Application of a combination of 1, 2 and 3 above that provide a weighted average of at least two of the above methods. Application of this method shall be in accordance with the criteria in Section 9.2.1(B) (IV) of the Design Manual.

If there is an existing post-construction stormwater management practice located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 – 4 above.

(ii) Channel Protection Volume (Cpv): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

(iii) *Overbank* Flood Control Criteria (Qp): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

(iv) Extreme Flood Control Criteria (Qf): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site

d. Sizing Criteria for Combination of Redevelopment Activity and New Development

Construction projects that include both New Development and Redevelopment Activity shall provide post-construction stormwater management controls that meet the sizing criteria calculated as an aggregate of the Sizing Criteria in Part I.C.2.a. or b. of this permit for the New Development portion of the project and Part I.C.2.c of this permit for Redevelopment Activity portion of the project.

D. Maintaining Water Quality

The Department expects that compliance with the conditions of this permit will control *discharge*s necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any discharge to either cause or contribute to a violation of *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, such as:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;

2. There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There shall be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the stormwater *discharge*s authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standards*; the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this general permit and document in accordance with Part IV.C.4. of this general permit. To address the *water quality standard* violation the *owner or operator* may need to provide additional information, include and implement appropriate controls in the SWPPP to correct the problem, or obtain an individual SPDES permit.

If there is evidence indicating that despite compliance with the terms and conditions of this general permit it is demonstrated that the stormwater *discharge*s authorized by this permit are causing or contributing to a violation of *water quality standards*, or if the Department determines that a modification of the permit is necessary to prevent a violation of *water quality standards*, the authorized *discharge*s will no longer be eligible for coverage under this permit. The Department may require the *owner or operator* to obtain an individual SPDES permit to continue discharging.

E. Eligibility Under This General Permit

1. This permit may authorize all *discharges* of stormwater from *construction activity* to *surface waters of the State* and *groundwaters* except for ineligible *discharges* identified under subparagraph F. of this Part.

2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater *discharge*s; including stormwater runoff, snowmelt runoff, and surface runoff and drainage, from *construction activities*.

3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater discharges are authorized by this permit: those listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "Discharges from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; waters to which other components have not been added that are used to control dust in accordance with the SWPPP; and uncontaminated *discharge*s from *construction site* de-watering operations. All non-stormwater discharges must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with *water quality standards* in Part I.D of this permit.

4. The *owner or operator* must maintain permit eligibility to *discharge* under this permit. Any *discharges* that are not compliant with the eligibility conditions of this permit are not authorized by the permit and the *owner or operator* must either apply for a separate permit to cover those ineligible *discharges* or take steps necessary to make the *discharge* eligible for coverage.

F. Activities Which Are Ineligible for Coverage Under This General Permit

All of the following are **not** authorized by this permit:

1. *Discharge*s after *construction activities* have been completed and the site has undergone *final stabilization*;

2. *Discharge*s that are mixed with sources of non-stormwater other than those expressly authorized under subsection E.3. of this Part and identified in the SWPPP required by this permit;

3. *Discharges* that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII.K. of this permit;

4. *Construction activities* or *discharges* from *construction activities* that may adversely affect an *endangered or threatened species* unless the *owner or*

operator has obtained a permit issued pursuant to 6 NYCRR Part 182 for the project or the Department has issued a letter of non-jurisdiction for the project. All documentation necessary to demonstrate eligibility shall be maintained on site in accordance with Part II.D.2 of this permit;

5. *Discharges* which either cause or contribute to a violation of *water quality standards* adopted pursuant to the *ECL* and its accompanying regulations;

6. *Construction activities* for residential, commercial and institutional projects:

   a. Where the *discharge*s from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and

   b. Which are undertaken on land with no existing *impervious cover*; and

   c. Which disturb one (1) or more acres of land designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase "E" or "F" (regardless of the map unit name), or a combination of the three designations.

7. *Construction activities* for linear transportation projects and linear utility projects:

   a. Where the *discharge*s from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and

   b. Which are undertaken on land with no existing *impervious cover*; and

   c. Which disturb two (2) or more acres of land designated on the current USDA Soil Survey as Soil Slope Phase "D" (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase "E" or "F" (regardless of the map unit name), or a combination of the three designations.

8. *Construction activities* that have the potential to affect an *historic property*, unless there is documentation that such impacts have been resolved. The following documentation necessary to demonstrate eligibility with this requirement shall be maintained on site in accordance with Part II.D.2 of this permit and made available to the Department in accordance with Part VII.F of this permit:

   a. Documentation that the *construction activity* is not within an archeologically sensitive area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant.

      - 1-5 acres of disturbance - 20 feet
      - 5-20 acres of disturbance - 50 feet
      - 20+ acres of disturbance - 100 feet, or

   b. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and
      (i) the State Environmental Quality Review (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or
      (ii) documentation from OPRHP that the *construction activity* will result in No Impact; or
      (iii) documentation from OPRHP providing a determination of No Adverse Impact; or
      (iv) a Letter of Resolution signed by the owner/operator, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA); or

   c. Documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

(i) No Affect
(ii) No Adverse Affect
(iii) Executed Memorandum of Agreement, or

d. Documentation that:

(i) SHPA Section 14.09 has been completed by NYS DEC or another state agency.

9. *Discharge*s from *construction activities* that are subject to an existing SPDES individual or general permit where a SPDES permit for *construction activity* has been terminated or denied; or where the *owner or operator* has failed to renew an expired individual permit.

Part II. PERMIT COVERAGE

A. How to Obtain Coverage

1. An *owner or operator* of a *construction activity* that is not subject to the requirements of a regulated, traditional land use control MS4 must first prepare a SWPPP in accordance with all applicable requirements of this permit and then submit a completed Notice of Intent (NOI) to the Department to be authorized to discharge under this permit.

2. An *owner or operator* of a *construction activity* that is subject to the requirements of a *regulated, traditional land use control MS4* must first prepare a SWPPP in accordance with all applicable requirements of this permit and then have the SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department. The *owner or operator* shall have the “MS4 SWPPP Acceptance” form signed in accordance with Part VII.H., and then submit that form along with a completed NOI to the Department.

3. The requirement for an *owner or operator* to have its SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department does not apply to an *owner or operator* that is obtaining permit coverage in accordance with the requirements in Part II.F. (Change of *Owner or Operator*) or where the *owner or operator* of the *construction activity* is the *regulated, traditional land use control MS4* . This exemption does not apply to *construction activities* subject to the New York City Administrative Code.

B. Notice of Intent (NOI) Submittal

1. Prior to December 21, 2020, an owner or operator shall use either the electronic (eNOI) or paper version of the NOI that the Department prepared. Both versions of the NOI are located on the Department's website (http://www.dec.ny.gov/). The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the following address:

   NOTICE OF INTENT
   NYS DEC, Bureau of Water Permits
   625 Broadway, 4th Floor
   Albany, New York 12233-3505

2. Beginning December 21, 2020 and in accordance with EPA's 2015 NPDES Electronic Reporting Rule (40 CFR Part 127), the *owner or operator* must submit the NOI electronically using the *Department's* online NOI.

3. The *owner or operator* shall have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.

4. As of the date the NOI is submitted to the Department, the *owner or operator* shall make the NOI and SWPPP available for review and copying in accordance with the requirements in Part VII.F. of this permit.

C. Permit Authorization

1. An *owner or operator* shall not *commence construction activity* until their authorization to *discharge* under this permit goes into effect.

2. Authorization to *discharge* under this permit will be effective when the *owner or operator* has satisfied all of the following criteria:

   a. project review pursuant to the State Environmental Quality Review Act ("SEQRA") have been satisfied, when SEQRA is applicable. See the Department's website (http://www.dec.ny.gov/) for more information,

   b. where required, all necessary Department permits subject to the *Uniform Procedures Act ("UPA")* (see 6 NYCRR Part 621), or the equivalent from another New York State agency, have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). *Owners or operators* of *construction activities* that are required to obtain *UPA* permits

must submit a preliminary SWPPP to the appropriate DEC Permit Administrator at the Regional Office listed in Appendix F at the time all other necessary *UPA* permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the *construction activity* qualifies for authorization under this permit,

c. the final SWPPP has been prepared, and

d. a complete NOI has been submitted to the Department in accordance with the requirements of this permit.

3. An *owner or operator* that has satisfied the requirements of Part II.C.2 above will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:

   a. For *construction activities* that are <u>not</u> subject to the requirements of a *regulated, traditional land use control MS4*:

      (i) Five (5) business days from the date the Department receives a complete electronic version of the NOI (eNOI) for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.; or

      (ii) Sixty (60) business days from the date the Department receives a complete NOI (electronic or paper version) for *construction activities* with a SWPPP that has <u>not</u> been prepared in conformance with the design criteria in technical standard referenced in Part III.B.1. or, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C., the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, or;

      (iii) Ten (10) business days from the date the Department receives a complete paper version of the NOI for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.

b. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*:

(i) Five (5) business days from the date the Department receives both a complete electronic version of the NOI (eNOI) and signed "*MS4* SWPPP Acceptance" form, or

(ii) Ten (10) business days from the date the Department receives both a complete paper version of the NOI and signed "MS4 SWPPP Acceptance" form.

4. Coverage under this permit authorizes stormwater *discharges* from only those areas of disturbance that are identified in the NOI. If an *owner or operator* wishes to have stormwater *discharges* from future or additional areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department. The *owner or operator* shall not *commence construction activity* on the future or additional areas until their authorization to *discharge* under this permit goes into effect in accordance with Part II.C. of this permit.

D. General Requirements For Owners or Operators With Permit Coverage

1. The *owner or operator* shall ensure that the provisions of the SWPPP are implemented from the *commencement of construction activity* until all areas of disturbance have achieved *final stabilization* and the Notice of Termination ("NOT") has been submitted to the Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of this permit.

2. The *owner or operator* shall maintain a copy of the General Permit (GP-0-20-001), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form, inspection reports, responsible contractor's or subcontractor's certification statement (see Part III.A.6.), and all documentation necessary to demonstrate eligibility with this permit at the *construction site* until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department. The documents must be maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection.

3. The *owner or operator* of a *construction activity* shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land*

use control MS4, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*). At a minimum, the *owner or operator* must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:

a. The *owner or operator* shall have a *qualified inspector* conduct **at least** two (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.

c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.

d. The *owner or operator* shall install any additional site-specific practices needed to protect water quality.

e. The *owner or operator* shall include the requirements above in their SWPPP.

4. In accordance with statute, regulations, and the terms and conditions of this permit, the Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements or consistent with Part VII.K..

5. Upon a finding of significant non-compliance with the practices described in the SWPPP or violation of this permit, the Department may order an immediate stop to all activity at the site until the non-compliance is remedied. The stop work order shall be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.

6. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the

regulated, traditional land use control MS4 in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *regulated, traditional land use control MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *regulated, traditional land use control MS4* prior to commencing construction of the post-construction stormwater management practice.

E. Permit Coverage for Discharges Authorized Under GP-0-15-002

1. Upon renewal of SPDES General Permit for Stormwater Discharges from *Construction Activity* (Permit No. GP-0-15-002), an *owner or operator* of *a construction activity* with coverage under GP-0-15-002, as of the effective date of GP- 0-20-001, shall be authorized to *discharge* in accordance with GP- 0-20-001, unless otherwise notified by the Department.

   An *owner or operator* may continue to implement the technical/design components of the post-construction stormwater management controls provided that such design was done in conformance with the technical standards in place at the time of initial project authorization. However, they must comply with the other, non-design provisions of GP-0-20-001.

F. Change of Owner or Operator

1. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original *owner or operator* must notify the new *owner or operator*, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. For *construction activities* subject to the requirements of a *regulated, traditional land use control MS4,* the original *owner or operator* must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.

2. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.B.1. of this permit. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.

3. Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or*

operator was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new *owner or operator*.

Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

1. A SWPPP shall be prepared and implemented by the *owner or operator* of each *construction activity* covered by this permit. The SWPPP must document the selection, design, installation, implementation and maintenance of the control measures and practices that will be used to meet the effluent limitations in Part I.B. of this permit and where applicable, the post-construction stormwater management practice requirements in Part I.C. of this permit. The SWPPP shall be prepared prior to the submittal of the NOI. The NOI shall be submitted to the Department prior to the *commencement of construction activity*. A copy of the completed, final NOI shall be included in the SWPPP.

2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the *pollutants* in stormwater *discharges* and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.

3. All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.

4. The *owner or operator* must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the *owner or operator* shall amend the SWPPP, including construction drawings:

    a. whenever the current provisions prove to be ineffective in minimizing *pollutants* in stormwater *discharges* from the site;

b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*;

c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* the Department or other regulatory authority; and

d. to document the final construction conditions.

5. The Department may notify the *owner or operator* at any time that the SWPPP does not meet one or more of the minimum requirements of this permit. The notification shall be in writing and identify the provisions of the SWPPP that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by the Department, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the *owner or operator* does not respond to the Department's comments in the specified time frame, the Department may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4. of this permit.

6. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor.* The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

   The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity*:

   "I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with

the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharge*s from *construction activities* and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the SWPPP that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for SWPPP implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* shall attach the certification statement(s) to the copy of the SWPPP that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the SWPPP after construction has commenced, they must also sign the certification statement and provide the information listed above.

7. For projects where the Department requests a copy of the SWPPP or inspection reports, the *owner or operator* shall submit the documents in both electronic (PDF only) and paper format within five (5) business days, unless otherwise notified by the Department.

B. Required SWPPP Contents

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Where erosion and sediment control practices are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must demonstrate *equivalence* to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:

    a. Background information about the scope of the project, including the location, type and size of project

b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours ; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the stormwater *discharge*(s);

c. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);

d. A construction phasing plan and sequence of operations describing the intended order of *construction activities*, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;

e. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented;

f. A temporary and permanent soil stabilization plan that meets the requirements of this general permit and the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of *final stabilization*;

g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;

h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any temporary sediment basins and structural practices that will be used to divert flows from exposed soils;

i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6. of this permit, to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection

schedule shall be in accordance with the requirements in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016;

j. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the stormwater *discharges*;

k. A description and location of any stormwater *discharges* associated with industrial activity other than construction at the site, including, but not limited to, stormwater *discharges* from asphalt plants and concrete plants located on the *construction site*; and

l. Identification of any elements of the design that are not in conformance with the design criteria in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. Post-construction stormwater management practice component – The *owner or operator* of any construction project identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the applicable *sizing criteria* in Part I.C.2.a., c. or d. of this permit and the *performance criteria* in the technical standard, New York State Stormwater Management Design Manual dated January 2015

   Where post-construction stormwater management practices are not designed in conformance with the *performance criteria* in the technical standard, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

   The post-construction stormwater management practice component of the SWPPP shall include the following:

   a. Identification of all post-construction stormwater management practices to be constructed as part of the project. Include the dimensions, material specifications and installation details for each post-construction stormwater management practice;

b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice;

c. A Stormwater Modeling and Analysis Report that includes:
   (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points;

   (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and post-construction stormwater management practices;

   (iii) Results of stormwater modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre and post-development runoff rates and volumes for the different storm events;

   (iv) Summary table, with supporting calculations, which demonstrates that each post-construction stormwater management practice has been designed in conformance with the *sizing criteria* included in the Design Manual;

   (v) Identification of any *sizing criteria* that is not required based on the requirements included in Part I.C. of this permit; and

   (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the Design Manual. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the Design Manual;

d. Soil testing results and locations (test pits, borings);

e. Infiltration test results, when required; and

f. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.

3. Enhanced Phosphorus Removal Standards - All construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the applicable *sizing criteria* in Part I.C.2. b., c. or d. of this permit and the *performance criteria,* Enhanced Phosphorus Removal Standards included in the Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.f. above.

C. Required SWPPP Components by Project Type

Unless otherwise notified by the Department, *owners or operators* of *construction activities* identified in Table 1 of Appendix B are required to prepare a SWPPP that only includes erosion and sediment control practices designed in conformance with Part III.B.1 of this permit. *Owners or operators* of the *construction activities* identified in Table 2 of Appendix B shall prepare a SWPPP that also includes post-construction stormwater management practices designed in conformance with Part III.B.2 or 3 of this permit.

Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures) and all post-construction stormwater management practices identified in the SWPPP are inspected and maintained in accordance with Part IV.B. and C. of this permit.

2. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York or protect the public health and safety and/or the environment.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity* identified in Tables 1 and 2 of Appendix B shall have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor shall

begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

2. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections. The *trained contractor* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of this permit as soon as soil disturbance activities resume.

3. For construction sites where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

C. Qualified Inspector Inspection Requirements

The *owner or operator* shall have a *qualified inspector* conduct site inspections in conformance with the following requirements:

[Note: The *trained contractor* identified in Part III.A.6. and IV.B. of this permit **cannot** conduct the *qualified inspector* site inspections unless they meet the *qualified inspector* qualifications included in Appendix A. In order to perform these inspections, the *trained contractor* would have to be a:

- licensed Professional Engineer,
- Certified Professional in Erosion and Sediment Control (CPESC),
- New York State Erosion and Sediment Control Certificate Program holder
- Registered Landscape Architect, or
- someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity].

1. A *qualified inspector* shall conduct site inspections for all *construction activities* identified in Tables 1 and 2 of Appendix B, with the exception of:

   a. the construction of a single family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located

in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

b. the construction of a single family home that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

c. construction on agricultural property that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres; and

d. *construction activities* located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

2. Unless otherwise notified by the Department, the *qualified inspector* shall conduct site inspections in accordance with the following timetable:

a. For construction sites where soil disturbance activities are on-going, the *qualified inspector* shall conduct a site inspection at least once every seven (7) calendar days.

b. For construction sites where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part II.D.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

c. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to reducing the frequency of inspections.

d. For construction sites where soil disturbance activities have been shut down with partial project completion, the *qualified inspector* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* shall have the *qualified inspector* perform a final inspection and certify that all disturbed areas have achieved *final stabilization,* and all temporary, structural erosion and sediment control measures have been removed*;* and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the "*Final Stabilization*" and "Post-Construction Stormwater Management Practice" certification statements on the NOT. The *owner or operator* shall then submit the completed NOT form to the address in Part II.B.1 of this permit.

e. For construction sites that directly *discharge* to one of the 303(d) segments listed in Appendix E or is located in one of the watersheds listed in Appendix C, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved *final stabilization,* all points of *discharge* to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site*, and all points of *discharge* from the *construction site*.

4. The *qualified inspector* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

a. Date and time of inspection;

b. Name and title of person(s) performing inspection;

c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;

d. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This shall include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;

e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This shall include identification of any *discharges* of sediment to the surface waterbody;

f. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance;

g. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;

h. Description and sketch of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection;

i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;

j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s);

k. Identification and status of all corrective actions that were required by previous inspection; and

l. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

5. Within one business day of the completion of an inspection, the *qualified inspector* shall notify the *owner or operator* and appropriate contractor or subcontractor identified in Part III.A.6. of this permit of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.

6. All inspection reports shall be signed by the *qualified inspector.* Pursuant to Part II.D.2. of this permit, the inspection reports shall be maintained on site with the SWPPP.

Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

1. An *owner or operator* that is eligible to terminate coverage under this permit must submit a completed NOT form to the address in Part II.B.1 of this permit. The NOT form shall be one which is associated with this permit, signed in accordance with Part VII.H of this permit.

2. An *owner or operator* may terminate coverage when one or more the following conditions have been met:

   a. Total project completion - All *construction activity* identified in the SWPPP has been completed; and all areas of disturbance have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

b. Planned shutdown with partial project completion - All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational;

c. A new *owner or operator* has obtained coverage under this permit in accordance with Part II.F. of this permit.

d. The *owner or operator* obtains coverage under an alternative SPDES general permit or an individual SPDES permit.

3. For *construction activities* meeting subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *qualified inspector* perform a final site inspection prior to submitting the NOT. The *qualified inspector* shall, by signing the "*Final Stabilization*" and "Post-Construction Stormwater Management Practice certification statements on the NOT, certify that all the requirements in Part V.A.2.a. or b. of this permit have been achieved.

4. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4* and meet subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *regulated, traditional land use control MS4* sign the "MS4 Acceptance" statement on the NOT in accordance with the requirements in Part VII.H. of this permit. The *regulated, traditional land use control MS4* official, by signing this statement, has determined that it is acceptable for the *owner or operator* to submit the NOT in accordance with the requirements of this Part. The *regulated, traditional land use control MS4* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) required in Part V.A.3. of this permit.

5. For *construction activities* that require post-construction stormwater management practices and meet subdivision 2a. of this Part, the *owner or operator* must, prior to submitting the NOT, ensure one of the following:

   a. the post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located,

b. an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s),

c. for post-construction stormwater management practices that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record,

d. for post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility; the *owner or operator* has policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

Part VI. REPORTING AND RETENTION RECORDS

A. Record Retention

The *owner or operator* shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5) years from the date that the Department receives a complete NOT submitted in accordance with Part V. of this general permit.

B. Addresses

With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.B.1 of this permit), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate DOW Water (SPDES) Program contact at the Regional Office listed in Appendix F.

Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The *owner or operator* must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water

Act (CWA) and the ECL and is grounds for an enforcement action against the *owner or operator* and/or the contractor/subcontractor; permit revocation, suspension or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the *owner or operator*.

If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE). *Construction activity* shall not resume until written permission to do so has been received from the RWE.

B. Continuation of the Expired General Permit

This permit expires five (5) years from the effective date. If a new general permit is not issued prior to the expiration of this general permit, an *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the terms and conditions of this general permit, if it is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, until a new general permit is issued.

C. Enforcement

Failure of the *owner or operator,* its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the permit requirements contained herein shall constitute a violation of this permit. There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to $37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for an *owner or operator* in an enforcement action that it would have been necessary to halt or reduce the *construction activity* in order to maintain compliance with the conditions of this permit.

E. Duty to Mitigate

The *owner or operator* and its contractors and subcontractors shall take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

F. Duty to Provide Information

The *owner or operator* shall furnish to the Department, within a reasonable specified time period of a written request, all documentation necessary to demonstrate eligibility and any information to determine compliance with this permit or to determine whether cause exists for modifying or revoking this permit, or suspending or denying coverage under this permit, in accordance with the terms and conditions of this permit. The NOI, SWPPP and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five (5) business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

G. Other Information

When the *owner or operator* becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any of the documents required by this permit , or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or *impervious area*), which were not reflected in the original NOI submitted to the Department, they shall promptly submit such facts or information to the Department using the contact information in Part II.A. of this permit. Failure of the *owner or operator* to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a violation of this permit.

H. Signatory Requirements

1. All NOIs and NOTs shall be signed as follows:

    a. For a corporation these forms shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

(ii) the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or

c. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(i) the chief executive officer of the agency, or

(ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Part VII.H.1. of this permit;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field,

superintendent, position of *equivalent* responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position) and,

c. The written authorization shall include the name, title and signature of the authorized representative and be attached to the SWPPP.

3. All inspection reports shall be signed by the *qualified inspector* that performs the inspection.

4. The MS4 SWPPP Acceptance form shall be signed by the principal executive officer or ranking elected official from the *regulated, traditional land use control MS4,* or by a duly authorized representative of that person.

   It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

I. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. *Owners or operators* must obtain any applicable conveyances, easements, licenses and/or access to real property prior to *commencing construction activity*.

J. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

K. Requirement to Obtain Coverage Under an Alternative Permit

1. The Department may require any owner or operator authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any discharger authorized by a general permit to apply for an individual SPDES permit, it shall notify the discharger in writing that a permit application is required. This notice shall

include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the owner or operator to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from owner or operator receipt of the notification letter, whereby the authorization to discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Permit Administrator at the Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Department, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Title.

2. When an individual SPDES permit is issued to a discharger authorized to *discharge* under a general SPDES permit for the same *discharge*(s), the general permit authorization for outfalls authorized under the individual SPDES permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

L. Proper Operation and Maintenance

The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of the SWPPP.

M. Inspection and Entry

The *owner or operator* shall allow an authorized representative of the Department, EPA, applicable county health department, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the owner’s or operator's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment), practices or operations regulated or required by this permit.

4. Sample or monitor at reasonable times, for purposes of assuring permit compliance or as otherwise authorized by the Act or ECL, any substances or parameters at any location.

N. Permit Actions

This permit may, at any time, be modified, suspended, revoked, or renewed by the Department in accordance with 6 NYCRR Part 621. The filing of a request by the *owner or operator* for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not limit, diminish and/or stay compliance with any terms of this permit.

O. Definitions

Definitions of key terms are included in Appendix A of this permit.

P. Re-Opener Clause

1. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with construction activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.

2. Any Department initiated permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

Q. Penalties for Falsification of Forms and Reports

In accordance with 6NYCRR Part 750-2.4 and 750-2.5, any person who knowingly makes any false material statement, representation, or certification in any application, record, report or other document filed or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished in accordance with ECL §71-1933 and or Articles 175 and 210 of the New York State Penal Law.

R. Other Permits

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

APPENDIX A – Acronyms and Definitions

Acronyms

APO – Agency Preservation Officer
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
Cpv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DOW – Division of Water
EAF – Environmental Assessment Form
ECL - Environmental Conservation Law
EPA – U. S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review
SEQRA - State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property –means the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" prepared by the Department in cooperation with agencies of New York Nonpoint Source Coordinating Committee (dated June 2007).

Alter Hydrology from Pre to Post-Development Conditions - means the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer - means a sewer that is designed to collect and convey both "sewage" and "stormwater".

Commence (Commencement of) Construction Activities - means the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the SWPPP. See definition for "*Construction Activity(ies)*" also.

Construction Activity(ies) - means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Construction Site – means the land area where *construction activity(ies)* will occur. See definition for "*Commence (Commencement of) Construction Activities"* and "*Larger Common Plan of Development or Sale" also.*

Dewatering – means the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Direct Discharge (to a specific surface waterbody) - means that runoff flows from a *construction site* by overland flow and the first point of discharge is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system

and the first point of discharge from the separate storm sewer system is the specific surface waterbody.

Discharge(s) - means any addition of any pollutant to waters of the State through an outlet or *point source*.

Embankment –means an earthen or rock slope that supports a road/highway.

Endangered or Threatened Species – see 6 NYCRR Part 182 of the Department's rules and regulations for definition of terms and requirements.

Environmental Conservation Law (ECL) - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

Equivalent (Equivalence) – means that the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization - means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

General SPDES permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 and Section 70-0117 of the ECL authorizing a category of discharges.

Groundwater(s) - means waters in the saturated zone. The saturated zone is a subsurface zone in which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

Historic Property – means any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) - means all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – means not technologically possible, or not economically practicable and achievable in light of best industry practices.

Larger Common Plan of Development or Sale - means a contiguous area where multiple separate and distinct *construction activities* are occurring, or will occur, under one plan. The term “plan” in “larger common plan of development or sale” is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQRA) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that *construction activities* may occur on a specific plot.

For discrete construction projects that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same “common plan” is not concurrently being disturbed.

Minimize – means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to surface waters of the State*;*
(ii) Designed or used for collecting or conveying stormwater;
(iii) Which is not a *combined sewer*; and
(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System (NPDES) - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

Natural Buffer –means an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – means any land disturbance that does not meet the definition of Redevelopment Activity included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

NOI Acknowledgment Letter - means the letter that the Department sends to an owner or operator to acknowledge the Department's receipt and acceptance of a complete Notice of Intent. This letter documents the owner's or operator's authorization to discharge in accordance with the general permit for stormwater discharges from *construction activity*.

Nonpoint Source - means any source of water pollution or pollutants which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank –means flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator - means the person, persons or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions.

Performance Criteria – means the design criteria listed under the "Required Elements" sections in Chapters 5, 6 and 10 of the technical standard, New York State Stormwater Management Design Manual, dated January 2015. It does not include the Sizing Criteria (i.e. WQv, RRv, Cpv, Qp and Qf) in Part I.C.2. of the permit.

Point Source - means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be discharged.

Pollutant - means dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast discharged into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq .

Qualified Inspector - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder or other Department endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional - means a person that is knowledgeable in the principles and practices of stormwater management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – means the disturbance and reconstruction of existing impervious area, including impervious areas that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Regulated, Traditional Land Use Control MS4 - means a city, town or village with land use control authority that is authorized to discharge under New York State DEC's

SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Routine Maintenance Activity - means *construction activity* that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including, but not limited to:

- Re-grading of gravel roads or parking lots,
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch,
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch),
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*,
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material,
- Long-term use of equipment storage areas at or near highway maintenance facilities,
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*,
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts.

Site limitations – means site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical site limitations include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of site limitations shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – means the criteria included in Part I.C.2 of the permit that are used to size post-construction stormwater management control practices. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

State Pollutant Discharge Elimination System (SPDES) - means the system established pursuant to Article 17 of the ECL and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

Steep Slope – means land area designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name is inclusive of slopes greater than 25%) , or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Streambank – as used in this permit, means the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – means a project specific report, including construction drawings, that among other things: describes the construction activity(ies), identifies the potential sources of pollution at the *construction site*; describes and shows the stormwater controls that will be used to control the pollutants (i.e. erosion and sediment controls; for many projects, includes post-construction stormwater management controls); and identifies procedures the *owner or operator* will implement to comply with the terms and conditions of the permit. See Part III of the permit for a complete description of the information that must be included in the SWPPP.

Surface Waters of the State - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – means that an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization - means that exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Loads (TMDLs) - A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and *nonpoint source*s. It is a calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet *water quality standards*, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for *point source* discharges, load allocations (LAs) for *nonpoint source*s, and a margin of safety (MOS).

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed

training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.6., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity).

The *trained contractor* is responsible for the day to day implementation of the SWPPP.

Uniform Procedures Act (UPA) Permit - means a permit required under 6 NYCRR Part 621 of the Environmental Conservation Law (ECL), Article 70.

Water Quality Standard - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1
Construction Activities that Require the Preparation of a SWPPP That Only Includes Erosion and Sediment Controls

The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:

- Single family home not located in one of the watersheds listed in Appendix C or not *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions with 25% or less impervious cover at total site build-out and not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E
- Construction of a barn or other *agricultural building*, silo, stock yard or pen.

The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:

All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Installation of underground, linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains
- Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects
- Pond construction
- Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover
- Cross-country ski trails and walking/hiking trails
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development;
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path or walking path.
- Slope stabilization projects
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics

Table 1 (Continued) CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Spoil areas that will be covered with vegetation
- Vegetated open space projects (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) excluding projects that *alter hydrology from pre to post development* conditions,
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre to post development* conditions
- Demolition project where vegetation will be established, and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*
- Structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State", excluding projects that involve soil disturbances of greater than five acres and construction activities that include the construction or reconstruction of impervious area
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary impervious areas that will be restored to pre-construction conditions once the construction activity is complete

Table 2

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Single family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family home that disturbs five (5) or more acres of land
- Single family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% impervious cover at total site build-out
- Single family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's, water treatment plants, and water storage tanks
- Office complexes
- Playgrounds that include the construction or reconstruction of impervious area
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surface
- Road construction or reconstruction, including roads constructed as part of the construction activities listed in Table 1

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Parking lot construction or reconstruction, including parking lots constructed as part of the construction activities listed in Table 1
- Athletic fields (natural grass) that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations and well drilling pads, surfaced with *impervious cover,* and constructed as part of an over-head electric transmission line project, wind-power project, cell tower project, oil or gas well drilling project, sewer or water main project or other linear utility project
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a residential, commercial or institutional development
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a highway construction or reconstruction project
- All other construction activities that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre to post development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual ("Design Manual").

- Entire New York City Watershed located east of the Hudson River **-** Figure 1
- Onondaga Lake Watershed **-** Figure 2
- Greenwood Lake Watershed **-**Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

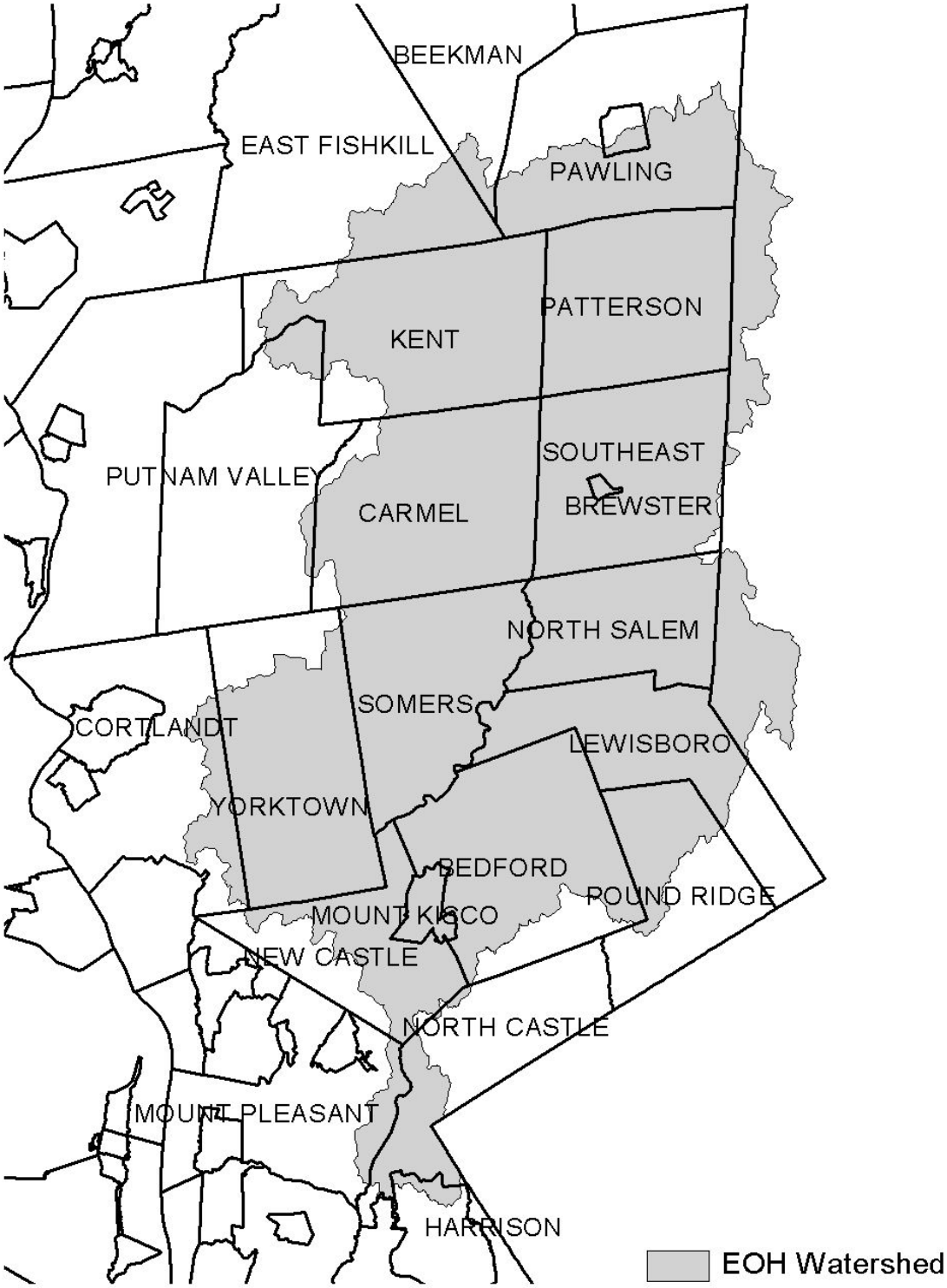


Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

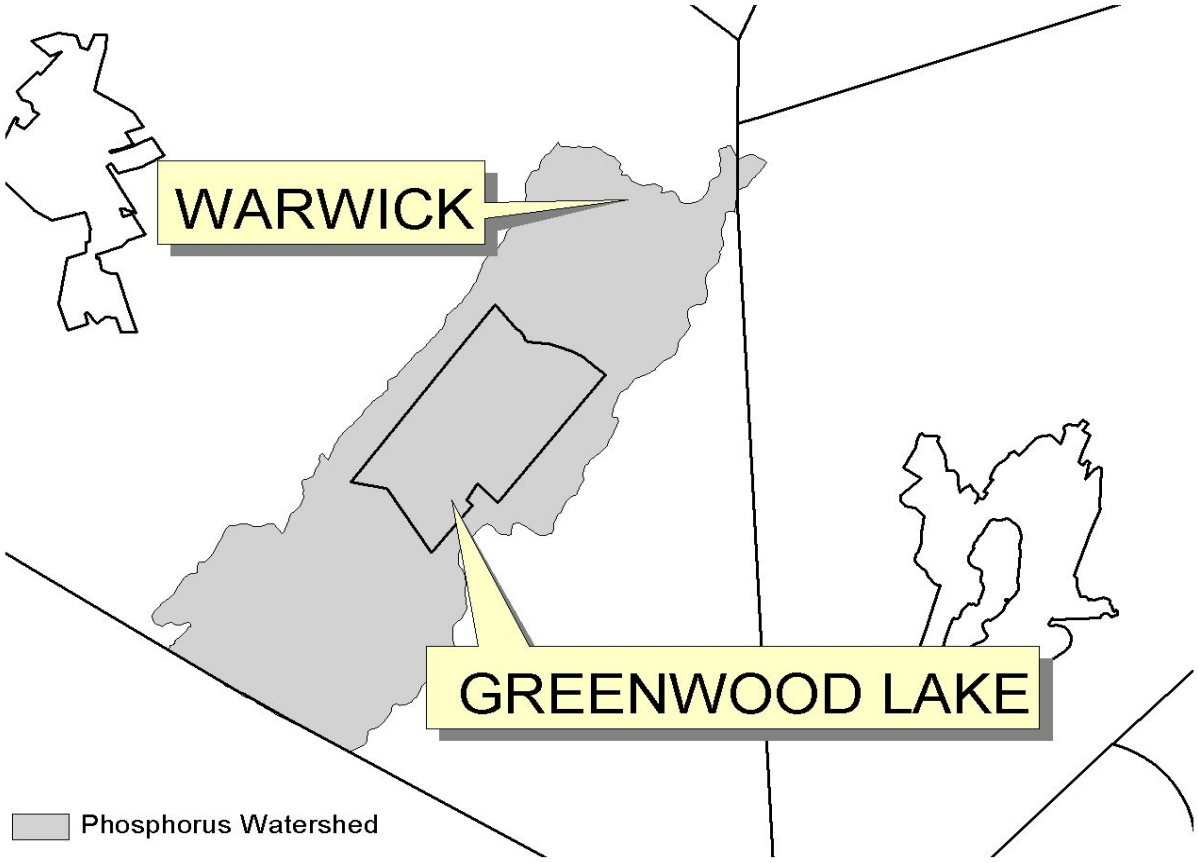


Figure 4 - Oscawana Lake Watershed

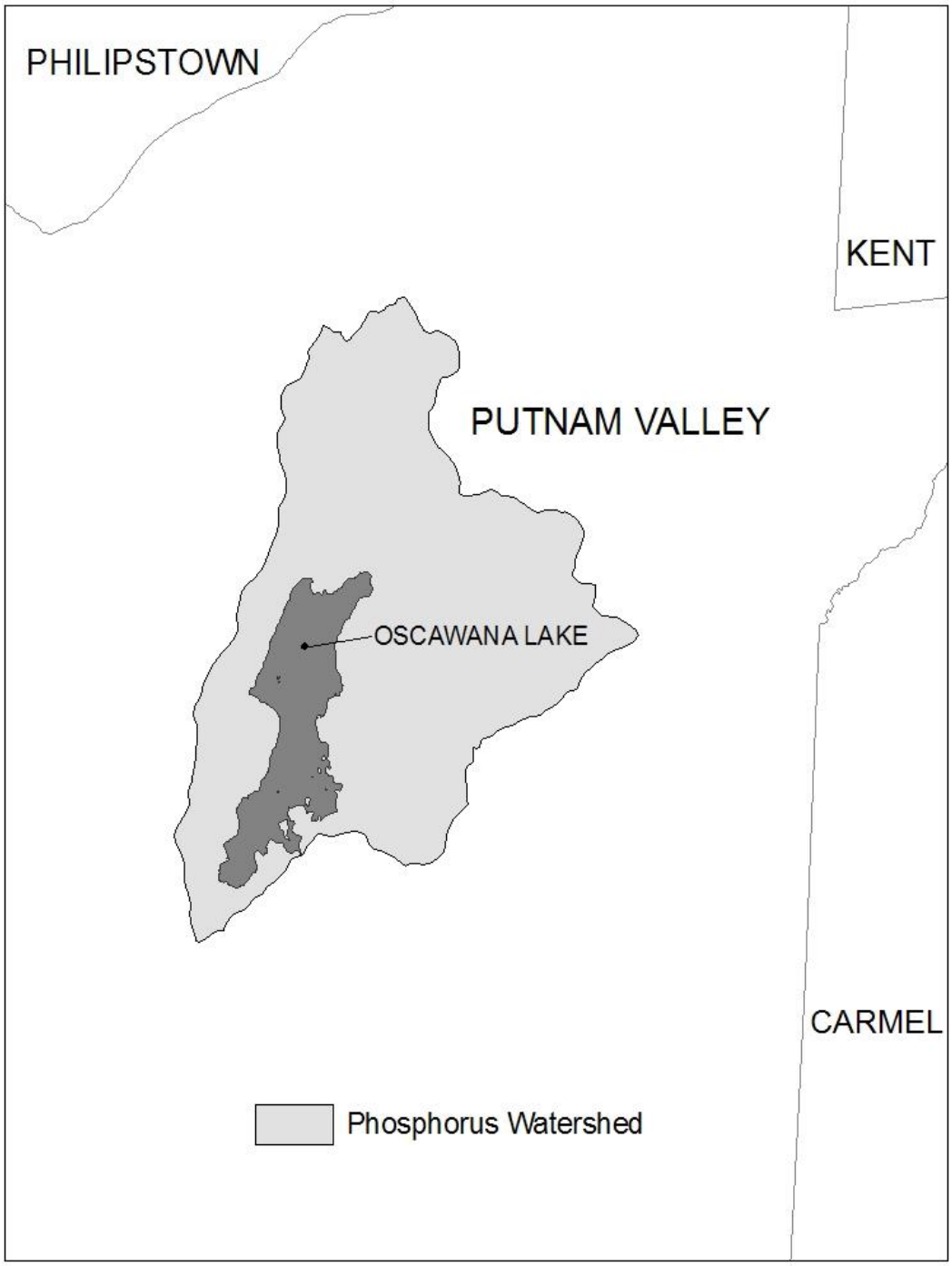
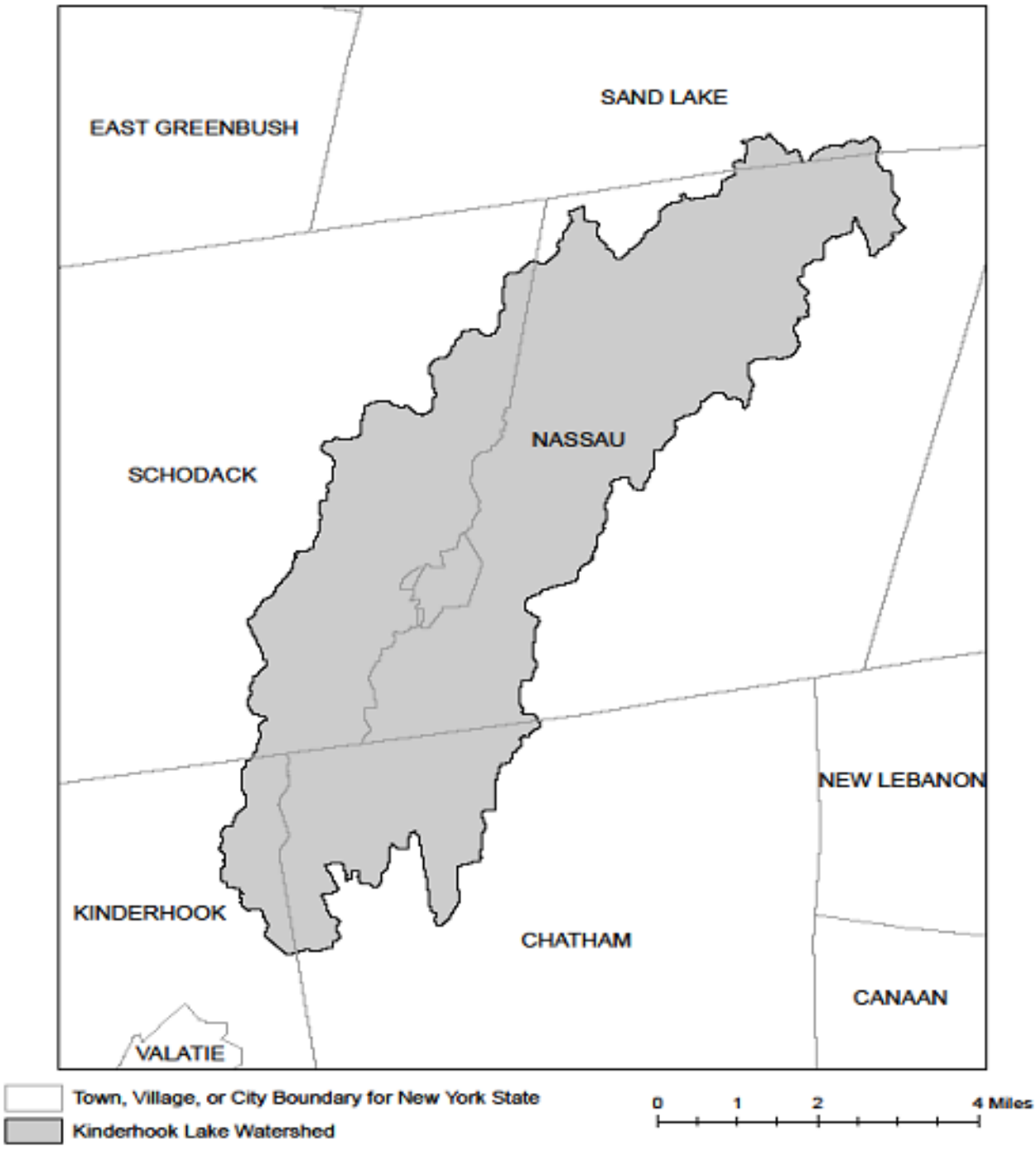


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Watersheds with Lower Disturbance Threshold

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River **-** See Figure 1 in Appendix C

APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). The list was developed using "The Final New York State 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy" dated November 2016. *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients
Albany	Basic Creek Reservoir	Nutrients
Allegany	Amity Lake, Saunders Pond	Nutrients
Bronx	Long Island Sound, Bronx	Nutrients
Bronx	Van Cortlandt Lake	Nutrients
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients
Broome	Whitney Point Lake/Reservoir	Nutrients
Cattaraugus	Allegheny River/Reservoir	Nutrients
Cattaraugus	Beaver (Alma) Lake	Nutrients
Cattaraugus	Case Lake	Nutrients
Cattaraugus	Linlyco/Club Pond	Nutrients
Cayuga	Duck Lake	Nutrients
Cayuga	Little Sodus Bay	Nutrients
Chautauqua	Bear Lake	Nutrients
Chautauqua	Chadakoin River and tribs	Nutrients
Chautauqua	Chautauqua Lake, North	Nutrients
Chautauqua	Chautauqua Lake, South	Nutrients
Chautauqua	Findley Lake	Nutrients
Chautauqua	Hulburt/Clymer Pond	Nutrients
Clinton	Great Chazy River, Lower, Main Stem	Silt/Sediment
Clinton	Lake Champlain, Main Lake, Middle	Nutrients
Clinton	Lake Champlain, Main Lake, North	Nutrients
Columbia	Kinderhook Lake	Nutrients
Columbia	Robinson Pond	Nutrients
Cortland	Dean Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Dutchess	Fall Kill and tribs	Nutrients
Dutchess	Hillside Lake	Nutrients
Dutchess	Wappingers Lake	Nutrients
Dutchess	Wappingers Lake	Silt/Sediment
Erie	Beeman Creek and tribs	Nutrients
Erie	Ellicott Creek, Lower, and tribs	Silt/Sediment
Erie	Ellicott Creek, Lower, and tribs	Nutrients
Erie	Green Lake	Nutrients
Erie	Little Sister Creek, Lower, and tribs	Nutrients
Erie	Murder Creek, Lower, and tribs	Nutrients
Erie	Rush Creek and tribs	Nutrients
Erie	Scajaquada Creek, Lower, and tribs	Nutrients
Erie	Scajaquada Creek, Middle, and tribs	Nutrients
Erie	Scajaquada Creek, Upper, and tribs	Nutrients
Erie	South Branch Smoke Cr, Lower, and tribs	Silt/Sediment
Erie	South Branch Smoke Cr, Lower, and tribs	Nutrients
Essex	Lake Champlain, Main Lake, South	Nutrients
Essex	Lake Champlain, South Lake	Nutrients
Essex	Willsboro Bay	Nutrients
Genesee	Bigelow Creek and tribs	Nutrients
Genesee	Black Creek, Middle, and minor tribs	Nutrients
Genesee	Black Creek, Upper, and minor tribs	Nutrients
Genesee	Bowen Brook and tribs	Nutrients
Genesee	LeRoy Reservoir	Nutrients
Genesee	Oak Orchard Cr, Upper, and tribs	Nutrients
Genesee	Tonawanda Creek, Middle, Main Stem	Nutrients
Greene	Schoharie Reservoir	Silt/Sediment
Greene	Sleepy Hollow Lake	Silt/Sediment
Herkimer	Steele Creek tribs	Silt/Sediment
Herkimer	Steele Creek tribs	Nutrients
Jefferson	Moon Lake	Nutrients
Kings	Hendrix Creek	Nutrients
Kings	Prospect Park Lake	Nutrients
Lewis	Mill Creek/South Branch, and tribs	Nutrients
Livingston	Christie Creek and tribs	Nutrients
Livingston	Conesus Lake	Nutrients
Livingston	Mill Creek and minor tribs	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs	Nutrients
Monroe	Buck Pond	Nutrients
Monroe	Cranberry Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Monroe	Lake Ontario Shoreline, Western	Nutrients
Monroe	Long Pond	Nutrients
Monroe	Mill Creek and tribs	Nutrients
Monroe	Mill Creek/Blue Pond Outlet and tribs	Nutrients
Monroe	Minor Tribs to Irondequoit Bay	Nutrients
Monroe	Rochester Embayment - East	Nutrients
Monroe	Rochester Embayment - West	Nutrients
Monroe	Shipbuilders Creek and tribs	Nutrients
Monroe	Thomas Creek/White Brook and tribs	Nutrients
Nassau	Beaver Lake	Nutrients
Nassau	Camaans Pond	Nutrients
Nassau	East Meadow Brook, Upper, and tribs	Silt/Sediment
Nassau	East Rockaway Channel	Nutrients
Nassau	Grant Park Pond	Nutrients
Nassau	Hempstead Bay	Nutrients
Nassau	Hempstead Lake	Nutrients
Nassau	Hewlett Bay	Nutrients
Nassau	Hog Island Channel	Nutrients
Nassau	Long Island Sound, Nassau County Waters	Nutrients
Nassau	Massapequa Creek and tribs	Nutrients
Nassau	Milburn/Parsonage Creeks, Upp, and tribs	Nutrients
Nassau	Reynolds Channel, west	Nutrients
Nassau	Tidal Tribs to Hempstead Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Silt/Sediment
Nassau	Tribs to Smith/Halls Ponds	Nutrients
Nassau	Woodmere Channel	Nutrients
New York	Harlem Meer	Nutrients
New York	The Lake in Central Park	Nutrients
Niagara	Bergholtz Creek and tribs	Nutrients
Niagara	Hyde Park Lake	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Oneida	Ballou, Nail Creeks and tribs	Nutrients
Onondaga	Harbor Brook, Lower, and tribs	Nutrients
Onondaga	Ley Creek and tribs	Nutrients
Onondaga	Minor Tribs to Onondaga Lake	Nutrients
Onondaga	Ninemile Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Middle, and tribs	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Onondaga	Onondaga Lake, northern end	Nutrients
Onondaga	Onondaga Lake, southern end	Nutrients
Ontario	Great Brook and minor tribs	Silt/Sediment
Ontario	Great Brook and minor tribs	Nutrients
Ontario	Hemlock Lake Outlet and minor tribs	Nutrients
Ontario	Honeoye Lake	Nutrients
Orange	Greenwood Lake	Nutrients
Orange	Monhagen Brook and tribs	Nutrients
Orange	Orange Lake	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Oswego	Lake Neatahwanta	Nutrients
Oswego	Pleasant Lake	Nutrients
Putnam	Bog Brook Reservoir	Nutrients
Putnam	Boyd Corners Reservoir	Nutrients
Putnam	Croton Falls Reservoir	Nutrients
Putnam	Diverting Reservoir	Nutrients
Putnam	East Branch Reservoir	Nutrients
Putnam	Lake Carmel	Nutrients
Putnam	Middle Branch Reservoir	Nutrients
Putnam	Oscawana Lake	Nutrients
Putnam	Palmer Lake	Nutrients
Putnam	West Branch Reservoir	Nutrients
Queens	Bergen Basin	Nutrients
Queens	Flushing Creek/Bay	Nutrients
Queens	Jamaica Bay, Eastern, and tribs (Queens)	Nutrients
Queens	Kissena Lake	Nutrients
Queens	Meadow Lake	Nutrients
Queens	Willow Lake	Nutrients
Rensselaer	Nassau Lake	Nutrients
Rensselaer	Snyders Lake	Nutrients
Richmond	Grasmere Lake/Bradys Pond	Nutrients
Rockland	Congers Lake, Swartout Lake	Nutrients
Rockland	Rockland Lake	Nutrients
Saratoga	Ballston Lake	Nutrients
Saratoga	Dwaas Kill and tribs	Silt/Sediment
Saratoga	Dwaas Kill and tribs	Nutrients
Saratoga	Lake Lonely	Nutrients
Saratoga	Round Lake	Nutrients
Saratoga	Tribs to Lake Lonely	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Schenectady	Collins Lake	Nutrients
Schenectady	Duane Lake	Nutrients
Schenectady	Mariaville Lake	Nutrients
Schoharie	Engleville Pond	Nutrients
Schoharie	Summit Lake	Nutrients
Seneca	Reeder Creek and tribs	Nutrients
St.Lawrence	Black Lake Outlet/Black Lake	Nutrients
St.Lawrence	Fish Creek and minor tribs	Nutrients
Steuben	Smith Pond	Nutrients
Suffolk	Agawam Lake	Nutrients
Suffolk	Big/Little Fresh Ponds	Nutrients
Suffolk	Canaan Lake	Silt/Sediment
Suffolk	Canaan Lake	Nutrients
Suffolk	Flanders Bay, West/Lower Sawmill Creek	Nutrients
Suffolk	Fresh Pond	Nutrients
Suffolk	Great South Bay, East	Nutrients
Suffolk	Great South Bay, Middle	Nutrients
Suffolk	Great South Bay, West	Nutrients
Suffolk	Lake Ronkonkoma	Nutrients
Suffolk	Long Island Sound, Suffolk County, West	Nutrients
Suffolk	Mattituck (Marratooka) Pond	Nutrients
Suffolk	Meetinghouse/Terrys Creeks and tribs	Nutrients
Suffolk	Mill and Seven Ponds	Nutrients
Suffolk	Millers Pond	Nutrients
Suffolk	Moriches Bay, East	Nutrients
Suffolk	Moriches Bay, West	Nutrients
Suffolk	Peconic River, Lower, and tidal tribs	Nutrients
Suffolk	Quantuck Bay	Nutrients
Suffolk	Shinnecock Bay and Inlet	Nutrients
Suffolk	Tidal tribs to West Moriches Bay	Nutrients
Sullivan	Bodine, Montgomery Lakes	Nutrients
Sullivan	Davies Lake	Nutrients
Sullivan	Evens Lake	Nutrients
Sullivan	Pleasure Lake	Nutrients
Tompkins	Cayuga Lake, Southern End	Nutrients
Tompkins	Cayuga Lake, Southern End	Silt/Sediment
Tompkins	Owasco Inlet, Upper, and tribs	Nutrients
Ulster	Ashokan Reservoir	Silt/Sediment
Ulster	Esopus Creek, Upper, and minor tribs	Silt/Sediment
Warren	Hague Brook and tribs	Silt/Sediment

303(d) Segments Impaired by Construction Related Pollutant(s)

Warren	Huddle/Finkle Brooks and tribs	Silt/Sediment
Warren	Indian Brook and tribs	Silt/Sediment
Warren	Lake George	Silt/Sediment
Warren	Tribs to L.George, Village of L George	Silt/Sediment
Washington	Cossayuna Lake	Nutrients
Washington	Lake Champlain, South Bay	Nutrients
Washington	Tribs to L.George, East Shore	Silt/Sediment
Washington	Wood Cr/Champlain Canal and minor tribs	Nutrients
Wayne	Port Bay	Nutrients
Westchester	Amawalk Reservoir	Nutrients
Westchester	Blind Brook, Upper, and tribs	Silt/Sediment
Westchester	Cross River Reservoir	Nutrients
Westchester	Lake Katonah	Nutrients
Westchester	Lake Lincolndale	Nutrients
Westchester	Lake Meahagh	Nutrients
Westchester	Lake Mohegan	Nutrients
Westchester	Lake Shenorock	Nutrients
Westchester	Long Island Sound, Westchester (East)	Nutrients
Westchester	Mamaroneck River, Lower	Silt/Sediment
Westchester	Mamaroneck River, Upper, and minor tribs	Silt/Sediment
Westchester	Muscoot/Upper New Croton Reservoir	Nutrients
Westchester	New Croton Reservoir	Nutrients
Westchester	Peach Lake	Nutrients
Westchester	Reservoir No.1 (Lake Isle)	Nutrients
Westchester	Saw Mill River, Lower, and tribs	Nutrients
Westchester	Saw Mill River, Middle, and tribs	Nutrients
Westchester	Sheldrake River and tribs	Silt/Sediment
Westchester	Sheldrake River and tribs	Nutrients
Westchester	Silver Lake	Nutrients
Westchester	Teatown Lake	Nutrients
Westchester	Titicus Reservoir	Nutrients
Westchester	Truesdale Lake	Nutrients
Westchester	Wallace Pond	Nutrients
Wyoming	Java Lake	Nutrients
Wyoming	Silver Lake	Nutrients

APPENDIX F – List of NYS DEC Regional Offices

Region	Covering the following counties:	DIVISION OF ENVIRONMENTAL PERMITS (DEP) Permit Administrators	DIVISION OF WATER (DOW) Water (SPDES) Program
1	Nassau and Suffolk	50 Circle Road Stony Brook, NY 11790 Tel. (631) 444-0365	50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	100 Hillside Avenue, Suite 1w White Plains, NY 10603 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1150 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	1115 State Route 86, Po Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Golf Course Road Warrensburg, NY 12885-1172 Tel. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7070

ATTACHMENT B NOTICE OF INTENT (RESERVED)

ATTACHMENT C SOIL REPORT

Soil Map—Queens County, New York
(Farrington Former Gas Works)

Map Scale: 1:853 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 10 20 40 60

Feet
0 40 80 160 240

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Queens County, New York
Survey Area Data: Version 12, Oct 27, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 17, 2020—Nov 5, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
UmA	Urban land, tidal marsh substratum, 0 to 3 percent slopes	0.6	28.3%
UoA	Urban land, outwash substratum, 0 to 3 percent slopes	1.5	71.7%
Totals for Area of Interest		**2.1**	**100.0%**

ATTACHMENT D 75% REMEDIAL DESIGN REPORT FARRINGTON STREET DRAWINGS & SPECIFICATIONS (RESERVED)

ATTACHMENT E CONSTRUCTION LOG & INSPECTION TEMPLATE

APPENDIX F
CONSTRUCTION SITE INSPECTION AND MAINTENANCE LOG BOOK

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM FOR CONSTRUCTION ACTIVITIES

SAMPLE CONSTRUCTION SITE LOG BOOK

Table of Contents

I. Pre-Construction Meeting Documents
   a. Preamble to Site Assessment and Inspections
   b. Pre-Construction Site Assessment Checklist

II. Construction Duration Inspections
   a. Directions
   b. Modification to the SWPPP

I. **PRE-CONSTRUCTION MEETING DOCUMENTS**

Project Name _____

Permit No. _____ **Date of Authorization** _____

Name of Operator _____

Prime Contractor _____

a. **Preamble to Site Assessment and Inspections**

The Following Information To Be Read By All Person's Involved in The Construction of Stormwater Related Activities:

The Operator agrees to have a qualified inspector[1] conduct an assessment of the site prior to the commencement of construction[2] and certify in this inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction.

Prior to the commencement of construction, the Operator shall certify in this site logbook that the SWPPP has been prepared in accordance with the State's standards and meets all Federal, State and local erosion and sediment control requirements. A preconstruction meeting should be held to review all of the SWPPP requirements with construction personnel.

When construction starts, site inspections shall be conducted by the qualified inspector at least every 7 calendar days. The Operator shall maintain a record of all inspection reports in this site logbook. The site logbook shall be maintained on site and be made available to the permitting authorities upon request.

Prior to filing the Notice of Termination or the end of permit term, the Operator shall have a qualified inspector perform a final site inspection. The qualified inspector shall certify that the site has undergone final stabilization[3] using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed. In addition, the Operator must identify and certify that all permanent structures described in the SWPPP have been constructed and provide the owner(s) with an operation and maintenance plan that ensures the structure(s) continuously functions as designed.

1 Refer to "Qualified Inspector" inspection requirements in the current SPDES General Permit for Stormwater Discharges from Construction Activity for complete list of inspection requirements.
2 "Commencement of construction" means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.
3 "Final stabilization" means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

b. Pre-construction Site Assessment Checklist
(NOTE: Provide comments below as necessary)

1. Notice of Intent, SWPPP, and Contractors Certification:

Yes No NA

[ ] [ ] [ ] Has a Notice of Intent been filed with the NYS Department of Conservation?
[ ] [ ] [ ] Is the SWPPP on-site? Where?_____
[ ] [ ] [ ] Is the Plan current? What is the latest revision date?_____
[ ] [ ] [ ] Is a copy of the NOI (with brief description) onsite? Where?_____
[ ] [ ] [ ] Have all contractors involved with stormwater related activities signed a contractor's certification?

2. Resource Protection

Yes No NA

[ ] [ ] [ ] Are construction limits clearly flagged or fenced?
[ ] [ ] [ ] Important trees and associated rooting zones, on-site septic system absorption fields, existing vegetated areas suitable for filter strips, especially in perimeter areas, have been flagged for protection.
[ ] [ ] [ ] Creek crossings installed prior to land-disturbing activity, including clearing and blasting.

3. Surface Water Protection

Yes No NA

[ ] [ ] [ ] Clean stormwater runoff has been diverted from areas to be disturbed.
[ ] [ ] [ ] Bodies of water located either on site or in the vicinity of the site have been identified and protected.
[ ] [ ] [ ] Appropriate practices to protect on-site or downstream surface water are installed.
[ ] [ ] [ ] Are clearing and grading operations divided into areas <5 acres?

4. Stabilized Construction Access

Yes No NA

[ ] [ ] [ ] A temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway has been installed.
[ ] [ ] [ ] Other access areas (entrances, construction routes, equipment parking areas) are stabilized immediately as work takes place with gravel or other cover.
[ ] [ ] [ ] Sediment tracked onto public streets is removed or cleaned on a regular basis.

5. Sediment Controls

Yes No NA

[ ] [ ] [ ] Silt fence material and installation comply with the standard drawing and specifications.
[ ] [ ] [ ] Silt fences are installed at appropriate spacing intervals
[ ] [ ] [ ] Sediment/detention basin was installed as first land disturbing activity.
[ ] [ ] [ ] Sediment traps and barriers are installed.

6. Pollution Prevention for Waste and Hazardous Materials

Yes No NA

[ ] [ ] [ ] The Operator or designated representative has been assigned to implement the spill prevention avoidance and response plan.
[ ] [ ] [ ] The plan is contained in the SWPPP on page _____
[ ] [ ] [ ] Appropriate materials to control spills are onsite. Where? _____

II. CONSTRUCTION DURATION INSPECTIONS

a. Directions:

Inspection Forms will be filled out during the entire construction phase of the project.

Required Elements:

1) On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;

2) Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization;

3) Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;

4) Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of sediment storage volume (for example, 10 percent, 20 percent, 50 percent);

5) Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water; and

6) Immediately report to the Operator any deficiencies that are identified with the implementation of the SWPPP.

SITE PLAN/SKETCH

Inspector (print name)	**Date of Inspection**
Qualified Inspector (print name)	**Qualified Inspector Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Maintaining Water Quality

Yes No NA
[ ] [ ] [ ] Is there an increase in turbidity causing a substantial visible contrast to natural conditions at the outfalls?
[ ] [ ] [ ] Is there residue from oil and floating substances, visible oil film, or globules or grease at the outfalls?
[ ] [ ] [ ] All disturbance is within the limits of the approved plans.
[ ] [ ] [ ] Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

Housekeeping

1. General Site Conditions

Yes No NA
[ ] [ ] [ ] Is construction site litter, debris and spoils appropriately managed?
[ ] [ ] [ ] Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ] [ ] [ ] Is construction impacting the adjacent property?
[ ] [ ] [ ] Is dust adequately controlled?

2. Temporary Stream Crossing

Yes No NA
[ ] [ ] [ ] Maximum diameter pipes necessary to span creek without dredging are installed.
[ ] [ ] [ ] Installed non-woven geotextile fabric beneath approaches.
[ ] [ ] [ ] Is fill composed of aggregate (no earth or soil)?
[ ] [ ] [ ] Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

3. Stabilized Construction Access

Yes No NA
[ ] [ ] [ ] Stone is clean enough to effectively remove mud from vehicles.
[ ] [ ] [ ] Installed per standards and specifications?
[ ] [ ] [ ] Does all traffic use the stabilized entrance to enter and leave site?
[ ] [ ] [ ] Is adequate drainage provided to prevent ponding at entrance?

Runoff Control Practices

1. Excavation Dewatering

Yes No NA
[ ] [ ] [ ] Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
[ ] [ ] [ ] Clean water from upstream pool is being pumped to the downstream pool.
[ ] [ ] [ ] Sediment laden water from work area is being discharged to a silt-trapping device.
[ ] [ ] [ ] Constructed upstream berm with one-foot minimum freeboard.

Runoff Control Practices (continued)

2. Flow Spreader

Yes No NA

[ ] [ ] [ ] Installed per plan.
[ ] [ ] [ ] Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
[ ] [ ] [ ] Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

Yes No NA

[ ] [ ] [ ] Installed per plan with minimum side slopes 2H:1V or flatter.
[ ] [ ] [ ] Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
[ ] [ ] [ ] Sediment-laden runoff directed to sediment trapping structure

4. Stone Check Dam

Yes No NA

[ ] [ ] [ ] Is channel stable? (flow is not eroding soil underneath or around the structure).
[ ] [ ] [ ] Check is in good condition (rocks in place and no permanent pools behind the structure).
[ ] [ ] [ ] Has accumulated sediment been removed?.

5. Rock Outlet Protection

Yes No NA

[ ] [ ] [ ] Installed per plan.
[ ] [ ] [ ] Installed concurrently with pipe installation.

Soil Stabilization

1. Topsoil and Spoil Stockpiles

Yes No NA

[ ] [ ] [ ] Stockpiles are stabilized with vegetation and/or mulch.
[ ] [ ] [ ] Sediment control is installed at the toe of the slope.

2. Revegetation

Yes No NA

[ ] [ ] [ ] Temporary seedings and mulch have been applied to idle areas.
[ ] [ ] [ ] 4 inches minimum of topsoil has been applied under permanent seedings

Sediment Control Practices

1. Silt Fence and Linear Barriers

Yes No NA

[ ] [ ] [ ] Installed on Contour, 10 feet from toe of slope (not across conveyance channels).
[ ] [ ] [ ] Joints constructed by wrapping the two ends together for continuous support.
[ ] [ ] [ ] Fabric buried 6 inches minimum.
[ ] [ ] [ ] Posts are stable, fabric is tight and without rips or frayed areas.
Sediment accumulation is ___% of design capacity.

Sediment Control Practices (continued)

2. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated; Filter Sock or Manufactured practices)

Yes No NA

[ ] [ ] [ ] Installed concrete blocks lengthwise so open ends face outward, not upward.
[ ] [ ] [ ] Placed wire screen between No. 3 crushed stone and concrete blocks.
[ ] [ ] [ ] Drainage area is 1acre or less.
[ ] [ ] [ ] Excavated area is 900 cubic feet.
[ ] [ ] [ ] Excavated side slopes should be 2:1.
[ ] [ ] [ ] 2" x 4" frame is constructed and structurally sound.
[ ] [ ] [ ] Posts 3-foot maximum spacing between posts.
[ ] [ ] [ ] Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing.
[ ] [ ] [ ] Posts are stable, fabric is tight and without rips or frayed areas.
[ ] [ ] [ ] Manufactured insert fabric is free of tears and punctures.
[ ] [ ] [ ] Filter Sock is not torn or flattened and fill material is contained within the mesh sock.

Sediment accumulation ___% of design capacity.

3. Temporary Sediment Trap

Yes No NA

[ ] [ ] [ ] Outlet structure is constructed per the approved plan or drawing.
[ ] [ ] [ ] Geotextile fabric has been placed beneath rock fill.
[ ] [ ] [ ] Sediment trap slopes and disturbed areas are stabilized.

Sediment accumulation is ___% of design capacity.

4. Temporary Sediment Basin

Yes No NA

[ ] [ ] [ ] Basin and outlet structure constructed per the approved plan.
[ ] [ ] [ ] Basin side slopes are stabilized with seed/mulch.
[ ] [ ] [ ] Drainage structure flushed and basin surface restored upon removal of sediment basin facility.
[ ] [ ] [ ] Sediment basin dewatering pool is dewatering at appropriate rate.

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design. All practices shall be maintained in accordance with their respective standards.

Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

CONSTRUCTION DURATION INSPECTIONS

b. Modifications to the SWPPP (To be completed as described below)

The Operator shall amend the SWPPP whenever:

1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

Modification & Reason:

APPENDIX J

QUALITY ASSURANCE PROJECT PLAN

QUALITY ASSURANCE PROJECT PLAN (QAPP)

FORMER FARRINGTON STREET MGP

Prepared For:

CONSOLIDATED EDISON CO. OF NEW YORK, INC.

31-01 20th Avenue

Long Island City, NY 11105

Prepared By:

301 Plainfield Road, Suite 350
Syracuse, New York 13212

AUGUST 2022

TABLE OF CONTENTS

LIST OF ACRONYMS vi

SECTION 1 PROJECT DESCRIPTION 1-1

1.1 INTRODUCTION 1-1

SECTION 2 PROJECT ORGANIZATION 2-1

2.1 PROJECT AND TEAM ORGANIZATION 2-1

2.1.1 Analytical Services 2-1

2.2 SPECIAL TRAINING/CERTIFICATION 2-1

SECTION 3 DATA QUALITY OBJECTIVES AND DATA QUALITY CRITERIA 3-1

3.1 INTRODUCTION 3-1

3.1.1 Data Use Objectives 3-2

3.2 DATA QUALITY OBJECTIVES (PARCCS PARAMETERS) 3-2

3.2.1 Introduction 3-2

3.2.2 PARCCS Parameters (Data Quality Indicators) 3-3

3.2.2.1 Precision 3-3

3.2.2.2 Accuracy 3-3

3.2.2.3 Representativeness 3-4

3.2.2.4 Completeness 3-5

3.2.2.5 Comparability 3-5

3.2.2.6 Sensitivity and Quantitation Limits 3-6

SECTION 4 DATA ACQUISITION 4-1

4.1 SAMPLING METHODS 4-1

4.2 SAMPLE HANDLING AND CUSTODY 4-1

4.2.1 Sample Handling 4-2

4.2.2 Field Sample Custody 4-3

4.2.3 Laboratory Sample Management 4-4

4.2.4 Sample Receipt and Logging 4-4

4.2.5 Sample Storage Security 4-4

4.2.6 Retention and Disposal of Samples 4-5

SECTION 5 DATA MANAGEMENT 5-1

5.1 INTRODUCTION 5-1

5.2 FIELD DATA MANAGEMENT 5-1

5.3 LABORATORY DATA MANAGEMENT 5-1

SECTION 6 DOCUMENTS AND RECORDS 6-1
6.1 INTRODUCTION 6-1
6.2 FIELD RECORDS 6-1
6.2.1 Field Log 6-1
6.2.2 Electronic Field Data Management 6-2
6.2.3 Chain-of-Custody Record 6-2
6.3 LABORATORY RECORDS 6-2
6.3.1 Operational Calibration Records 6-3
6.3.2 Maintenance Records 6-4
6.3.3 Nonconformance Memos 6-4
6.3.4 Corrective Action Request (CAR) Forms 6-4
6.3.5 Analytical Data Reports 6-4
6.4 Data Validation and Audit Records 6-5
6.4.1 Data Usability Summary Reports 6-5
6.4.2 Audit Reports 6-5
SECTION 7 ANALYTICAL PROCEDURES 7-1
7.1 INTRODUCTION 7-1
7.2 STANDARD OPERATING PROCEDURES 7-1
SECTION 8 QUALITY CONTROL 8-1
8.1 INTRODUCTION 8-1
8.1.1 Field Quality Control Samples 8-1
8.1.1.1 Equipment Rinse Blanks 8-1
8.1.1.2 Field Duplicates 8-2
8.1.1.3 Trip Blanks 8-2
8.1.1.4 Temperature Blank 8-2
8.1.2 Laboratory Quality Control Samples 8-2
8.1.2.1 Matrix Spike/Matrix Spike Duplicate/ Matrix Duplicates 8-3
8.1.2.2 Laboratory Control Samples 8-3
8.1.2.3 Method and Preparation Blanks 8-3
8.1.2.4 Surrogate Spike Analyses 8-3
8.2 INSTRUMENT/EQUIPMENT TESTING, INSPECTION, AND MAINTENANCE 8-4
8.2.1 Field Equipment 8-4
8.2.2 Laboratory Instrumentation 8-4
8.3 INSTRUMENT/EQUIPMENT CALIBRATION AND FREQUENCY 8-5

8.3.1 Field Instruments 8-5
8.3.2 Laboratory Instruments 8-5
8.3.3 Calibration System 8-6
8.3.3.1 Calibration Procedures 8-6
8.3.3.2 Equipment Identification 8-6
8.3.3.3 Calibration Frequency 8-6
8.3.3.4 Calibration Reference Standards 8-6
8.3.4 Operational Calibration 8-7
8.3.4.1 Preparation of a Calibration Curve 8-7
8.3.4.2 Periodic Calibration 8-7
8.4 INSPECTION/ACCEPTANCE OF SUPPLIES AND CONSUMABLES 8-7
SECTION 9 DATA VALIDATION AND USABILITY ELEMENTS 9-1
9.1 DATA REVIEW, VERIFICATION, AND VALIDATION 9-1
9.2 VERIFICATION AND VALIDATION METHODS 9-2
9.2.1 Laboratory 9-2
9.2.2 Analytical Data Validation 9-3
9.3 RECONCILIATION WITH USER REQUIREMENTS 9-4
SECTION 10 ASSESSMENT AND OVERSIGHT 10-1
10.1 ASSESSMENTS AND RESPONSE ACTIONS 10-1
10.2 PROJECT-SPECIFIC AUDITS 10-1
10.2.1 System Audits 10-1
10.2.2 Performance Audits 10-1
10.2.3 Formal Audits 10-2
10.2.4 Laboratory Audits 10-2
10.2.4.1 Laboratory Performance Audits 10-2
10.2.4.2 Laboratory Internal Audits 10-2
10.2.4.3 Laboratory Data Audits 10-3
10.2.4.4 Laboratory Audit Procedures 10-3
10.2.4.5 Laboratory Documentation 10-3
10.3 CORRECTIVE ACTIONS 10-4
SECTION 11 REPORTS TO MANAGEMENT 11-1
11.1 QA REPORTS 11-1
SECTION 12 REFERENCES 12-1

LIST OF TABLES

Table 3.1 Quality Control Limits for Project Samples
Table 3.2A Soil Analysis Quantitation Limits
Table 3.2B Waste Analysis Quantitation Limits
Table 4.1 Sample Containerization, Preservation, and Holding Times
Table 6.1 Summary of Field, Laboratory, and Data Management Records
Table 8.1 Summary of Field QC Sample Types and Collection Frequency
Table 8.2 Laboratory Quality Control Sample Frequency
Table 8.3 Operational Calibration Formulas
Table 8.4 Periodic Calibration Requirements
Table 8.5 Sample Concentration Calibration Formulas

LIST OF FIGURES

Figure 4.1 Sample Custody Flow Chart
Figure 4.2 Example Chain-of-Custody
Figure 10.1 Corrective Action Request Form

LIST OF ATTACHMENTS

ATTACHMENT 1 SUMMARY OF ANALYTICAL DATA PACKAGE (DQO LEVEL IV)

LIST OF ACRONYMS

ACRONYM	Definition
ASTM	American Society for Testing and Materials
BFB	4-Bromofluorobenzene
°C	Degrees Celsius
CAR	Corrective Action Request
CCV	Continuing Calibration Verification
CERCLA	Comprehensive Emergency Response, Compensation, Liability Act
CFR	Code of Federal Regulations
CLP	Contract Laboratory Program
cm/s	centimeter per second
COC	Chain-of-Custody
CPOI	Chemical Parameter of Interest
CVAA	Cold Vapor Atomic Absorption
cy	cubic yards
DFTPP	decafluorotriphenylphosphine
DOT	Department of Transportation
DQO	Data Quality Objective
DUO	Data Use Objective
DUSR	Data Usability Summary Report
EDD	Electronic Data Deliverable
FS	Feasibility Study
GC	Gas Chromatography
GC/ECD	Gas Chromatography/Electron Capture Detection
GC/MS	Gas Chromatography/Mass Spectroscopy
HSC	Health and Safety Coordinator
ICP	Inductively Coupled Plasma
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
ICP/AES	Inductively Coupled Plasma/Atomic Emission Spectroscopy
LCS	Laboratory Control Sample
LIMS	Laboratory Information Management System
LNAPL	Light Non-aqueous Phase Liquid
LPM	Laboratory Project Manager
MD	Matrix Duplicate
mg/kg	milligram per kilogram
mL	milliliter
MS	Matrix Spike
MSB	Matrix Spike Blank
MS/MD	Matrix Spike/Matrix Duplicate
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MSD	Matrix Spike Duplicate
NCM	Nonconformance Memo
ng	nanograms
NIOSH	National Institute of Safety and Health
NIST	National Institute of Standards and Technology
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OM	Operations Manager
OSHA	Occupational Safety and Health Administration
PAHs	Polynuclear Aromatic Hydrocarbons
PARCCS	Precision, Accuracy, Representativeness, Completeness, Comparability, and Sensitivity
PCB	Polychlorinated Biphenyl
PE	Performance Evaluation
PID	Photoionization Detector
PRRL	Project Required Quantitation Limit
PT	Performance Testing
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
QAO	Quality Assurance Officer
QAPP	Quality Assurance Project Plan
QC	Quality Control
QL	Quantitation Limit
RL	Reporting Limit
ROD	Record of Decision
RPD	Relative Percent Difference
SAP	Sampling and Analysis Plan
SDG	Sample Delivery Group
SMU	Sediment Management Unit
SOP	Standard Operating Procedure
SVOC	Semivolatile Organic Compound
TAL	Target Analyte List
TCL	Target Compound List
SVOC	Semivolatile Organic Compound
ug	Micrograms
USEPA	Unites States Environmental Protection Agency
VOC	Volatile Organic Compound

SECTION 1 PROJECT DESCRIPTION

1.1 INTRODUCTION

This Quality Assurance Project Plan (QAPP) has been prepared to support remedial design activities and specifies the quality assurance/quality control (QA/QC) procedures for field and laboratory sampling and measurements for the Former Farrington Street Manufactured Gas Plant (MGP) site. The specific objectives of the QAPP are:

- Foster data quality that is sufficient to meet the investigation objectives and to support the decision-making process; and
- Provide a standard for control and review of measurement data to confirm that the data are scientifically sound, representative, comparable, defensible, and of known quality.

This QAPP has been prepared in accordance with USEPA guidance (USEPA, 2000a, 2002b). Project or site specific work plans will have additional scope and quality requirements that may not be addressed in this QAPP.

Project scope and site descriptions are provided in the scoping documents and work plan.

SECTION 2 PROJECT ORGANIZATION

2.1 PROJECT AND TEAM ORGANIZATION

The project organization and the function and responsibility of each group affected by the QAPP are presented in the project scoping documents. The project organization is designed to promote the exchange of information and for efficient project operation. Key contact information is also summarized in the project scoping documents.

2.1.1 Analytical Services

The analytical laboratory (or laboratories) will analyze environmental samples collected for the project. Laboratory operations will be conducted under the supervision of a general manager or laboratory director and a quality assurance manager. A project manager and alternate will be assigned. The project manager will be the primary point of contact and will be responsible for coordination and quality of all laboratory activities associated with the project. The laboratory's project manager will manage project sample receipt, analysis scheduling, and data reporting. In case of temporary absence, the direct supervisor will assume the responsibilities of the absent employee or delegate the responsibility to qualified personnel. Sample Management Staff is responsible for receiving, logging, and maintaining internal custody of samples during the sample's residence in the laboratory. In addition, the laboratory will ensure that project analytical requirements are met; monitor project analytical compliance and immediately notify Parsons if conflict or discrepancies arise; initiate and implement appropriate corrective actions; ensure adequate quality review of deliverables prior to release; and participate in coordination meetings.

2.2 SPECIAL TRAINING/CERTIFICATION

Management and field personnel must review the requirements of this QAPP to make certain that persons assigned to specific tasks have appropriate credentials and experience. The Field Team Leaders will check that all onsite personnel have read and understood the QAPP.

Field personnel will be required to adhere to the project Health and Safety Plan (HASP) and Field Activities Plan (FAP). They must also follow applicable task-specific health and safety plans that project subcontractors develop before they begin investigation activities.

Laboratories will have trained and experienced staff capable of performing the analyses specified in this QAPP. Laboratories will have New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) certification for all project analyses where applicable. Additionally, the laboratories must be able to demonstrate that they have analyzed performance-evaluation or proficiency-testing samples within 12 months of beginning the analyses.

All personnel independent of the laboratory generating the data who are performing data validation and verification must have experience in data validation, quality assurance oversight, and auditing. The data validator must have a Bachelor's degree in chemistry or natural sciences with a minimum of 20 credit hours in chemistry; one year experience in the implementation and application of analytical laboratory methodologies; and one year experience evaluating data packages of all matrices (e.g., soil, water, air, tissue) for compliance and usability with respect to the analytical method and the USEPA National Functional Guidelines with regional modifications.

SECTION 3 DATA QUALITY OBJECTIVES AND DATA QUALITY CRITERIA

3.1 INTRODUCTION

A systematic planning process will develop site-specific data quality objective (DQOs). These DQOs will clarify study objectives, define the appropriate type of data, and specify tolerable levels of potential errors. These parameters, in turn, will be the basis for establishing the quality and quantity of data needed to support the utility of the data. This section was prepared in accordance with USEPA Guidance for the Data Quality Objectives Process (USEPA, August 2000). Project DQOs will be developed using the "seven-step" DQO process, consisting of the following steps:

Step 1: State the problem
Step 2: Identify the decision
Step 3: Identify inputs to the decision
Step 4: Define the study boundaries
Step 5: Define the decision rule
Step 6: Specify tolerable limits of decision error
Step 7: Optimize the design

Data quality objectives specify the underlying reason for collecting the data and the data type, quality, quantity, and uses needed to make decision, and they provide the basis for designing data collection activities. DQOs and quality assurance objectives are related data quality planning and evaluation tools for all sampling and analysis tools.

The purpose of this QAPP is to provide a standard for control and review of measurement data to ensure they are scientifically sound, representative, comparable, defensible, and of known quality. The data will be used to evaluate the physical and chemical attributes of samples collected. The project objective for analytical testing is to characterize the physical characteristics and chemical constituents and to provide data to support the decision-making process.

The data produced during sampling activities will be compared with the defined QA objectives and criteria for precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) to see that the data reported are representative of actual conditions at the site.

This data assessment activity is an on-going coordinated process with data production and is intended to assure that data produced during the project are acceptable for use in subsequent evaluations. Both statistical and qualitative evaluations will be used to assess the quality of the data. The primary evaluation of the data will be based upon the field quality control samples described in Section 8.1.1 and the laboratory quality control samples described in Section 8.1.2. The "blank" samples (laboratory QC blank samples and field QC blank samples) will be used to evaluate whether or not the laboratory and/or the field team's procedures for handling of samples represent a possible source of sample contamination. Laboratory duplicate sample results will be used to evaluate analytical precision. Field duplicate sample results will be used to evaluate the overall precision of the sampling and analysis process, as well as sample representativeness and site heterogeneity. Laboratory control samples will be used to evaluate the accuracy of analytical results, as will other analysis-specific criteria, such as surrogate compound recoveries for organic analyses. Matrix spike/matrix spike duplicate (MS/MSD) analysis of project samples will be used to evaluate potential sample matrix effects on the analytical results (both of the sample utilized for MS/MSD and other samples collected from the site). For all sample results, the impact of sample-specific, analysis-specific, and site-specific factors will be evaluated, and an assessment will

be made as to their impact, if any, on the data. Duplicate sample (field and laboratory QC samples) results will be used to evaluate data precision.

3.1.1 Data Use Objectives

Data use objectives define why analyses are being conducted and how ultimately the data will be used to meet the overall project objectives. For the project activities, these project objectives are stated in the project scoping documents.

3.2 DATA QUALITY OBJECTIVES (PARCCS PARAMETERS)

3.2.1 Introduction

DQOs are based on the premise that different data uses require different levels of data quality. The term *data quality* refers to a degree of uncertainty with respect to PARCCS data quality indicators. Specific objectives are established to develop sampling protocols and identify applicable documentation, sample handling procedures, and measurement system procedures. These DQOs are established by onsite conditions, objectives of the project, and knowledge of available measurement systems. Overall work assignment DQOs are presented and discussed in detail in this QAPP. A wide range of data quality is achieved through the use of various analytical methods. The following data quality levels are widely accepted as descriptions of the different kinds of data that can be generated for various purposes:

- **Level I, Field screening or analysis using portable instruments (e.g., photoionization detector [PID]):** Results are often not compound-specific but results are available in real time. Depending on the analysis being performed and the instrumentation used, the results may be considered qualitative, semi-quantitative, or quantitative.
- **Level II, Field analysis using more sophisticated portable analytical instruments (e.g., on-site mobile laboratory):** There is a wide range in the quality of data that can be generated depending on the use of suitable calibration standards, reference materials, and sample preparation equipment. Results are available in real-time or typically within hours of sample collection.
- **Level III, All analyses performed in an off-site analytical laboratory using methods other than USEPA-approved analytical methods**: These data generally do not include the level of formal documentation required under Level IV and are not subject to formal data validation. These data are typically used for engineering studies (e.g., treatability testing), site investigations and remedial design.
- **Level IV, Data generated using USEPA methods and enhanced by a rigorous QA program, supporting documentation, and data validation procedures:** These data are typically used for engineering studies (e.g., treatability testing), risk assessment, site investigations, and remedial design, and may be suitable for litigation/enforcement activities. Results are both qualitative and quantitative.

Project data quality level requirements for sample analyses have been determined to be as follows:

- Level I data quality will be obtained for field screening data collected with portable instruments such as pH meters, temperature probes, and Photoionization Detectors (PIDs) which will be used for health and safety and field operational monitoring. In addition, these instruments or field test kits may be used to produce data for determining where to collect a sample to assess impacts and for field screening of samples to be designated for laboratory confirmation analyses.
- A Level II data quality assurance program will be executed by the field team for obtaining data.
- A Level III data quality assurance program will be executed by the laboratory for chemical analyses not required to be Level IV, such as pH.

- A Level IV data quality assurance program will be executed, in general, by the laboratory for chemical analyses necessary to meet the project work assignment objectives.

3.2.2 PARCCS Parameters (Data Quality Indicators)

3.2.2.1 Precision

Precision is an expression of the reproducibility of measurements of the same parameter under a given set of conditions. Specifically, it is a quantitative measurement of the variability of a group of measurements compared to their average value (USEPA, 1987). Precision is usually stated in terms of standard deviation, but other estimates such as the coefficient of variation (relative standard deviation), absolute difference (D), range (maximum value minus minimum value), relative range, and relative percent difference (RPD) are common.

The objectives for precision for each chemical are based on the capabilities of the approved EPA analytical method with respect to laboratory performance. For this project, field-sampling precision will be determined by analyzing coded (blind) duplicate samples for the same parameters, and then, during data validation, calculating the %RPD for duplicate sample results. Field duplicate precision criteria for the water samples will be 30%RPD and 50%RPD for soil samples. The laboratory will determine analytical precision by calculating the %RPD or %D, as applicable to the analytical method being used, e.g., pH will be evaluated using %D.

The laboratory will determine analytical precision by calculating the RPD for the results of the analysis of the laboratory duplicates and matrix spike duplicates. The formula for calculating %RPD is as follows:

$$\%RPD = \frac{|V1 - V2|}{(V1 + V2)/2} \times 100$$

where:

RPD	=	Relative percent difference
V1, V2	=	Values to be compared
|V1 - V2|	=	Absolute value of the difference between the two values
(V1 + V2)/2	=	Average of the two values

For data evaluation purposes, in instances where both sample concentrations are less than five times (<5x) the RL, duplicate precision will be evaluated using the calculated %D result. In this instance, the applicable precision criterion will be two times the RL (2xRL). If a value is not detected, the %RPD criterion will be considered to be not applicable and the %RPD will not be calculated (i.e. precision will not be quantitatively determined). The data quality objectives for analytical precision, calculated as the RPD between duplicate analyses, are presented in Table 3.1.

3.2.2.2 Accuracy

Accuracy is a measure of the degree of agreement of a measured value with the true or expected value of the quantity of concern (Taylor, 1987) or the difference between a measured value and the true or accepted reference value. The accuracy of an analytical procedure is best determined by the analysis of a sample containing a known quantity of material and is expressed as the percent of the known quantity that is recovered or measured. The recovery of a given analyte depends on the sample matrix, method of analysis, and the specific compound or element being determined. The concentration of the analyte relative to the detection limit of the analytical method is also a major factor in determining the accuracy of the measurement. Concentrations of analytes that are less than the quantitation limits are less accurate because they are more affected by such factors as instrument "noise." Higher concentrations will not be as affected by instrument noise or other variables and, thus, will be more accurate.

The objectives for accuracy for each chemical are based on the capabilities of the approved USEPA analytical method with respect to laboratory performance. Analytical accuracy is typically assessed by examining the percent recoveries of surrogate compounds that are added to each sample (organic analyses only), the percent recoveries of matrix spike compounds added to selected samples, and the percent recoveries of spike compounds added to laboratory control samples (LCS). An LCS will be analyzed to provide additional information on analytical accuracy. Additionally, initial and continuing calibrations must be performed and accomplished within the established method control limits to define the instrument accuracy before analytical accuracy can be determined for any sample set.

Accuracy is normally measured as the percent recovery (%R) of a known amount of analyte, called a *spike*, added to a sample (matrix spike or laboratory control). The accuracy on a per sample basis will be measured using surrogates for the organics analyses. The %R is calculated as follows:

Matrix Spike Recovery: $\%\ \text{Recovery} = \dfrac{SSR - SR}{SA} \times 100$

where:

%R	=	Percent recovery
SSR	=	Spike sample result: concentration of analyte obtained by analyzing the sample with the spike added
SR	=	Sample result: the background value; *i.e.,* the concentration of the analyte obtained by analyzing the sample
SA	=	Spiked analyte: concentration of the analyte spike added to the sample

Surrogate Recovery: $\%\ \text{Recovery} = \dfrac{\text{Concentration (or amount) found}}{\text{Concentration (or amount) spiked}} \times 100$

LCS Recovery: $\%\ \text{Recovery} = \dfrac{\text{Concentration (or amount) found}}{\text{Concentration (or amount) spiked}} \times 100$

The acceptance limits for accuracy for each parameter are presented in **Table 3.1**.

3.2.2.3 Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point or an environmental condition. Representativeness is a qualitative parameter and is most concerned with the proper design of the sampling program (USEPA, 1987). Samples must be representative of the environmental media being sampled. An important factor in the selection of sample locations and sampling procedures will be obtaining representative samples.

Field and laboratory procedures will be performed in such a manner as to ensure, to the degree technically possible, that the data derived represents the in-place quality of the material sampled. Care will be exercised to see that chemical compounds are not introduced to the sample from sample containers, handling, and analysis. Field blanks, trip blanks, and laboratory method/prep blanks will be analyzed to monitor for potential sample contamination from field and laboratory procedures.

The assessment of representativeness also must consider the degree of heterogeneity in the material from which the samples are collected. Sampling heterogeneity will be evaluated during data validation through the analysis of coded (blind) field duplicate samples. The analytical laboratory will also follow acceptable procedures to

assure the samples are adequately homogenized prior to taking aliquots for analysis such that the reported results are representative of the sample received. Chain-of-custody procedures will be followed to document the possession of sample containers from the time of container preparation through sample collection and receipt back at the laboratory. Field QC samples will be collected and analyzed to provide information to evaluate sample representativeness. Details of field QC sample collection (rinse blanks, trip blanks, temperature blanks, field duplicates) and chain-of-custody procedures are presented in Section 4.2 and Section 8.1.1.

3.2.2.4 Completeness

Completeness is defined as the percentage of measurements that meet the project's data quality objectives (USEPA, 1987). Completeness is calculated for each method (or analyte) and sample matrix for an assigned group of samples. Completeness for a data set represents the results usable for data interpretation and decision making. The completeness objective for the analytical and field data is 90-100%. Completeness is defined as follows for all sample measurements:

$$\%C = \frac{V}{T} \times 100$$

where:

%C = Percent completeness
V = Number of measurements judged valid (not rejected during data validation)
T = Total number of measurements

Completeness, which is expressed as a percentage, is calculated by subtracting the number of rejected and unreported results from the total planned results and dividing by the total number of results. Results rejected because of out-of-control analytical conditions, severe matrix effects, broken or spilled samples, or samples that could not be analyzed for any other reason, negatively affect influence completeness and are subtracted from the total number of results to calculate completeness.

3.2.2.5 Comparability

Comparability expresses the degree of confidence with which one data set can be compared to another (USEPA, 1987). The comparability of all data collected for this project will be managed by:

- Using identified standard methods (including laboratory standard operating procedures) for both sampling and analysis phases of this project
- Requiring traceability of all analytical standards and/or source materials to the USEPA or National Institute of Standards and Technology (NIST)
- Requiring that calibrations be verified with an independently prepared standard from a source other than that used for calibration (if applicable)
- Using standard reporting units and reporting formats including the reporting of QC data
- Performing data validation on the analytical results, including the use of data qualifiers in all cases where appropriate
- Evaluating the sample collection information and analytical QC sample results
- Requiring that the significance of all validation qualifiers be assessed any time an analytical result is used for any purpose.

By taking these steps during the investigation, future users of either the data or the conclusions drawn from them will be able to judge the comparability of these data and conclusions.

3.2.2.6 Sensitivity and Quantitation Limits

When selecting an analytical method during the DQO process, the achievable detection limit (MDL) and method reporting limit (RL) must be evaluated to verify that the method will meet the project quantitation limits necessary to support project decision making requirements. This process ensures that the analytical method sensitivity has been considered and that the methods used can produce data that satisfy users' needs while making the most effective use of resources. The concentration of any one target compound that can be detected and/or quantified is a measure of sensitivity for that compound. Sensitivity is instrument-, compound-, method-, and matrix-specific and achieving the required project quantitation limit (RL) and/or method detection limit (MDL) objectives depends on instrument sensitivity and potential matrix effects. With regard to instrument sensitivity, it is important to monitor the instrument performance to ensure consistent instrument performance at the low end of the calibration range. Instrument sensitivity will be monitored through the analysis of method/prep blanks, calibration check samples, and low standard evaluations.

Laboratories generally establish limits that are reported with the analytical results; these results may be called reporting limits, detection limits, quantitation limits, or other terms. These laboratory-specific limits, apply undiluted analyses and must be less than or equal to the project RLs. The RL, also known as the practical quantitation limit (PQL), represents the concentration of an analyte that can be routinely measured in the sampled matrix within stated limits and with confidence in both identification and quantitation. Throughout various documents RL and PQL may be interchanged, but they effectively have the same meaning. The RLs are established based on specific knowledge about the analyte, sample matrix, project specific requirements, and regulatory requirements. The RL is typically established by the laboratory at the level of the lowest calibration standard and is generally in the range of two to ten times the MDL.

The method detection limit (MDL) is defined as "the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results" (40 CFR 136 Appendix B). MDLs are experimentally determined and verified for each target analyte of the methods in the sampling program. The laboratory will determine MDLs for each analyte and matrix type prior to analysis of project samples. In addition, when multiple instruments are employed for the analysis of the same method, each individual instrument will maintain a current MDL study. MDLs are statistically calculated in accordance with the Title 40, Code of Federal Regulations Part 136 (40 CFR 136) as promulgated in September 2017. If risk-based project objectives are developed, then where practicable, MDLs must be lower than the risk-based criteria determined for the project.

Laboratory RLs and MDLs for all analyses will meet at a minimum the standards criteria specified in the NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives for Unrestricted Use and/or the NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations."

All analytical results for the project will be reported to the MDL. Analytical results below the MDL will be flagged with a *U* at the RL to indicate the data are non-detect. However, the laboratory will flag analytes detected at a level less than the RL but greater than the MDL (or the laboratory's determined minimum reportable concentration) with a *J* to denote an estimated concentration for the project samples.

When results are corrected for dry weight, the reporting limits are then elevated accordingly. To compensate for the low solids, modifications are made either to increase the initial volume extracted/digested or to reduce the final volume of extract/digestate.

For samples that do not meet the project-specified RLs or MDLs, (taking into consideration elevated detection limits due to percent solids or percent moisture and aliquots used for the designated analysis), the laboratory must make available compelling documentation (e.g., screening data) and a justifiable explanation for its inability to meet the specified limits using the project protocols. It must also provide an appropriate, justifiable explanation of the issues and resolution in the analytical report/data package (dilution factor, interference, etc.).

Excessive, unnecessary dilutions on any sample for a project are unacceptable. The laboratory will analyze all samples initially undiluted, unless for GC/MS analyses (i.e., SW8260 and SW8270), a preliminary GC-screen is performed and indicates that GC/MS instrument damage or compromise may occur if the sample is not analyzed initially at dilution. In this instance, the sample will be analyzed at the lowest possible dilution factor. If multiple extractions/ analyses are performed (such as undiluted and diluted analyses), resulting in several data sets for the same sample, the laboratory will report all data and results from each of the multiple analyses in the data package.

Quantitation limits for all definitive data quality level laboratory analytical methods, compounds, and matrices are presented in Table 3.2.

SECTION 4 DATA ACQUISITION

4.1 SAMPLING METHODS

Any non-disposable sampling equipment used for chemical sampling will be cleaned and decontaminated prior to use to prevent potential cross-contamination between each use. The project FAP documents standard operating procedures, best practices, and field decontamination methods to mitigate cross contamination. Additionally, this QAPP describes management, handling, and tracking procedures for investigation-derived waste, including solid and liquid materials, and personal protective equipment.

The special precautions described here will be taken to confirm that each sample collected is representative of the conditions at that location and that the sampling and handling procedures neither alter nor contaminate the sample. If failure in the sampling or measurement system occurs, the procedures specified in Section 10.3 of this QAPP will be followed to identify who is responsible for implementing the appropriate corrective action. This section presents sample container preparation procedures, sample preservation procedures, and sample holding times.

For this program, the laboratory will purchase and distribute certified clean sample containers with chemical preservatives. The sample containers used for chemical analysis must be virgin bottleware, I-Chem™ Series 300 (or equivalent). Vendors are required to provide documentation of analysis for each lot of containers, and the documentation will be kept on file at the laboratory. Alternatively, the laboratory may perform testing to certify that the sample containers are not contaminated. Since the containers supplied by the laboratory will be certified clean, the bottles will not be rinsed in the field prior to use.

Laboratory-supplied sample kits (coolers containing field chain-of-custody forms, custody seals, sample containers, preservatives, and packing material) will be prepared by the laboratory's Sample Management Staff and shipped to the Field Team Leader. The type of containers, required sample volumes, preservation techniques, and holding times for specific analyses are presented in **Table 4.1.**

Samples requiring chemical preservation will be collected in sample containers provided by the analytical laboratory that already contain sufficient quantities of the appropriate preservative(s) to ensure that the sample is kept in accordance with the method requirements. The laboratory must provide an adequate amount of pre-preserved bottles with traceable high-purity preservatives, and additional preservative for use if the added amount is not sufficient, based on request by the Field Team Leader and on an as-needed basis if additional bottleware is needed during the field activities. The field team must verify that the preservative has been added appropriately.

4.2 SAMPLE HANDLING AND CUSTODY

This section presents sample handling and custody procedures for both the field and laboratory. Implementation of proper handling and custody procedures for samples generated in the field is the responsibility of field personnel. Both laboratory and field personnel involved in the chain of custody and transfer of samples will be trained as to the purpose and procedures prior to implementation. For transfer of samples within the laboratory, an internal chain of custody will be required.

4.2.1 Sample Handling

Samples to be collected for the project work assignment are specified in the work plan and FAP. After the samples are collected, they will be split as necessary among preserved containers appropriate to the parameters to be analyzed. Each container will be provided with a sample label that will be filled out at the time of collection. The sampler will print label information, specified below, on each label either before or immediately after collecting the sample with an indelible writing instrument. The label will be protected from water and solvents with clear label packing tape.

The following information, at a minimum, is required on each sample label (note: the location ID and the sample ID as described in the Data Management section below inherently identify some of this information, see below):

- Client
- Project name
- Sampling location
- Sample number
- Date and time of sample collection
- Parameters to be analyzed
- Preservative(s) added, if any
- Initials of the sampler.

Following sample collection, excess soil, water, etc., will be wiped from the outside of the sample containers with a paper towel and the lids will be checked to verify they are tightly closed. Each glass container will be wrapped with bubble wrap to minimize breakage during transport. Bottles containing soil, sediment, and water samples will be placed in separate Ziploc® bags (one bag) and set on ice (ice bath not necessary). Documentation of equipment and methods used in the field for treating the samples will be maintained in the field logs, and a chain of custody will be initiated to document transfer of the samples from the field team to the laboratory. In preparation for shipment to the analytical laboratory, the shipment cooler will be packaged as follows:

- Fill a dry shipment cooler with inert cushioning to a depth of 1 inch to prevent bottle breakage.
- Place the bagged samples and the laboratory-provided temperature blank upright in the sample cooler. The temperature blank should be placed in the center (horizontally and vertically) with the samples surrounding.
- Place additional cushioning material around the sample bottles as necessary.
- Place bags of ice in the remaining void space to keep the samples cooled to 4°C.
- Complete the chain-of-custody form (see Section 4.2.2). Place the chain-of-custody form in a polyethylene, sealable bag (such as a 1-gal Ziploc® bag or equivalent) and tape the bag to the interior of the cooler lid. Field personnel retain a copy of the chain-of-custody form; another copy is transmitted to the QAO and the Project Manager specified.
- Prior to sealing for shipment, the list of samples will be checked against the container contents to verify the presence of each sample listed on the chain-of-custody record including the temperature blank.
- Affix a custody seal to the cooler.
- Seal the cooler securely with packing tape, taking care not to cover labels if already present.
- Label the cooler appropriately in accordance with the Department of Transportation (DOT) regulations (49 CFR 171 through 179).
- Ship the samples in accordance with the DOT requirements outlined in 49 CFR 171 through 179. Complete the carrier bill of lading, and retain a copy on file.
- Samples will be delivered to the laboratory by the most expedient means to meet holding times. Whenever practicable, samples will be shipped on the day of collection for delivery to the laboratory the morning of the day after collection. The laboratory will be required to adhere to the holding times as stated in the NYSDEC ASP for sample analyses. Laboratory performance requirements for analysis turnaround time will be established using the validated time of sample receipt (VTSR) in accordance to NYSDEC requirements.

The field team will carefully coordinate sampling activities with the laboratory to see that holding times are met.

The required holding times must be adhered to for the initial sample preparation/analysis. If subsequent reanalysis or re-extraction becomes necessary because of method requirements or additional requirements stated here, the laboratory will make every effort to perform those re-extractions and/or reanalysis within the primary holding times. Any holding time that is exceeded will be reported immediately to the Project Manager and the QAO by the laboratory QA manager.

4.2.2 Field Sample Custody

The primary objective of sample custody procedures is to create an accurate written record that can be used to trace the possession and handling of samples from the moment of their collection through analysis until their final disposition. A sample (or sample container) will be considered under custody if:

- In a person's possession
- Maintained in view after possession is accepted and documented
- Locked and tagged with custody seals placed on the sample cooler so that no one can tamper with it after having been in physical custody
- In a secured area that is restricted to authorized personnel.

The sample custody flowchart is shown in **Figure 4.1**.

DATA REQUIRED ON CHAIN-OF-CUSTODY*
Project name and client Signatures of samplers Sample number, date and time of collection, and grab or composite sample designation Signatures of individuals involved in sample transfer If applicable, the air bill or other shipping number
ADDITIONAL ITEMS THAT SHOULD BE INCLUDED:
Sample matrix Number of sample containers Analyses to be performed, Preservative(s) Name of the analytical laboratory to which the samples are sent Method of sample shipment Project number.

A chain-of-custody record will accompany the samples from the time the samples leave the original sampler's possession through the sample shipments' receipt at the laboratory. Triplicate copies of the chain-of-custody record must be completed for each sample set collected. See chart for data requirements. An example chain-of-custody form is shown in **Figure 4.2**.

If samples are split and sent to different laboratories, a copy of the chain-of-custody record is sent with each sample.

The REMARKS space on the chain-of-custody form is used to indicate if the sample is a matrix spike/matrix spike duplicate (MS/MSD) or matrix spike/matrix duplicate (MS/MD), or any other sample information for the laboratory. Since they are not specific to any one-sample point, blanks are indicated on separate rows. Immediately prior to sealing the sample cooler, the sampler will sign the chain-of-custody form and write the date and time on the first RELINQUISHED BY space. The sampler will also write the method of shipment, the shipping cooler identification number, and the shipper air bill number on the top of the chain-of-custody form. Mistakes will be crossed out with a single line in ink and initialed by the author.

Sampling personnel will retain one copy of the chain-of-custody form, and the other two copies are put into a sealable plastic bag and taped inside the lid of the shipping cooler. The cooler lid is closed, custody seals provided by the laboratory are affixed to the latch and across the back and front lids of the cooler, and the person relinquishing the samples signs his or her name across the seal. The seal is taped, and the cooler is wrapped tightly with clear packing tape. Field personnel then relinquish the cooler to personnel responsible for shipment, typically an overnight carrier.

The chain-of-custody seal must be broken to open the sample cooler. Breakage of the seals before receipt at the laboratory may indicate tampering. If tampering is apparent, the laboratory will contact the Field Team Leader for direction on whether to proceed with the analyses.

Sampling personnel record the information placed on the chain-of-custody record in the field logs. They also include in the log a detailed description of the exact locations from which the samples were collected, any pertinent conditions under which the samples were obtained, and the lot number of the containers used.

4.2.3 Laboratory Sample Management

The laboratory has a designated Sample Management Staff responsible for receiving samples in the laboratory, opening the coolers, checking the sample integrity and custody seals, logging samples into the laboratory information management system (LIMS), and controlling the handling and storage of samples while in the laboratory. The laboratory is a secure facility and only authorized laboratory personnel are allowed to handle active samples. The laboratory maintains an SOP for sample management.

4.2.4 Sample Receipt and Logging

Upon receipt at the laboratory, sample-receiving personnel inspect the samples for integrity of the custody seal, check the shipment against the chain-of-custody form, and note any discrepancies. Specifically, the sample-receiving personnel note any damaged or missing sample containers. At this time, the field chain-of-custody record is completed and signed by the Sample Management Staff.

Using the temperature blank in each cooler, the temperature of each incoming sample cooler is measured and recorded during the sample receipt and log-in procedures before samples are placed in laboratory cold storage. Similarly, the laboratory documents that its cold storage facilities are being maintained through daily (at a minimum) documented temperature measurements using a thermometer.

Upon receipt, Sample Management Staff measure and record on the preservation documentation sheet the pH of acid- or base-preserved aqueous samples. Any problems observed during sample receipt must be communicated to the Field Team Leader and/or the QAO verbally and either by fax transmission or email within 24 hr. (preferably 3 hr. beginning with the normal business day or immediately following for problems noted during second shifts or weekends) after discovery and before samples are released to the laboratory for analysis. Problems may include but are not limited to broken bottles, errors or ambiguities in paper work, insufficient sample volume or weight, inappropriate pH, and elevated temperature.

When the shipment is inspected and the chain-of-custody record agree, the sample receiving personnel enter the sample and analysis information into the LIMS and assign each sample a unique laboratory number. This number is affixed to each sample bottle.

4.2.5 Sample Storage Security

While in the laboratory, the samples and aliquots that require cold storage will be stored and will be maintained in a secured refrigerator unless they are being used for preparation and/or analysis. All of the refrigerators in

the laboratory used for storage of samples have restricted access and are numbered. In addition, dedicated refrigerators are designated for extracts and analytical standards. The sample storage areas are in the laboratory, and access is limited to laboratory personnel. Specific requirements for sample storage are described below:

- Samples will be removed from the shipping container and stored in their original containers unless damaged.
- Damaged samples will be disposed in an appropriate manner, and the disposal will be documented or repacked as necessary and appropriate.
- Samples and extracts will be stored in a secure area designed to comply with the storage method(s) defined in the contract.
- The storage area will be kept secure at all times. The sample custodian or designated personnel will monitor access to the storage area.
- Standards or reagents will not be stored with samples or sample extracts.

The following standard operating procedures for laboratory sample security will be implemented to confirm that the laboratory satisfies sample chain-of-custody requirements:

- Samples will be stored in a secure area.
- Access to the laboratory will be through a monitored area. Other outside access doors to the laboratory will be kept locked.
- Visitors must sign a visitor's log and will be escorted while in the laboratory.
- Refrigerators, freezers, and other sample storage areas will be securely maintained.

Storage blanks will be initiated and analyzed on a weekly basis for each cold storage unit used to hold samples submitted for the analysis of volatile organic compounds (VOCs). Field QC samples must be stored in the same cold storage units as the samples that they are associated with (even if the matrices are different). All soil samples must undergo thorough sample homogenization (stirred within the original sample container) using inert utensils and mixing platforms that will not interfere with the target analytes being requested for analysis with the exception of soil samples submitted for the analysis of VOCs. Samples for VOC determinations will be stored in a secure refrigerator separate from other samples, sample extracts, reagents, and standards.

4.2.6 Retention and Disposal of Samples

The laboratory must retain all excess samples within their original sample bottles for a minimum of 30 days in cold storage (below 4 degrees Celsius) following submission of the validated data to NYSDEC. At that time, the laboratory must contact the Field Team Leader for authorization for responsible disposal or further storage instructions. At the point at which the laboratory is provided authorization to dispose of the samples, the laboratory will be responsible, and will assume all liability for proper characterization and disposal of samples and bottleware in accordance with all local, state, and federal regulations.

SECTION 5 DATA MANAGEMENT

5.1 INTRODUCTION

The electronic data management system will be implemented to process the information effectively without loss or alteration. As of April 1, 2011, the New York State Division of Environmental Remediation (DER) has implemented an Environmental Information Management System (EIMS). The EIMS uses the database software application EQuIS$_{TM}$ from EarthSoft® Inc. In an effort to improve the management of environmental data and reduce paper quantities, all laboratory analytical data minus instrument raw data must be submitted in the DEC-approved Electronic Data Deliverable (EDD).

Data providers must download and install the EQuIS Data Processor (EDP) to check their properly formatted EDD as well as the NYSDEC DER Format file. The EDP performs a series of formatting checks on the EDD and identifies any errors in the data file prior to submission. All EDDs are to be error free when submitted. It is important that the most recent version of the EDP and NYSDEC format file are employed since the valid values used by EIMS are periodically updated for the EDP.

5.2 FIELD DATA MANAGEMENT

The Field Team Leader will manage data generated in the field. He or his designee will be responsible for recording and documenting sampling activities in the field logs, on sampling records (as appropriate), and on chain-of-custody forms (when samples are collected) as described in Section 4.2.2. The records may be photocopied and stored in the project file along with the original.

A sample nomenclature system will be coordinated with the Data Management Team. Each sample name will be unique to include location ID and field sample ID. The Database Manager will add data to EIMS through the input module of the system.

DATA INPUT TO EIMS MAY INCLUDE:
– Sample planning information (e.g., sample depth)
– Chain-of-custody data
– Sediment coring logs
– Geotechnical data
– Location and geographic data
– Field measurements
– Meteorological data
– Waste characterization data
– Groundwater levels
– Radiodating data
– Laboratory analytical data

5.3 LABORATORY DATA MANAGEMENT

Laboratory data management involves several important stages that include data transformation, review, verification, and validation, as well as data storage, retrieval, and security. The laboratory will implement a data management system to manage the data from its generation in the laboratory to its final reporting and storage.

The data management system will include, but not be limited to, the use of standard record-keeping practices, standard document control systems, and the electronic data management system.

The laboratory data reduction, verification, validation, and reporting procedures and project data management activities, data/information exchange procedures ensure that complete documentation is maintained, transcription and reporting errors are minimized, and data are properly review.

Specific laboratory data management requirements and procedures are discussed in Sections 6 and 9 of this QAPP.

SECTION 6 DOCUMENTS AND RECORDS

6.1 INTRODUCTION

Records will be maintained to document accurately the data generation process during investigation in the field, sample analysis in the lab, and during data validation. Project documentation will be maintained in general accordance with guidelines in the National Enforcement Investigation Center Policies and Procedures (USEPA, 1986). A project file will be maintained that will contain appropriate project documentation; see components in chart. Some of this documentation may be retained electronically in lieu of paper copies. **Table 6.1** summarizes the types of project documents and records.

MINIMUM COMPONENTS OF PROJECT FILE
- Project plans and specifications - Field logs and data records - Photographs, maps, and drawings - Sample identification documents - Chain-of-custody records - Data review notes - Report notes and calculations - Progress and technical reports and   - Correspondence and other pertinent information - Full analytical data deliverables package provided by the lab, including QC documentation and electronic data deliverable

6.2 FIELD RECORDS

Field personnel are responsible for documenting sample handling activities, observations, and data in field sampling records including field logs, chain-of-custody records, photographs, and pre-design investigation records. The Field Team Leader is responsible for maintaining these documents. Each record is described below.

6.2.1 Field Log

A Field Log will be used to document pre-design investigation activities. The field log will have consecutively numbered pages, and documentation will be recorded using waterproof ink. Incomplete lines, pages, and changes in the log will be lined out with a single line, dated, and initialed. More detailed procedures for documenting investigation activities (such as field sampling records and boring log forms) and type of information to include in the field log may be developed.

MINIMUM REQUIREMENT FOR INFORMATION IN FIELD LOG
- Responsible person's name - Date and time of activity - Equipment and methods used for field preparation of samples - Field measurements of samples (*e.g.,* pH, temperature) - Information coordinating sample handling activities with appropriate field activities and chain-of-custody documentation

Daily calibration activities:

- Calibrator's name
- Instrument name and model
- Date and time of calibration
- Standards used and their source
- Temperature (if appropriate)
- Results of calibration
- Corrective actions taken (if any)

6.2.2 Electronic Field Data Management

The field sampling program will have an electronic data management component. The system will be designed to specify the necessary samples taken at any given location and to provide the ability to be updated and amended in the field. This will provide a management system that efficiently tracks the needs of the sampling scope. As the samples are taken, log entries are put in the database, and sample labels are printed. At any given time a chain-of-custody record can be printed as well.

6.2.3 Chain-of-Custody Record

The chain of custody record establishes the documentation necessary to trace sample possession from the date and time of sample collection, through sample shipment, to the date and time of arrival at the laboratory designated to perform analysis. The ability to trace the history of a sample is essential to show that the sample collected was, indeed, the sample analyzed and that the sample was not subjected to biasing influences. Evidence of sample traceability and integrity is provided by chain-of-custody procedures. These procedures are necessary to support the validity of the data and will accompany each shipping container.

A copy of the chain-of-custody record will be detached and kept with the field log or placed in the project file; the original record will accompany the shipment.

6.3 LABORATORY RECORDS

Laboratories providing analytical support for this project must maintain records to ensure that all aspects of the analytical processes are adequately documented to ensure legal defensibility of the data.

When a mistake is made, the wrong entry is crossed out with a single line, initialed, and dated by the person making the entry, and the correct information recorded. Obliteration of an incorrect entry or writing over it is not allowed, nor is the use of correction tape or fluid on any laboratory records.

Overwriting or disposal of any electronic media prior to a 5-yr expiration period is strictly prohibited. All electronic and hardcopy data must be stored in an easily accessible climate-controlled environment. The laboratory will exercise "best practices" in terms of frequent, redundant electronic backup procedures on proper long-term storage media to assure that all electronic data representing sample analyses will be maintained for the 5-yr storage period. Electronic data must be stored in a secure, limited-access area with redundant copies stored in fireproof vaults and/ or stored off-site of the laboratory facilities.

Sample preparation in the laboratory must be fully documented and include sample preparation conditions (such as digestion temperatures). In addition, documentation must allow complete traceability to all prepared or purchased reagents, acids and solvents, and reference solutions. All spike solutions and calibration standards must be used prior to labeled expiration dates and stored in accordance with manufacturers recommended

conditions. Complete and unequivocal documentation must exist to enable traceability of all prepared spike solutions, calibration standards, and prepared reagents back to the reference materials utilized. Organic extracts must be stored in the same type of vials (amber or clear) as the associated standards at the appropriate storage temperatures.

The unit conventions set forth in the figures for reported data will be consistent with standard laboratory procedures. Reporting units used are those commonly used for the analyses performed. Concentrations in soil and sediment samples will be expressed in terms of weight per unit dry weight, with moisture content reported for each sample.

Laboratory records used to document analytical activities in the laboratory will include reagent and titrant preparation records, standard preparation logs, sample preparation logs, bench data sheets, instrument run logs, and strip chart recordings/chromatograms/computer output. Additional records will include calibration records, maintenance records, nonconformance memos, and Corrective Action Request (CAR) forms.

LAB RECORDS SHOULD CONVEY:
- What was done - When it was done - Who did it and - What was found

REQUIREMENTS FOR LAB RECORDKEEPING
- Data entries must be made in indelible water-resistant ink - Date of each entry and observer must be clear - Observer uses his or her full name or initials - Initial and signature log is maintained so the recorder of every entry can be identified - Information must be recorded in notebook or on other records when the observations are made - Recording information on loose pieces of paper not allowed

6.3.1 Operational Calibration Records

Operational calibration records will document the calibration of instruments and equipment that are corrected on an operational basis. Such calibration generally consists of determining instrumental response against compounds of known composition and concentration or the preparation of a standard response curve of the same compound at different concentrations. Records of these calibrations are maintained in the following documents:

- Standard preparation information, to trace the standards to the original source solution of neat compound, is maintained in LIMS or laboratory standard preparation logs.
- Instrument logbook provides an ongoing record of the calibration for a specific instrument. The logbook should be indexed in the laboratory operations records and should be maintained at the instrument by the chemist. The chemist must sign and date all entries, and the QM or his designee must review them.
- For Level IV data packages that are required for soil and waste samples, copies of the raw calibration data will be kept with the analytical sample data, so the results can readily be processed and verified as one complete data package. If samples from several projects are processed together, the calibration data is copied and included with each group of data. The laboratory will maintain all calibration, analysis, and corrective action documentation (both hard copy and electronic data) for a minimum of 7 years. The documentation maintained must be sufficient to show all factors used to derive the final (reported) value for each sample. Documentation must include all calculation factors such as dilution factor, sample aliquot size, and dry-weight conversion for solid samples. The individual who performs hand calculations must sign

and date them. This documentation must be stored with the raw data. Calculations performed by the data system will be documented and stored as electronic and hard copy data. The instrument printouts will be kept on file, and the electronic data will be stored by the laboratory for a minimum of 7 years.

6.3.2 Maintenance Records

Maintenance records will be used to document maintenance activities, service procedures, and schedules. They must be traceable to each analytical instrument, tool, or gauge. The individual responsible for the instrument must review, maintain, and file these records. These records may be audited by the QAO to verify compliance. Logs must be established to record and control maintenance and service procedures and schedules.

6.3.3 Nonconformance Memos

Nonconformance Memos (NCM) may be either a hard copy record or an electronic database record. In either case, review and release of the record must be documented by the initiator, the analytical group leader where appropriate, the laboratory project manager, and the laboratory QA manager. All internal laboratory nonconformance documentation will be communicated to the Field Team Leader by the laboratory project manager verbally and summarized in the report narrative. The NCM will be used to document equipment that fails calibration and will identify any corrective actions taken.

6.3.4 Corrective Action Request (CAR) Forms

The laboratory must use CAR forms to document any incidents requiring corrective action. The CAR form will be issued to the personnel responsible for the affected item or activity. A copy will also be submitted to the laboratory project manager. The individual to whom the CAR is addressed will return the requested response promptly to the QA personnel and will affix his or her signature and date to the corrective action block after stating the cause of the conditions and corrective action to be taken. QA personnel will maintain a log for status of CAR forms to confirm the adequacy of the intended corrective action and to verify its implementation. CARs will be retained in the project record file.

6.3.5 Analytical Data Reports

Analytical data will be reported as an Electronic Data Deliverable (EDD) and as an analytical data package. The analytical laboratories are required to submit all data, preliminary and final, in formatted EDDs in accordance with NYSDEC's requirements. The laboratory must meet 100% compliance with these requirements. The Parsons Database Manager will submit written requests dictating the requirements and appropriate files to be supplied by the laboratory. The specifications of the EDD are presented in Section 5.

Analytical data reports will be provided by the laboratory within 28 calendar days following receipt of a complete Sample Delivery Group (SDG) and will include the specifications identified in Attachment 1. An SDG is considered to include all samples received for the same project or site, to a maximum of twenty investigative samples not to exceed 5 consecutive days of sampling. The data package provided by the laboratory for soil and waste will be Level IV data in the NYSDEC Category B format, unless an alternative requirement is specified in a laboratory statement of work (SOW) and will contain all information to support the data validation in accordance with the USEPA Region II Standard Operating Procedures (SOP) as described in Section 9. Additionally, the completed copies of the chain-of-custody records, accompanying each sample from the time of initial bottle preparation to completion of analysis, must be attached to the analytical reports for soil and waste samples.

6.4 Data Validation and Audit Records

Data validation personnel are responsible for documenting validation procedures and results in the form of a data usability summary report (DUSR) for soil and waste samples. The QAO will be responsible for maintaining this report and the QAO will be responsible for its distribution. Additionally, audit reports will be prepared and distributed by the QAO. A brief description of each record is described below.

6.4.1 Data Usability Summary Reports

The DUSR will be prepared as required by NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 2B, May 2010 for soil and waste samples. The DUSR will summarize the impacts of using data that do not achieve overall data quality objectives or that do not meet PARCC and sensitivity criteria identified in Section 3.3. Additionally, the report will be used to identify, assess and present issues associated with the overall data.

6.4.2 Audit Reports

Among other QA audit reports, which may be generated during the conduct of activities, a final audit report for this project may be prepared by the QAO. The report will include:

- Periodic assessment of measurement data accuracy, precision, and completeness
- Results of performance audits and/or system audits
- Significant QA problems and recommended solutions for future projects

Status of solutions to any problems previously identified.

SECTION 7 ANALYTICAL PROCEDURES

7.1 INTRODUCTION

To meet program specific regulatory requirements for chemicals of concern, all methods will be followed as stated, with some specific requirements noted below. Chemical analyses for inorganics, organics, and wet chemistry parameters will be conducted in accordance with the QAPP, the project scoping documents, laboratory's SOPs (maintained "on-file" at the laboratory), and with referenced analytical methods including USEPA SW846 Test Methods for Evaluating Solid Waste, Physical, and Chemical (USEPA, 1997), and Methods for Chemical Analysis of Water and Wastes (USEPA, 1983). Where requirements conflict, the technical and QA/QC requirements in this QAPP, or the project scoping documents take precedence.

7.2 STANDARD OPERATING PROCEDURES

Standard Operating Procedures (SOPs) are a written step-by-step description of laboratory operating procedures exclusive of analytical methods. Laboratories providing analytical support for this project will be required to document all procedures in SOPs. The SOPs must address the following areas:

- Storage containers and sample preservatives
- Sample receipt and logging
- Sample custody
- Sample handling procedures
- Sample transportation
- Glassware cleaning
- Laboratory security
- QC procedures and criteria
- Equipment calibration and maintenance
- Documentation
- Safety
- Data handling procedures
- Document control
- Personnel training and documentation
- Sample and extract storage
- Preventing sample contamination
- Traceability of standards
- Data reduction and validation
- Maintaining instrument records and logbooks
- Nonconformance
- Corrective actions
- Records management

SECTION 8 QUALITY CONTROL

8.1 INTRODUCTION

A QC program is a systematic process that controls the validity of analytical results by measuring the accuracy and precision of method and matrix, developing expected control limits, using these to detect anomalous events, and requiring corrective action techniques to prevent or minimize the recurrence of these events. QC measurements for analytical protocols are designed to evaluate laboratory performance, and measurement biases resulting from the sample matrix and field performance.

- **Field performance:** QC samples are used to evaluate the effectiveness of the sampling program to obtain representative samples, eliminating any cross contamination. These samples will include trip blanks, field duplicates and rinse blanks.
- **Sample performance:** Factors associated with sample preparation and analysis influence accuracy and precision. Such factors are monitored by the use of internal QC samples. QC field samples are analyzed to evaluate measurement bias due to the sample matrix based on evaluation of matrix spike (MS) and matrix spike duplicate (MSD) samples. If acceptance criteria are not met, matrix interferences are confirmed either by reanalysis or by inspection of the LCS results to verify that laboratory method performance is in control. Data are reported with appropriate qualifiers or discussion.
- **Laboratory method performance:** All QC criteria for method performance should be met for all target analytes for data to be reported. These criteria generally apply to instrument detector assessment (such as, tunes, ICP interference check sample), calibration, method blanks, and LCS. Variances will be documented and noted in the case narrative of the report.

8.1.1 Field Quality Control Samples

QC samples will be collected in the field as part of the sampling program to allow evaluation of data quality. Field QA/QC samples will consist of the collection and analysis of rinse blanks, field duplicates, and matrix spike/matrix spike duplicate (MS/MSD) samples, at a frequency of 1:20 for each sample media. Temperature blanks will accompany each sample shipment container (cooler) shipped to the laboratory for sample analysis. Standard sample identifiers will identify field QA/QC samples and they may provide no indication of their nature as QA/QC samples.

A summary of the type and collection frequency of field QC sample to be collected respective to the sampling programs specified in this QAPP, is included in **Table 8.1**. A description of each QC sample is included below.

8.1.1.1 Equipment Rinse Blanks

To assess field sampling and decontamination performance, rinse blanks will be used to evaluate the effectiveness of the decontamination procedures for chemical sampling equipment. Rinse blanks will be collected as part of all chemical sampling programs, except for waste characterization. An equipment rinse blank (rinse blank) is a sample of deionized water provided by the laboratory that is poured over or through the sampling equipment (such as split spoon, wipe template), into the sample container. A rinse blank will be collected at a frequency of 1:20 samples per type of sample collection activity using non-disposable sampling equipment.

8.1.1.2 Field Duplicates

Coded (blind) field duplicates will be used to assess the precision of field sampling procedures. Precision of a sample is calculated by quantifying the RPD between two sample measurements (Section 3.2.2.1). If the RPD of field duplicate results is greater than the precision criterion, environmental results for the field duplicate pair will be qualified as estimated. The Field Leader responsible for sample collection and processing should be notified to identify the source of variability (if possible), and corrective action should be taken (Section 10.3).

Coded (blind) field duplicates will be collected to evaluate the representativeness and effectiveness of homogenization and proper mixing for soil and aqueous samples. The field duplicate will be analyzed for all of the parameters for which the associated samples are being analyzed. The samples will be labeled in such a manner that the laboratory will not be able to identify the sample as a duplicate sample. This will eliminate bias that could arise by laboratory personnel.

8.1.1.3 Trip Blanks

During field sampling and sample shipping, contamination may be introduced to the samples that could affect the accuracy of analysis results. Trip blanks will be used during sample shipment to detect cross-contamination. Each cooler of aqueous samples sent to the laboratory for analysis of VOCs will contain one trip blank. Trip blanks are prepared only when VOCs samples are taken and are analyzed for VOCs analytes. The trip blank consists of a VOC sample vial filled in the laboratory with ASTM Type II reagent grade water, transported to the sampling site, handled like an environmental sample, and returned to the laboratory for analysis. Trip blanks are not opened in the field.

8.1.1.4 Temperature Blank

The temperature blank is used to indicate the temperature of the sample cooler upon receipt at the laboratory. A temperature blank consists of laboratory reagent in a 40-ml glass vial sealed with a Teflon® septum. Any cooler temperature exceeding the allowable 4 ± 2 degrees Celsius (°C) must be noted and the QAO notified prior to sample analyses.

8.1.2 Laboratory Quality Control Samples

QC data from the laboratory are necessary to determine precision and accuracy of the analyses and to demonstrate the absence of interferences and contamination of glassware and reagents. The laboratory will analyze QC samples routinely as part of the laboratory QC procedures. Laboratory QC results will consist of analysis of MS/MSD, LCS, method/preparation blanks, and surrogate spikes. The frequency of the analysis of laboratory QC is summarized in **Table 8.2**. QC samples will be prepared and analyzed utilizing the same preparation and analysis procedures as the field samples. These laboratory QC sample analyses will be run independently of the field QC samples. Results of these analyses will be reported with the sample data and kept in the project QC data file. The QC checks, their frequency, acceptance criteria, and corrective actions for noncompliance are summarized for each analytical method in the laboratory's SOP.

QC samples will be prepared and analyzed utilizing the same preparation and analysis procedures as the field samples. Re-preparation and/or reanalysis of the laboratory QC samples due to a failing recovery and/or precision failure without the re-preparation and reanalysis of the associated samples is prohibited. In all events, QC failures, holding time exceedances, or any other non-standard occurrence must be communicated immediately to the QAO and prior to reporting and then, with approval to report the data, summarized in the case narrative. If the criteria are not met, appropriate corrective action must be taken as specified in Section 9.1 and Section 10.

8.1.2.1 Matrix Spike/Matrix Spike Duplicate/ Matrix Duplicates

MS/MSD samples for organics, metals, and wet chemistry parameters will be taken at a frequency of 1 per 20 field samples (per SDG) per matrix per method. A "batch" is considered up to twenty samples from the same matrix, of the same extraction/digestion type, prepared and/or analyzed by a given analyst, within 12-hr, within an extraction/digestion event, whichever is more frequent. These samples are used to assess the effect of the sample matrix on the recovery of target compounds or target analytes by spiking a normal field sample with a known concentration of the analyte of interest. Samples identified as rinse blanks will not be used for the MS/MSD preparation or analysis.

Spiked samples will be analyzed, and the percent recovery will be calculated. Results of the analysis will be used to evaluate accuracy and precision of the actual sample matrix. For MS/MSD, the result will be compared and used to evaluate the precision of the actual sample matrix. The percent recovery for each analyte in the MS and MSD should fall within the limits established by laboratory QC protocol. The percent recovery and RPD control limits between the MS and MSD and the sample and the duplicate concentrations are provided in Table 3.1.

The original sample, MS/MSD, and laboratory duplicate sample aliquots will be treated exactly the same throughout the sample preparation and analysis and will not be homogenized more than any other project sample (either in the field or at the laboratory). The spike samples will be analyzed for the same parameters as the sample. Field personnel must indicate on the chain-of-custody form which sample(s) are designated as MS/MSD. If samples are not designated for these QC purposes and/or insufficient sample is available the Project Manager and/or QAO will be notified for resolution.

8.1.2.2 Laboratory Control Samples

Laboratory Control Samples (LCS) are designed to check the accuracy of the analytical procedure by measuring a known concentration of an analyte of interest. An LCS will be analyzed for each analytical batch requested for sample preparation and analysis. LCSs must be prepared at a frequency of one per batch for all analytical methods. If high LCS recoveries are observed and the associated samples are reported as "not detected" for the requested target analytes, no action is necessary other than to note the issue in the case narrative of the final analytical report. LCS recoveries must meet the criteria specified in the analytical method.

8.1.2.3 Method and Preparation Blanks

Laboratory blank samples (also referred to as method or preparation blanks) are designed to detect contamination resulting from the laboratory environment or sample preparation procedure. Method blanks verify that method interferences caused by contaminants in solvents, reagents, glassware, or in other sample processing hardware, are known. Method blanks will be analyzed for each analytical batch using similar preparation techniques (separatory funnel and liquid/liquid extraction) to assess possible contamination and evaluate which corrective measures may be taken, if necessary.

Method blanks associated with field samples must undergo all of the processes performed on investigative samples, including but not limited to pre-filtration and sample cleanups. The blank will be deionized water for water samples or a purified solid matrix such as sodium sulfate for extractable soil samples. Where all the field samples in a batch do not require an additional cleanup procedure, an additional blank may be prepared to check the performance of the additional cleanup and will be associated with the field samples getting the specific additional cleanup. Where this is done, both blanks will be reported, and the procedure described in the case narrative. Method blanks must be prepared at a frequency of one per analytical batch.

8.1.2.4 Surrogate Spike Analyses

Surrogate spikes (applicable to organic analysis only) are used to determine the efficiency of analyte recovery in sample preparation and analysis. Calculated percent recovery of the spikes is used to measure the accuracy of

the analytical method. A surrogate spike is prepared by adding a known amount of a compound similar in type to the analytes of interest. Surrogate compounds will be added to all samples analyzed by USEPA Methods, including method blanks, MS/MSDs, project environmental samples, and duplicate samples in accordance with the method. Surrogate spike recoveries should fall within the limits established by laboratory QC protocol and the NYSDEC ASP.

8.2 INSTRUMENT/EQUIPMENT TESTING, INSPECTION, AND MAINTENANCE

8.2.1 Field Equipment

Equipment failure will be minimized by routinely inspecting all field equipment to ensure that it is operational and by performing preventative maintenance procedures. Field sampling equipment will be inspected prior to sample collection activities, and repairs will be made prior to decontamination and reuse of the sampling equipment. Equipment, instruments, tools, gauges, and other items requiring preventive maintenance will be serviced in accordance with the manufacturer's specified recommendations and written procedure, based on the manufacturer's instructions or recommendations. Maintenance will be performed in accordance with the schedule specified by the manufacturer to minimize the downtime of the measurement system. Qualified personnel must perform maintenance work.

MINIMUM ROUTINE PREVENTIVE MAINTENANCE
Removal of foreign debris from exposed surfaces
Storage in a cool dry place protected from the elements
Daily inspections
Verification of instrument calibrations (Section 8.3.1)

A list of critical spare parts will be developed prior to the initiation of fieldwork. Field personnel will have ready access to critical spare parts to minimize downtime while fieldwork is in progress. A service contract for rapid instrument repair or backup instruments may be substituted for the spare part inventory.

Non-routine maintenance procedures require field equipment to be inspected prior to initiation of fieldwork to determine whether or not it is operational. If it is not operational, it will be serviced or replaced. Batteries will be fully charged or fresh, as applicable.

8.2.2 Laboratory Instrumentation

Periodic preventive maintenance is required for all sensitive equipment. Instrument manuals will be kept on file for reference if equipment needs repair. The troubleshooting section of factory manuals may be used in assisting personnel in performing maintenance tasks.

Major instruments in the laboratory are covered by annual service contracts with manufacturers or other qualified personnel (internal or external). Under these agreements, trained service personnel make regular preventive maintenance visits. Maintenance is documented and maintained in permanent records by the individual responsible for each instrument.

The laboratory manager is responsible for preparation, documentation, and implementation of the program. The laboratory QA manger reviews implementation to verify compliance during scheduled internal audits.

Written procedures will establish the schedule for servicing critical items to minimize the downtime of the measurement system. The laboratory will adhere to the maintenance schedule and arrange any necessary and prompt service. Qualified personnel will perform required service.

8.3 INSTRUMENT/EQUIPMENT CALIBRATION AND FREQUENCY

Instruments (field and laboratory) used to perform chemical measurements will be properly calibrated prior to use to obtain valid and usable results. The requirement to properly calibrate instruments prior to use applies equally to field instruments as it does to fixed laboratory instruments to generate appropriate data to meet DQOs.

8.3.1 Field Instruments

All field analytical equipment will be calibrated immediately prior to each day's use. The calibration procedures of field instruments (such as PID, pH, temperature), will conform to manufacturer's standard instructions to ensure that the equipment functions within the allowable tolerances established by the manufacturer and required by the project. Personnel performing instrument calibrations must be trained in its proper operation and calibration. Records of all instrument calibration will be maintained by the Field Team Leader in the field log (Section 6.2) and will be subject to audit by the QAO or authorized personnel. The Field Team Leader will maintain copies of all the instrument manuals on the site.

8.3.2 Laboratory Instruments

A formal calibration program will control instruments and equipment used in the laboratory. The program will verify that equipment is of the proper type, range, accuracy, and precision to provide data compatible with specified requirements. Instruments and equipment that measure a quantity or whose performance is expected at a stated level will be subject to calibration. Laboratory personnel or external calibration agencies or equipment manufacturers will calibrate the instruments using reference standards. Upon request, the laboratory will provide all data and information to demonstrate that the analytical system was properly calibrated at the time of analysis including calibration method, frequency, source of standards, concentration of standards, response factors, linear range, check standards, and all control limits. This data will be documented in a calibration record (Section 6.3.1). Calibration records will be prepared and maintained for each piece of equipment subject to calibration.

This section provides an overview of the practices used by the laboratory to implement a calibration program. Detailed calibration procedures, calibration frequencies, and acceptance criteria are specified in the laboratory's analytical method SOPs. The requirements for the calibration of instruments and equipment depend on the type and expected performance of individual instruments and equipment. Therefore, the laboratory will use the guidelines provided here to develop a calibration program.

Two types of calibration are described in this section: periodic calibration and operational calibration. The results of the calibration activities will be documented in the analytical data package and the calibration records (Section 6.3.1).

- **Periodic calibration:** Performed at prescribed intervals for equipment, such as balances and thermometers. In general, equipment which can be calibrated periodically is a distinct, singular purpose unit and is relatively stable in performance.
- **Operational calibration:** routinely performed as part of an analytical procedure or test method, such as the development of a standard curve for use with an atomic absorption spectrophotometer. Operational calibration is generally performed for instrument systems.

Equipment that cannot be calibrated or becomes inoperable will be removed from service. Such equipment must be repaired and satisfactorily recalibrated before reuse. For equipment that fails calibration, analysis cannot proceed until appropriate corrective action is taken, and the analyst achieves an acceptable calibration. This type of failure will be documented in an NCM (Section 10).

8.3.3 Calibration System

The calibration system includes calibration procedures, equipment identification, calibration frequency, calibration reference standards, calibration failure, and calibration records. These elements are described next.

8.3.3.1 Calibration Procedures

Written procedures will be used by the laboratory for all instruments and equipment subject to calibration. Whenever possible, recognized procedures, such as those published by ASTM or USEPA, will be adopted. If established procedures are not available, a procedure will be developed considering the type of equipment, stability characteristics of the equipment, required accuracy, and the effect of operational error on the quantities measured. Calibration procedure established by the laboratory must, at a minimum, meet the calibration requirements of the method on which the SOP is based.

MINIMUM CALIBRATION PROCEDURES
Equipment to be calibrated
Reference standards used for calibration
Calibration technique and sequential actions
Acceptable performance tolerances
Frequency of calibration
Calibration documentation format

8.3.3.2 Equipment Identification

Equipment that is subject to calibration is identified by a unique number assigned by the laboratory. Calibration records reference the specific instrument identification.

8.3.3.3 Calibration Frequency

Instruments and equipment will be calibrated at prescribed intervals and/or as part of the operational use of the equipment. Calibration frequency will be based on the type of equipment, inherent stability, manufacturer's recommendations, values provided in recognized standards, intended data use, specified analytical methods, effect of error upon the measurement process, and prior experience.

8.3.3.4 Calibration Reference Standards

Two types of reference standards will be used by the laboratory for calibration:

- **Physical standards**, such as weights for calibrating balances and certified thermometers for calibrating working thermometers, refrigerators and ovens, are generally used for periodic calibration. Physical reference standards that have known relationships to nationally recognized standards (such as NIST) or accepted values of natural physical constants will be used whenever possible. If national standards do not exist, the basis for the reference will be documented. Physical reference standards will be used only for calibration and will be stored separately from equipment used in analyses. In general, physical standards will be recalibrated annually by a certified external agency, and documentation will be maintained. Balances will be calibrated against class "S" weights by an outside source annually. Physical standards such as the laboratory's class "S" weights will be recertified annually.

- **Chemical standards,** such as vendor certified stock solutions and neat compounds, will generally be used for operational calibration. The laboratory, to provide traceability for all standards used for calibration and QC samples, will document standard preparation activities.

8.3.4 Operational Calibration

Operational calibration will generally be performed as part of the analytical procedure and will refer to those operations in which instrument response (in its broadest interpretation) is related to analyte concentration. Formulas used for calibration are listed in **Table 8.3**.

8.3.4.1 Preparation of a Calibration Curve

Preparation of a standard calibration curve will be accomplished by analyzing calibration standards that are prepared by adding the analyte(s) of interest to the solvent that is introduced into the instrument. The concentrations of the calibration standards will be chosen to cover the working range of the instrument or method. All sample measurements will be made within this working range. Average response factors will be used or a calibration curve will be prepared by plotting or regressing the instrument responses versus the analyte concentrations. Where appropriate a best-fit curve may be used for nonlinear curves and the concentrations of the analyzed samples will be back-calculated from the calibration curve.

8.3.4.2 Periodic Calibration

Periodic calibrations are performed for equipment (such as balances and thermometers), that is required in the analytical method, but that is not routinely calibrated as part of the analytical procedure. **Table 8.4** lists the periodic calibration requirements used by the laboratories.

8.4 INSPECTION/ACCEPTANCE OF SUPPLIES AND CONSUMABLES

In the laboratory, personnel qualifying reagents and standards must be trained to perform the associated instrumental analysis, including instrument calibration, calculations, and data interpretation. Laboratory personnel must document the purchase, receipt, handling, storage, and tracking of supplies and consumables used during analysis. For example, analytical standards, source materials, and reference materials used for instrumental calibration/tunes/checks must be certified and traceable to the USEPA or NIST through reference numbers documented directly in each analytical sequence. Calibration for all requested analyses must be verified by an independent second source reference. Adhering to these procedures precludes the use of expired supplies and consumables or supplies and consumables that do not meet standard acceptance criteria.

Records must be maintained on reagent and standard preparation in the LIMS reagent system or laboratory standard preparation logs. The records should indicate traceability of the standards to their original source solution or neat compound, the name of the material, concentration, the method and date of preparation, the expiration date, storage conditions, and the preparer's initials. Each prepared reagent or standard should be labeled with a unique identifier that links the solution to the preparation documentation that specifies an expiration and/or re-evaluation date for the solution.

SECTION 9 DATA VALIDATION AND USABILITY ELEMENTS

9.1 DATA REVIEW, VERIFICATION, AND VALIDATION

The data collected during this project will undergo a systematic review for compliance with the DQOs and performance objectives as stated in Section 3. In particular, field, laboratory, and data management activities will be reviewed to confirm compliance with the method QC criteria for performance and accuracy and to show that data were collected in a manner that is appropriate for accomplishing the project objectives. These data will be evaluated as to their usability during data verification. In particular, data outside QC criteria, but not rejected, will be reviewed for possible high and low bias. All data will be validated following verification and reduction.

Qualified data validation personnel will assess and verify soil and waste data and will review the data against QC criteria, DQOs (Sections 3 and 9.2.2), analytical method, and USEPA Region 2 SOPs for data review to identify outliers or errors and to flag suspect values. Field and laboratory activities that should be reviewed include, at a minimum, sample collection, handling, and processing techniques; field documentation records; verification of proper analytical methods; analytical results of QC samples; and calibration records for laboratory instruments and field equipment. A review of such elements is necessary to demonstrate whether the DQOs were met. Samples that deviate from the experimental design and affect the project objectives must be reported to the QAO and data validation personnel.

Departures from standard procedures in the FAP, this QAPP, or the laboratory SOPs, may lead to exclusion of that data from the project database or validation process based on discussions with and approval of the NYSDEC. However, routine field audits involving thorough reviews of sample collection procedures and sample documentation should preclude such deviations from occurring. Additionally, routine laboratory audits will be used to document proper sample receipt, storage, and analysis; instrument calibration; use of the proper analytical methods; and use of QC samples specified in Section 8 to assist in appropriately qualifying the data.

The laboratory's analytical report for each sample delivery group (SDG) containing soil and waste data will be assembled by collecting and incorporating all the data for each analysis associated with the reported samples; the analytical narratives; and other report-related information such as copies of chain-of-custody forms, communication records, and nonconformance forms. The information included in the analytical data report is summarized in Attachment 1.

Before the laboratory submits data, the laboratory's data review process will include a full first level "technical" review by the laboratory's analyst during sample analysis and data generation. The review must include a check of all QC data for errors in transcription, calculations, and dilution factors and for compliance with QC requirements. Failure to meet method performance QC criteria may result in the reanalysis of the sample or analytical batch. After the initial review is completed, the data will be collected from summary sheets, workbooks, or computer files and assembled into a data package.

The laboratory's first review will be followed by a second-level technical review of the data package. The second level review may be performed by a peer trained in the procedures being reviewed or by the appropriate analytical group supervisor. The reviewer will check the data packages for completeness and compliancy with the project requirements and will certify that the report meets the DQOs for PARCCS specifications. The report narrative will be generated at this stage of the data review. Any problems discovered during the review and the corrective actions necessary to resolve them will be communicated to the responsible individual, who will discuss the findings with the laboratory QA manager for resolution.

The first and second review will be conducted throughout sample analysis and data generation to validate data integrity during collection and reporting of analytical data. Data review checklists will be used to document the performance and review of the QC and analytical data.

Before the laboratory's final release to the client, the data will undergo a final review by the laboratory's QA officer or his/her designee. This third level review is to confirm that the report is complete and meets project requirements for performance and documentation. The laboratory's QA officer must review reports involving non-conforming data issues. A summary of all non-conformances will be included in the case narrative. The report will then be released to the client for data validation, and a copy will be archived by the laboratory for a period of 7 yrs.

The laboratory analytical soil and waste data will be validated using project-specific data validation procedures to confirm that data meet the applicable data quality objectives. Depending on the type of data and the intended data uses, the data validation process for a given SDG (or a specific percentage of sample analyses) or analytical method may be performed following a Level IV protocol (full validation or USEPA Stage 3 data validation), or a Level III protocol (sample plus QC summary data only, no raw data review, or USEPA Stage 2B data validation). The project-specific Level III data validation protocol will provide a level of review resulting in the generation of a data usability summary report (DUSR), as defined by NYSDEC. Level III validation will be performed on all DQO Level III and all DQO Level IV data. Ten percent (10%) of the DQO Level IV Data for each analytical method will undergo a Level IV validation. Certain geotechnical and field screening data may be evaluated in a manner suitable for the intended data uses.

A data validation report will be issued and reviewed by the QAO before finalization. The data validation report will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain-of-custody procedures, and a summary assessment of PARCCS criteria for each analytical method. The validation criteria are objective and are not sample dependent, except for consideration of sample matrix effects. The criteria specify performance requirements that should be under the control of the field-sampling contractor or analytical laboratory. This QAPP will be the primary reference for evaluating the data.

After data validation, the data will be evaluated for consistency with site conditions and developed conceptual models. Data validation personnel will prepare a project DUSR that summarizes the implications of the use of any soil and waste data out of criteria. In addition, the data usability report will include the percentage of sample completeness for critical and non-critical samples and a discussion of any issues in representativeness of the data that may develop as a result of validation. The data usability report will address overall data quality and achievement of PARCCS criteria and assess issues associated with the overall data and data quality for all validated Level III and Level IV data.

9.2 VERIFICATION AND VALIDATION METHODS

9.2.1 Laboratory

The laboratory will verify and assess analytical data against the stated requirements on the chain-of-custody record, the sample handling procedures (Section 4), and the QC parameters. The laboratory data reviewers will also check that transcriptions of raw or final data and calculations were performed correctly and are verified.

Following data verification, analytical data generated by the laboratory will be reduced and managed based on the procedures specified in this QAPP and analytical methodologies. Data reduction includes all processes that change either the values or numbers of data items. The data reduction processes used in the laboratory includes establishment of calibration curves, calculation of sample concentrations from instrument responses, and computation of QC parameters. Table 8.5 lists the formulas used to calculate sample concentrations.

The reduction of instrument responses to sample concentrations takes different forms for different types of methods. For most analyses, the sample concentrations are calculated from the measured instrument responses using a calibration curve. The sample concentrations can be back-calculated from a regression equation fitted to calibration data. For gravimetric and titrimetric analyses, the calculations are performed according to equations given in the method. For chromatographic analyses, the unknown concentrations are determined using either calibration factors (external standard procedure) or relative response factors (internal standard procedure). GC analyses are generally quantitated using the external standard technique; GC/MS analyses are quantitated using the internal standard technique. These calculations are generally performed by the associated computerized data systems.

Validated analytical data will be loaded into a database and reported in tabular format. Database fields will include the field sample identification, laboratory sample identification, blinded sample number, analytical results, detection limits, and validation qualifiers. The usability of the data will be evaluated by the QAO or designee.

9.2.2 Analytical Data Validation

The data review process is performed in two phases:

1. **Initial phase, contract compliance screening (CCS)**: Review of sample data deliverables for completeness. Completeness is evaluated by ensuring that all required data deliverables are received in a legible format with all required information. The CCS process also includes a review of the chain-of-custody forms, case narratives, and RLs. Sample resubmission requests, documentation of nonconformances with respect to data deliverable completeness, and corrective actions often are initiated during the CCS review. The results of the CCS process are incorporated into the data validation process.
2. **Second phase, data validation:** A project-specific data validation procedure based on a "Level III" or the "Level IV" validation protocol will be performed on the analytical results from the fixed-base laboratory or laboratories, with the exception of the bench-scale testing data. The Level III validation protocol, which be applied to Level III data packages and Level IV data packages not receiving "full" Level IV validation includes a review of summary information to determine adherence to analytical holding times; results from analysis of field duplicates, method blanks, field blanks, surrogate spikes, MS/MSDs, LCSs, and sample temperatures during shipping and storage. Data qualifiers are applied to analytical results during the data validation process based on adherence to method protocols and laboratory-specific QA/QC limits. The Level IV validation protocol incorporates the Level III validation protocol and adds calculation checks from the raw data of reported and summarized sample data and QC results.

The laboratory will send the required analytical data package deliverables and the EDD following completion of the laboratory's validation process (Section 9.2.2). Data validation will be performed in accordance with the USEPA **Region 2 Data Validation SOPs** for organic and inorganic data review (USEPA, 2015, 2016a, 2016b, 2016c, 2016d, 2016e, 2016f). In addition, Parsons will refer to this QAPP and the project scoping documents to verify that DQOs were met. If problems are identified during data validation, the QAO and the laboratory QA manager will be alerted, and corrective actions will be requested. The LPM and data validation chemists will maintain close contact with the QAO to ensure all nonconformance issues are acted upon prior to data manipulation and assessment routines.

Data validation will be conducted using the USEPA guidelines (USEPA, 2020a, 2020b) as supplementary guidelines. Where USEPA guidelines and SW-846 disagree, this QAPP and data validation professional judgment will prevail.

FULL VALIDATION (LEVEL IV)	
Organic Analytical Methods	Inorganic Constituents, Wet Chemistry Parameters
Percentage of solids Sample preservation and holding times Instrument tuning Instrument calibrations Blank results System monitoring compounds or surrogate recovery compounds (as applicable) Internal standard recovery results MS and MSD results LCS results Target compound identification Chromatogram quality Duplicate results Compound quantitation and reported RLs System performance and Results verification	Percentage of solids Sample preservation and holding times Calibrations Blank results Interference check samples (inorganics only) LCSs Project Required Reporting Limit (PRRL) standard check samples Duplicates MSs (pre-digestions and post-digestions for inorganics only) ICP serial dilutions and Results verification and reported detection limits

Trained and experienced data validation chemists will perform the data validation work. The QAO will review the data validation report before it is finalized. The data validation report will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain-of-custody procedures, and a summary assessment of PARCCS criteria for each analytical method. A detailed assessment of each SDG will follow. Based on the results of data validation, the validated analytical results reported will be assigned a usability flag (see chart below).

USABILITY FLAGS FOR VALIDATED RESULTS	
U	Not detected at given value
UJ	Analyte not detected; associated quantitation limit is an approximate (estimated) values.
J	Estimated value
J+	Estimated biased high
J-	Estimated biased low
N	Presumptive evidence at the value given
NJ	Analysis indicates presence of analyte tentatively identified; the associated numerical value is its approximate concentration
R	Result not useable
No flag	Result accepted without qualification

9.3 RECONCILIATION WITH USER REQUIREMENTS

Following data validation by qualified personnel, the data will be evaluated by the QAO and the project manager as to consistency with site conditions and developed conceptual models to determine whether field and

analytical data meet the requirements for decision making. Specifically, the results of the measurements will be compared to the DQOs (Section 3).

The DQOs will be considered complete and satisfied if the data are identified as usable and if no major data gaps are identified. For example, the objective for data collected under the characterization program is to further refine the limits of dredging and/or capping. If the collected data sufficiently characterizes these limits in a manner that is acceptable for remedial action, then the DQO is satisfied. In cases where data may be considered not usable (for example, rejected during data validation), resampling may be required at a specific location. If resampling is not possible, the data will be identified and noted in the project database to make data users aware of its limitations.

SECTION 10 ASSESSMENT AND OVERSIGHT

10.1 ASSESSMENTS AND RESPONSE ACTIONS

Performance and system audits of both field and laboratory activities may be performed. Any such audits will be performed at a frequency to be determined to ensure that sampling and analysis activities are completed in accordance with the procedures specified in the FAP and this QAPP.

Quality assurance audits will be carried out under the direction of the QAO on field activities, including sampling and field measurements. They will be implemented to verify that established procedures are being followed and to evaluate the capability and performance of project and subcontractor personnel, items, activities, and documentation of the measurement system(s).

The QAO will plan, schedule, and approve system and performance audits based on procedures customized to the project requirements. If required, the QAO may request additional personnel with specific expertise from company and/or project groups to assist in conducting performance audits. Quality auditing personnel will not have responsibility for field or laboratory project work.

10.2 PROJECT-SPECIFIC AUDITS

Project-specific audits include system and performance audits of sampling and analysis procedures, and of associated recordkeeping and data management procedures. Project-specific audits will be performed on a discretionary basis at a frequency determined by the project manager.

10.2.1 System Audits

The QAO may perform system audits. Such audits will encompass a qualitative evaluation of measurement system components to ascertain their appropriate selection and application. In addition, field and laboratory QC procedures and associated documentation may be system-audited including the field log, field sampling records, laboratory analytical records, sample handling, processing, and packaging in compliance with the established procedures, maintenance of QA procedures, and chain-of-custody procedures. These audits may be carried out during execution of the project to confirm that sampling crews employ consistent procedures. However, if conditions adverse to quality are detected additional audits may occur.

Findings from the audit will be summarized and provided to the PM and/or designated personnel so that necessary corrective action can be monitored from initiation to closure.

10.2.2 Performance Audits

The laboratory may be required to conduct an analysis of PE samples or provide proof that PE samples were submitted by an approved USEPA or NYSDEC performance testing provider within the past 12 months. If necessary, proof that applicable PE samples have been analyzed at the laboratory within the past 12 months will be included in the laboratory procurement package.

10.2.3 Formal Audits

Formal audits are any system or performance audit that the QAO documents and implements. These audits encompass documented activities performed by qualified lead auditors to a written procedure or checklist to verify objectively that QA requirements have been developed, documented, and instituted in accordance with contractual and project criteria. At the discretion of the project manager, the QAO or designated personnel may conduct formal audits on project and subcontractor work during the course of the project.

Auditors who have performed the site audit after gathering and evaluating all data will write audit reports. Items, activities, and documents determined by lead auditors to be in noncompliance must be identified at exit interviews conducted with the involved management. Noncompliance will be logged and documented through audit findings. These findings will be attached to and become part of the integral audit report. These audit-finding forms are directed to management to resolve satisfactorily the noncompliance in a specified and timely manner.

The QAO has overall responsibility to see that all corrective actions necessary to resolve audit findings are acted upon promptly and satisfactorily. Audit reports will be submitted to the PM after completion of the audit. Serious deficiencies will be reported to the PM on an expedited basis. Audit checklists, audit reports, audit findings, and acceptable resolutions will be approved by the QAO prior to issue. Verification of acceptable resolutions may be determined by re-audit or documented surveillance of the item or activity. Upon verification acceptance, the QAO will close out the audit report and findings.

10.2.4 Laboratory Audits

Internal laboratory audits will be performed routinely to review and evaluate the adequacy and effectiveness of the laboratory's performance and QA program, to ascertain if the QAPP is being completely and uniformly implemented, to identify nonconformances, and to verify that identified deficiencies are corrected. The laboratory QA manager is responsible for such audits and will perform them according to a schedule planned to coincide with appropriate activities on the project schedule and sampling plans. Such scheduled audits may be supplemented by additional audits for one or more of the following reasons:

- When significant changes are made in the QAPP
- When necessary to verify that corrective action has been taken on a nonconformance reported in a previous audit
- When requested by the laboratory's project manager or QA manager.

10.2.4.1 Laboratory Performance Audits

Performance audits are independent sample checks made by a supervisor or auditor to arrive at a quantitative measure of the quality of the data produced by one section or the entire measurement process. Performance audits are conducted by introducing control samples, in addition to those used routinely, into the data production process. These control samples include PE samples of known concentrations. The results of performance audits will be evaluated against acceptance criteria. The results will be summarized and maintained by the laboratory QA manager and distributed to the supervisors who must investigate and respond to any results that are outside control limits.

10.2.4.2 Laboratory Internal Audits

The laboratory QA manager conducts routine internal audits of each laboratory section for completeness, accuracy, and adherence to SOPs. The laboratory audit team will verify that the laboratory's measurement systems are operated within specified acceptable control criteria and that a system is in place to confirm that out-of-control conditions are efficiently identified and corrected.

10.2.4.3 Laboratory Data Audits

The laboratory will maintain raw instrument data for sample analyses on magnetic tape media or optical media in a secured fireproof safe. During routine audits, the audit team will verify the processing of the raw data file by reviewing randomly selected electronic data files and comparing the results with the hardcopy report. Tapes will be archived for a period of 7 yr. Tapes will be also available for audit by the QAO upon request.

10.2.4.4 Laboratory Audit Procedures

Prior to an audit, the designated lead auditor will prepare an audit checklist. During an audit and upon its completion, the auditor will discuss the findings with the individuals audited and discuss and agree on corrective actions to be initiated. The auditor will prepare and submit an audit report to the designated responsible individual of the audited group, the PM, and the QAO. Minor administrative findings that can be resolved to the satisfaction of the auditor during an audit need not be cited as items requiring corrective action. Findings that are not resolved during the course of the audit and findings affecting the overall quality of the project will be included in the audit report.

The designated responsible individual of the audited group will prepare and submit to the QAO a reply to the audit. This reply will include, at a minimum, a plan for implementing the corrective action to be taken on nonconformances indicated in the audit report, the date by which such corrective action will be completed, and actions taken to prevent reoccurrence. If the corrective action has been completed, supporting documentation should be attached to the reply. The auditor will ascertain (by re-audit or other means) if appropriate and timely corrective action has been implemented.

Records of audits will be maintained in the project files. Audit files will include, as a minimum, the audit report, the reply to the audit, and any supporting documents. It is the responsibility of the designated responsible individual of the audited group to conform to the established procedures, particularly as to development and implementation of such corrective action.

10.2.4.5 Laboratory Documentation

To confirm that the previously defined scope of the individual audits is accomplished and that the audits follow established procedures, a checklist will be completed during each audit. The checklist will detail the activities to be executed and ensure that the auditing plan is accurate. Audit checklists will be prepared in advance and will be available for review.

AUDIT CHECKLIST (AT MINIMUM)
Date and type of audit
Name and title of auditor
Description of group, task, or facility being audited
Names of lead technical personnel present at audit
Checklist of audit items according to scope of audit
Deficiencies or non-conformances

Following each system, performance, and data audit, the QAO or his designee will prepare a report to document the findings of the specific audit. The report will be submitted to the designated individual of the audited group to ensure that objectives of the QA program are met.

MINIMUM CONTENT OF AUDIT REPORT
Description and date of audit
Name of auditor
Copies of completed, signed, and dated audit form and/or checklist

Summary of findings including any nonconformance or deficiencies
Date of report and appropriate signatures
Description of corrective actions

The QAO will maintain a copy of the signed and dated report for each audit. If necessary, a second copy will be placed in project files.

10.3 CORRECTIVE ACTIONS

Corrective action procedures have been established to ensure that conditions adverse to quality, such as malfunctions, deficiencies, deviations, and errors, are promptly investigated, documented, evaluated, and corrected. Corrective action enables significant conditions adverse to quality to be noted promptly at the site, laboratory, or subcontractor location. Additionally, it allows for the cause of the condition to be identified and corrective action to be taken to rectify the problem and to minimize the effect on the data set. Further, corrective action is intended to minimize the possibility of repetition.

Condition identification, cause, reference documents, and corrective action planned to be taken will be documented and reported to the QAO, PM, FTL, and involved subcontractor management, at a minimum. Implementation of corrective action is verified by documented follow-up action. Any project personnel may identify noncompliance issues; however, the designated QA personnel are responsible for documenting, numbering, logging, and verifying the close out action. The designated responsible individual of the audited group will be responsible for ensuring that all recommended corrective actions are implemented, documented, and approved.

Events that trigger corrective actions
When predetermined acceptance standards are not attained
When a deviation from SOP is required or observed
When procedure or data compiled are determined to be deficient
When equipment or instrumentation is found to be faulty
When samples and analytical test results are not clearly traceable
When QA requirements have been violated
When designated approvals have been circumvented
As a result of system and performance audits
As a result of a management assessment
As a result of laboratory/field comparison studies
As required by analytical method

All project personnel have the responsibility, as part of normal work duties, to promptly identify, solicit approved correction, and report conditions adverse to quality. Specifically, the laboratory must designate the assigned individual to act as the primary laboratory contact responsible for timely identification and resolution of any and all issues including contract and administrative issues. Any phone calls initiated by personnel or designated representatives to the laboratory with respect to corrective actions must be returned in a timely manner on a normal business day if the designate individual (or alternate) is not available at the initiation of the phone call.

Project management and related staff, including field investigation teams, remedial design planning personnel, and laboratory groups will monitor on-going work performance as part of daily responsibilities. Work may be audited at the site, the laboratories, or subcontractor locations. Activities or documents ascertained to be noncompliant with QA requirements will be documented. Corrective actions will be mandated through audit finding sheets attached to the audit report. Audit findings are logged, maintained, and controlled by the QAO, PM, or designated personnel.

Personnel assigned to QA functions will have the responsibility to issue and control CAR forms (**Figure 10.1**). The CAR identifies the out-of-compliance condition, reference document(s), and recommended corrective action(s) to be administered.

Similar to the CAR, the laboratory will record and report nonconformances internally using the laboratory's non-conformance documentation tracking system in the form of an NCM. Each NCM is traceable so that it can be cross-referenced with its resolution to the associated project records. The laboratory QA manager summarizes critical nonconformances, such as reissued reports and client complaints, in a monthly report to the laboratory management staff. Management of the NCM is described in Section 6.3. Corrective action procedures applicable to QC requirements that do not meet the criteria of this QAPP are described in the following sections. Consistent, frequent contacts between laboratory personnel, the QAO, or designated personnel are required.

TYPICAL CONTENT OF NCM FORMS
Problem description and root cause
Corrective action
Client notification summary
QA verification
Approval history action

SECTION 11 REPORTS TO MANAGEMENT

11.1 QA REPORTS

Management personnel receive QA reports appropriate to their level of responsibility. The PM receives copies of all QA documentation. QC documentation is retained within the department that generated the product or service except where this documentation is a deliverable for a specific contract. QC documentation is also submitted to the project QAO for review and approval. Previous sections detailed the QA activities and the reports, which they generate. Among other QA audit reports that may be generated during the conduct of activities, a final audit report for this project will be prepared by the QAO. The report will include:

- Periodic assessment of measurement data accuracy, precision, and completeness
- Results of performance audits and/or system audits
- Significant QA problems and recommended solutions for future projects
- Status of solutions to any problems previously identified.

Additionally, any incidents requiring corrective action will be fully documented.

SECTION 12 REFERENCES

Taylor, J. K., 1987. Quality Assurance of Chemical Measurements. Lewis Publishers, Inc., Chelsea, Michigan.

USEPA, 1983. Methods for Chemical Analysis of Water and Wastes, EPA600/4-79/020, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, OH, Rev. March.

USEPA, 1986. NEIC Policies and Procedures. EPA 330/9-78-001-R. United States Environmental Protection Agency, Office of Enforcement and Compliance Monitoring, Washington, D.C. May 1978, revised May 1986.

USEPA, 1987. Data Quality Objectives for Remedial Response Actions Activities: Development Process. EPA/540/G-87/003, OSWER Directive 9355.0-7- U.S. Environmental Protection Agency, Washington, D.C.

USEPA, 1997. USEPA SW846 Test Methods for Evaluating Solid Waste, Physical and Chemical. 3rd edition including updates. U.S. Environmental Protection Agency, Washington, D.C. December.

USEPA, 2000. Guidance for the Data Quality Objective Process. EPA QA/G-4. Office of Environmental Information. August.

USEPA, 2001a. EPA Requirements for Quality Assurance Project Plans. EPA QA/R-5. Office of the Environmental Information. March.

USEPA, 2002b. Guidance for Quality Assurance Project Plans. EPA QA/G-5. U.S. Environmental Protection Agency. December.

USEPA, 2015. Polychlorinated Biphenyl (PCB) Aroclor Data Validation, SOP HW-37a, Revision 0. USEPA Region 2. June.

USEPA, 2016a. ICP-AES Data Validation, SOP HW-3a, Revision 1. USEPA Region 2. September.

USEPA, 2016b. ICP-MS Data Validation, SOP HW-3b, Revision 1. USEPA Region 2. September.

USEPA, 2016c. Mercury and Cyanide Data Validation, SOP HW-3c, Revision 1. USEPA Region 2. September.

USEPA, 2016d. Semivolatile Data Validation, SOP HW-35a, Revision 1. USEPA Region 2. September.

USEPA, 2016e. Low/Medium Volatile Data Validation, SOP HW-33a, Revision 1. USEPA Region 2. September.

USEPA, 2016f. Pesticide Data Validation, SOP HW-36a, Revision 1. USEPA Region 2. October.

USEPA, 2020a. USEPA National Functional Guidelines for Organic Superfund Methods Data Review, EPA 540-R-20-005. U.S. Environmental Protection Agency, Washington, D.C. November.

USEPA, 2020b. USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, EPA 540-R-20-006. U.S. Environmental Protection Agency, Washington, D.C. November.

TABLES

TABLE 3.1 QUALITY CONTROL LIMITS FOR PROJECT SAMPLES

			Laboratory Accuracy and Precision				
Analytical Parameters	**Analytical Method**	**Spike Compound**	**MS/MSD % Recovery**	**MS/MSD RPD or Lab Dup RPD**	**LCS % Recovery**	**Surrogate Compounds**	**Surrogate % Recovery**
VOCs + TCLP VOCs	SW8260	All Target Analytes	70-130 or lab QC limit	0-20 or lab QC limit	70-130 or lab QC limit	Toluene-d8 4-Bromofluorobenzene 1,2-Dichloroethane-d4 Dibromofluoromethane	Lab QC Limit
SVOCs + TCLP SVOCs	SW8270	All Target Analytes	70-130 or lab QC limit	0-20 or lab QC limit	70-130 or lab QC limit	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14 Phenol-d5 2-Fluorophenol 2,4,6-Tribromophenol	Lab QC Limit
Metals + TCLP Metals	SW6010 SW7470 SW7471	All Target Analytes	75-125 80-120 (mercury)	0-20	90-110	NA	NA
TCLP Pesticides	SW8081	All Target Analytes	70-130 or lab QC limit	0-20 or lab QC limit	70-130 or lab QC limit	Decachlorobiphenyl Tetrachloro-m-xylene	Lab QC Limit
PCBs using Soxhlet Extraction	SW8082	All Target Analytes	70-130 or lab QC limit	0-20 or lab QC limit	70-130 or lab QC limit	Decachlorobiphenyl Tetrachloro-m-xylene	Lab QC Limit
TCLP Herbicides	SW8151	All Target Analytes	70-130 or lab QC limit	0-20 or lab QC limit	70-130 or lab QC limit	2,4-Dichlorophenylacetic acid	Lab QC Limit
Cyanide	SW9012	Cyanide	80-120	0-20	80-120	NA	NA

NOTES: MS/MSD – Matrix spike/matrix spike duplicate

RPD – Relative Percent Difference

LCS – Laboratory Control Sample

NA – Not applicable

TABLE 3.2A
SOIL ANALYSIS
FORMER FARRINGTON STREET MGP

CAS NO.	COMPOUND	Analytical Method	QAPP Quantitation Limit (1)	UNITS
PCBs				
12674-11-2	PCB-1016 (Aroclor 1016)	SW8082 w/Soxhlet Extraction	0.033	mg/kg
11104-28-2	PCB-1221 (Aroclor 1221)	SW8082 w/Soxhlet Extraction	0.033	mg/kg
11141-16-5	PCB-1232 (Aroclor 1232)	SW8082 w/Soxhlet Extraction	0.033	mg/kg
53469-21-9	PCB-1242 (Aroclor 1242)	SW8082 w/Soxhlet Extraction	0.033	mg/kg
12672-29-6	PCB-1248 (Aroclor 1248)	SW8082 w/Soxhlet Extraction	0.033	mg/kg
11097-69-1	PCB-1254 (Aroclor 1254)	SW8082 w/Soxhlet Extraction	0.033	mg/kg
11096-82-5	PCB-1260 (Aroclor 1260)	SW8082 w/Soxhlet Extraction	0.033	mg/kg
37324-23-5	PCB-1262 (Aroclor 1262)	SW8082 w/Soxhlet Extraction	0.033	mg/kg
11100-14-4	PCB-1268 (Aroclor 1268)	SW8082 w/Soxhlet Extraction	0.033	mg/kg
1336-36-3	TOTAL PCBS	SW8082 w/Soxhlet Extraction	0.033	mg/kg

NOTES:

(1) Actual laboratory reporting limit (RL) may vary. Laboratory RL or, at a minimum, the laboratory method detection limit (MDL) will meet the appropriate standard criteria.

mg/kg Milligrams per kilogram

TABLE 3.2B
WASTE ANALYSIS
FORMER FARRINGTON STREET MGP

		Analytical Method	QAPP Wastewater Quantitation Limit[(1)]	Wastewater Units	QAPP Waste Characterization Quantitation Limit[(1)]	Waste Characterization Units
VOLATILES						
123-91-1	1,4-DIOXANE	SW8260	50	µg/L	20	µg/kg
71-55-6	1,1,1-TRICHLOROETHANE	SW8260	1	µg/L	1	µg/kg
79-34-5	1,1,2,2-TETRACHLOROETHANE	SW8260	1	µg/L	1	µg/kg
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	SW8260	1	µg/L	1	µg/kg
79-00-5	1,1,2-TRICHLOROETHANE	SW8260	1	µg/L	1	µg/kg
75-34-3	1,1-DICHLOROETHANE	SW8260	1	µg/L	1	µg/kg
75-35-4	1,1-DICHLOROETHENE	SW8260	1	µg/L	1	µg/kg
87-61-6	1,2,3-TRICHLOROBENZENE	SW8260	1	µg/L	1	µg/kg
120-82-1	1,2,4-TRICHLOROBENZENE	SW8260	1	µg/L	1	µg/kg
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	SW8260	1	µg/L	1	µg/kg
106-93-4	1,2-DIBROMOETHANE	SW8260	1	µg/L	1	µg/kg
95-50-1	1,2-DICHLOROBENZENE	SW8260	1	µg/L	1	µg/kg
107-06-2	1,2-DICHLOROETHANE	SW8260	1	µg/L	1	µg/kg
78-87-5	1,2-DICHLOROPROPANE	SW8260	1	µg/L	1	µg/kg
541-73-1	1,3-DICHLOROBENZENE	SW8260	1	µg/L	1	µg/kg
106-46-7	1,4-DICHLOROBENZENE	SW8260	1	µg/L	1	µg/kg
591-78-6	2-HEXANONE	SW8260	5	µg/L	5	µg/kg
67-64-1	ACETONE	SW8260	5	µg/L	5	µg/kg
71-43-2	BENZENE	SW8260	1	µg/L	1	µg/kg
74-97-5	BROMOCHLOROMETHANE	SW8260	1	µg/L	1	µg/kg
75-27-4	BROMODICHLOROMETHANE	SW8260	1	µg/L	1	µg/kg
75-25-2	BROMOFORM	SW8260	1	µg/L	1	µg/kg
74-83-9	BROMOMETHANE	SW8260	1	µg/L	1	µg/kg
75-15-0	CARBON DISULFIDE	SW8260	1	µg/L	1	µg/kg
56-23-5	CARBON TETRACHLORIDE	SW8260	1	µg/L	1	µg/kg
108-90-7	CHLOROBENZENE	SW8260	1	µg/L	1	µg/kg
75-00-3	CHLOROETHANE	SW8260	1	µg/L	1	µg/kg
67-66-3	CHLOROFORM	SW8260	1	µg/L	1	µg/kg
74-87-3	CHLOROMETHANE	SW8260	1	µg/L	1	µg/kg
156-59-2	CIS-1,2-DICHLOROETHYLENE	SW8260	1	µg/L	1	µg/kg
10061-01-5	CIS-1,3-DICHLOROPROPENE	SW8260	1	µg/L	1	µg/kg
110-82-7	CYCLOHEXANE	SW8260	1	µg/L	1	µg/kg
124-48-1	DIBROMOCHLOROMETHANE	SW8260	1	µg/L	1	µg/kg
75-71-8	DICHLORODIFLUOROMETHANE	SW8260	1	µg/L	1	µg/kg
100-41-4	ETHYLBENZENE	SW8260	1	µg/L	1	µg/kg

TABLE 3.2B
WASTE ANALYSIS
FORMER FARRINGTON STREET MGP

		Analytical Method	QAPP Wastewater Quantitation Limit[(1)]	Wastewater Units	QAPP Waste Characterization Quantitation Limit[(1)]	Waste Characterization Units
98-82-8	ISOPROPYLBENZENE (CUMENE)	SW8260	1	µg/L	1	µg/kg
79-20-9	METHYL ACETATE	SW8260	5	µg/L	5	µg/kg
78-93-3	METHYL ETHYL KETONE (2-BUTANONE)	SW8260	5	µg/L	5	µg/kg
108-10-1	METHYL ISOBUTYL KETONE	SW8260	5	µg/L	5	µg/kg
108-87-2	METHYLCYCLOHEXANE	SW8260	1	µg/L	1	µg/kg
75-09-2	METHYLENE CHLORIDE	SW8260	2	µg/L	2	µg/kg
100-42-5	STYRENE	SW8260	1	µg/L	1	µg/kg
1634-04-4	TERT-BUTYL METHYL ETHER	SW8260	1	µg/L	1	µg/kg
127-18-4	TETRACHLOROETHYLENE (PCE)	SW8260	1	µg/L	1	µg/kg
108-88-3	TOLUENE	SW8260	1	µg/L	1	µg/kg
156-60-5	TRANS-1,2-DICHLOROETHENE	SW8260	1	µg/L	1	µg/kg
10061-02-6	TRANS-1,3-DICHLOROPROPENE	SW8260	1	µg/L	1	µg/kg
79-01-6	TRICHLOROETHYLENE (TCE)	SW8260	1	µg/L	1	µg/kg
75-69-4	TRICHLOROFLUOROMETHANE	SW8260	1	µg/L	1	µg/kg
75-01-4	VINYL CHLORIDE	SW8260	1	µg/L	1	µg/kg
XYLENES	XYLENES, TOTAL	SW8260	2	µg/L	2	µg/kg
	SEMIVOLATILES					
95-94-3	1,2,4,5-TETRACHLOROBENZENE	SW8270	10	µg/L	330	µg/kg
58-90-2	2,3,4,6-TETRACHLOROPHENOL	SW8270	20	µg/L	660	µg/kg
95-95-4	2,4,5-TRICHLOROPHENOL	SW8270	20	µg/L	660	µg/kg
88-06-2	2,4,6-TRICHLOROPHENOL	SW8270	20	µg/L	660	µg/kg
120-83-2	2,4-DICHLOROPHENOL	SW8270	20	µg/L	660	µg/kg
105-67-9	2,4-DIMETHYLPHENOL	SW8270	20	µg/L	660	µg/kg
51-28-5	2,4-DINITROPHENOL	SW8270	20	µg/L	660	µg/kg
121-14-2	2,4-DINITROTOLUENE	SW8270	10	µg/L	330	µg/kg
606-20-2	2,6-DINITROTOLUENE	SW8270	10	µg/L	330	µg/kg
91-58-7	2-CHLORONAPHTHALENE	SW8270	10	µg/L	330	µg/kg
95-57-8	2-CHLOROPHENOL	SW8270	20	µg/L	660	µg/kg
91-57-6	2-METHYLNAPHTHALENE	SW8270	10	µg/L	330	µg/kg
95-48-7	2-METHYLPHENOL (O-CRESOL)	SW8270	20	µg/L	660	µg/kg
88-74-4	2-NITROANILINE	SW8270	10	µg/L	330	µg/kg
88-75-5	2-NITROPHENOL	SW8270	20	µg/L	660	µg/kg
91-94-1	3,3'-DICHLOROBENZIDINE	SW8270	10	µg/L	330	µg/kg
99-09-2	3-NITROANILINE	SW8270	10	µg/L	330	µg/kg
106-44-5	3&4-METHYLPHENOL (M&P-CRESOL)	SW8270	20	µg/L	660	µg/kg
534-52-1	4,6-DINITRO-2-METHYLPHENOL	SW8270	20	µg/L	660	µg/kg
101-55-3	4-BROMOPHENYL PHENYL ETHER	SW8270	10	µg/L	330	µg/kg

TABLE 3.2B
WASTE ANALYSIS
FORMER FARRINGTON STREET MGP

		Analytical Method	QAPP Wastewater Quantitation Limit[(1)]	Wastewater Units	QAPP Waste Characterization Quantitation Limit[(1)]	Waste Characterization Units
59-50-7	4-CHLORO-3-METHYLPHENOL	SW8270	20	µg/L	660	µg/kg
106-47-8	4-CHLOROANILINE	SW8270	10	µg/L	330	µg/kg
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	SW8270	10	µg/L	330	µg/kg
100-01-6	4-NITROANILINE	SW8270	10	µg/L	330	µg/kg
100-02-7	4-NITROPHENOL	SW8270	20	µg/L	660	µg/kg
83-32-9	ACENAPHTHENE	SW8270	10	µg/L	330	µg/kg
208-96-8	ACENAPHTHYLENE	SW8270	10	µg/L	330	µg/kg
98-86-2	ACETOPHENONE	SW8270	10	µg/L	330	µg/kg
120-12-7	ANTHRACENE	SW8270	10	µg/L	330	µg/kg
1912-24-9	ATRAZINE	SW8270	10	µg/L	330	µg/kg
100-52-7	BENZALDEHYDE	SW8270	10	µg/L	330	µg/kg
56-55-3	BENZO(A)ANTHRACENE	SW8270	10	µg/L	330	µg/kg
50-32-8	BENZO(A)PYRENE	SW8270	10	µg/L	330	µg/kg
205-99-2	BENZO(B)FLUORANTHENE	SW8270	10	µg/L	330	µg/kg
191-24-2	BENZO(G,H,I)PERYLENE	SW8270	10	µg/L	330	µg/kg
207-08-9	BENZO(K)FLUORANTHENE	SW8270	10	µg/L	330	µg/kg
85-68-7	BENZYL BUTYL PHTHALATE	SW8270	10	µg/L	330	µg/kg
92-52-4	BIPHENYL (DIPHENYL)	SW8270	10	µg/L	330	µg/kg
111-91-1	BIS(2-CHLOROETHOXY) METHANE	SW8270	10	µg/L	330	µg/kg
111-44-4	BIS(2-CHLOROETHYL) ETHER	SW8270	10	µg/L	330	µg/kg
108-60-1	BIS(2-CHLOROISOPROPYL) ETHER	SW8270	10	µg/L	330	µg/kg
117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	SW8270	10	µg/L	330	µg/kg
105-60-2	CAPROLACTAM	SW8270	10	µg/L	330	µg/kg
86-74-8	CARBAZOLE	SW8270	10	µg/L	330	µg/kg
218-01-9	CHRYSENE	SW8270	10	µg/L	330	µg/kg
53-70-3	DIBENZ(A,H)ANTHRACENE	SW8270	10	µg/L	330	µg/kg
132-64-9	DIBENZOFURAN	SW8270	10	µg/L	330	µg/kg
84-66-2	DIETHYL PHTHALATE	SW8270	10	µg/L	330	µg/kg
131-11-3	DIMETHYL PHTHALATE	SW8270	10	µg/L	330	µg/kg
84-74-2	DI-N-BUTYL PHTHALATE	SW8270	10	µg/L	330	µg/kg
117-84-0	DI-N-OCTYLPHTHALATE	SW8270	10	µg/L	330	µg/kg
206-44-0	FLUORANTHENE	SW8270	10	µg/L	330	µg/kg
86-73-7	FLUORENE	SW8270	10	µg/L	330	µg/kg
118-74-1	HEXACHLOROBENZENE	SW8270	10	µg/L	330	µg/kg
87-68-3	HEXACHLOROBUTADIENE	SW8270	10	µg/L	330	µg/kg
77-47-4	HEXACHLOROCYCLOPENTADIENE	SW8270	10	µg/L	330	µg/kg
67-72-1	HEXACHLOROETHANE	SW8270	10	µg/L	330	µg/kg

TABLE 3.2B
WASTE ANALYSIS
FORMER FARRINGTON STREET MGP

		Analytical Method	QAPP Wastewater Quantitation Limit[(1)]	Wastewater Units	QAPP Waste Characterization Quantitation Limit[(1)]	Waste Characterization Units
193-39-5	INDENO(1,2,3-C,D)PYRENE	SW8270	10	µg/L	330	µg/kg
78-59-1	ISOPHORONE	SW8270	10	µg/L	330	µg/kg
91-20-3	NAPHTHALENE	SW8270	10	µg/L	330	µg/kg
98-95-3	NITROBENZENE	SW8270	10	µg/L	330	µg/kg
621-64-7	N-NITROSODI-N-PROPYLAMINE	SW8270	10	µg/L	330	µg/kg
86-30-6	N-NITROSODIPHENYLAMINE	SW8270	10	µg/L	330	µg/kg
87-86-5	PENTACHLOROPHENOL	SW8270	10	µg/L	330	µg/kg
85-01-8	PHENANTHRENE	SW8270	10	µg/L	330	µg/kg
108-95-2	PHENOL	SW8270	20	µg/L	660	µg/kg
129-00-0	PYRENE	SW8270	10	µg/L	330	µg/kg
PCBs						
12674-11-2	PCB-1016 (Aroclor 1016)	SW8280	N/A	N/A	33	µg/kg
11104-28-2	PCB-1221 (Aroclor 1221)	SW8280	N/A	N/A	33	µg/kg
11141-16-5	PCB-1232 (Aroclor 1232)	SW8280	N/A	N/A	33	µg/kg
53469-21-9	PCB-1242 (Aroclor 1242)	SW8280	N/A	N/A	33	µg/kg
12672-29-6	PCB-1248 (Aroclor 1248)	SW8280	N/A	N/A	33	µg/kg
11097-69-1	PCB-1254 (Aroclor 1254)	SW8280	N/A	N/A	33	µg/kg
11096-82-5	PCB-1260 (Aroclor 1260)	SW8280	N/A	N/A	33	µg/kg
37324-23-5	PCB-1262 (Aroclor 1262)	SW8280	N/A	N/A	33	µg/kg
11100-14-4	PCB-1268 (Aroclor 1268)	SW8280	N/A	N/A	33	µg/kg
1336-36-3	Total PCBs	SW8280	N/A	N/A	33	µg/kg
METALS						
7429-90-5	ALUMINUM	SW6010	200	µg/L	10	mg/kg
7440-36-0	ANTIMONY	SW6010	20	µg/L	1	mg/kg
7440-38-2	ARSENIC	SW6010	15	µg/L	1	mg/kg
7440-39-3	BARIUM	SW6010	200	µg/L	2	mg/kg
7440-41-7	BERYLLIUM	SW6010	2	µg/L	0.5	mg/kg
7440-43-9	CADMIUM	SW6010	4	µg/L	1	mg/kg
7440-70-2	CALCIUM	SW6010	5000	µg/L	100	mg/kg
7440-47-3	CHROMIUM, TOTAL	SW6010	10	µg/L	1	mg/kg
7440-48-4	COBALT	SW6010	50	µg/L	2	mg/kg
7440-50-8	COPPER	SW6010	25	µg/L	2	mg/kg
7439-89-6	IRON	SW6010	150	µg/L	10	mg/kg
7439-92-1	LEAD	SW6010	10	µg/L	1	mg/kg
7439-95-4	MAGNESIUM	SW6010	5000	µg/L	100	mg/kg
7439-96-5	MANGANESE	SW6010	15	µg/L	4	mg/kg
7439-97-6	MERCURY	SW7470/SW7471	0.2	µg/L	0.017	mg/kg

TABLE 3.2B
WASTE ANALYSIS
FORMER FARRINGTON STREET MGP

		Analytical Method	QAPP Wastewater Quantitation Limit[(1)]	Wastewater Units	QAPP Waste Characterization Quantitation Limit[(1)]	Waste Characterization Units
7440-02-0	NICKEL	SW6010	40	µg/L	2	mg/kg
7440-09-7	POTASSIUM	SW6010	5000	µg/L	100	mg/kg
7782-49-2	SELENIUM	SW6010	20	µg/L	1	mg/kg
7440-22-4	SILVER	SW6010	10	µg/L	1	mg/kg
7440-23-5	SODIUM	SW6010	5000	µg/L	100	mg/kg
7440-28-0	THALLIUM	SW6010	20	µg/L	1	mg/kg
7440-62-2	VANADIUM	SW6010	50	µg/L	2	mg/kg
7440-66-6	ZINC	SW6010	30	µg/L	8	mg/kg
	TCLP VOLATILES					
75-35-4	1,1-DICHLOROETHENE	SW1311/SW8260	0.01	mg/L	0.01	mg/L
107-06-2	1,2-DICHLOROETHANE	SW1311/SW8260	0.01	mg/L	0.01	mg/L
106-46-7	1,4-DICHLOROBENZENE	SW1311/SW8260	0.01	mg/L	0.01	mg/L
71-43-2	BENZENE	SW1311/SW8260	0.01	mg/L	0.01	mg/L
56-23-5	CARBON TETRACHLORIDE	SW1311/SW8260	0.01	mg/L	0.01	mg/L
108-90-7	CHLOROBENZENE	SW1311/SW8260	0.01	mg/L	0.01	mg/L
67-66-3	CHLOROFORM	SW1311/SW8260	0.01	mg/L	0.01	mg/L
78-93-3	METHYL ETHYL KETONE (2-BUTANONE)	SW1311/SW8260	0.1	mg/L	0.1	mg/L
127-18-4	TETRACHLOROETHYLENE (PCE)	SW1311/SW8260	0.01	mg/L	0.01	mg/L
79-01-6	TRICHLOROETHYLENE (TCE)	SW1311/SW8260	0.01	mg/L	0.01	mg/L
75-01-4	VINYL CHLORIDE	SW1311/SW8260	0.01	mg/L	0.01	mg/L
	TCLP SEMIVOLATILES					
95-95-4	2,4,5-TRICHLOROPHENOL	SW1311/SW8270	0.05	mg/L	0.05	mg/L
88-06-2	2,4,6-TRICHLOROPHENOL	SW1311/SW8270	0.05	mg/L	0.05	mg/L
121-14-2	2,4-DINITROTOLUENE	SW1311/SW8270	0.05	mg/L	0.05	mg/L
95-48-7	2-METHYLPHENOL (O-CRESOL)	SW1311/SW8270	0.05	mg/L	0.05	mg/L
106-44-5	3&4-METHYLPHENOL (M&P-CRESOL)	SW1311/SW8270	0.05	mg/L	0.05	mg/L
118-74-1	HEXACHLOROBENZENE	SW1311/SW8270	0.05	mg/L	0.05	mg/L
87-68-3	HEXACHLOROBUTADIENE	SW1311/SW8270	0.05	mg/L	0.05	mg/L
67-72-1	HEXACHLOROETHANE	SW1311/SW8270	0.05	mg/L	0.05	mg/L
98-95-3	NITROBENZENE	SW1311/SW8270	0.05	mg/L	0.05	mg/L
87-86-5	PENTACHLOROPHENOL	SW1311/SW8270	0.1	mg/L	0.1	mg/L
110-86-1	PYRIDINE	SW1311/SW8270	0.05	mg/L	0.05	mg/L
	TCLP PESTICIDES					
57-74-9	CHLORDANE	SW1311/SW8081	0.01	mg/L	0.01	mg/L
72-20-8	ENDRIN	SW1311/SW8081	0.0005	mg/L	0.0005	mg/L
58-89-9	GAMMA BHC (LINDANE)	SW1311/SW8081	0.0005	mg/L	0.0005	mg/L

TABLE 3.2B
WASTE ANALYSIS
FORMER FARRINGTON STREET MGP

		Analytical Method	QAPP Wastewater Quantitation Limit[(1)]	Wastewater Units	QAPP Waste Characterization Quantitation Limit[(1)]	Waste Characterization Units
76-44-8	HEPTACHLOR	SW1311/SW8081	0.0005	mg/L	0.0005	mg/L
1024-57-3	HEPTACHLOR EPOXIDE	SW1311/SW8081	0.0005	mg/L	0.0005	mg/L
72-43-5	METHOXYCHLOR	SW1311/SW8081	0.0005	mg/L	0.0005	mg/L
8001-35-2	TOXAPHENE	SW1311/SW8081	0.02	mg/L	0.02	mg/L
	TCLP HERBICIDES					
94-75-7	2,4-D (DICHLOROPHENOXYACETIC ACID)	SW1311/SW8151	0.005	mg/L	0.005	mg/L
93-72-1	SILVEX (2,4,5-TP)	SW1311/SW8151	0.005	mg/L	0.005	mg/L
	GENERAL CHEMISTRY					
57-12-5	CYANIDE	SW9012	0.01	mg/L	0.5	mg/kg
	CORROSIVITY (pH)	SW9045	N/A	pH Units	N/A	pH Units
	IGNITABILITY/FLASHPOINT	SW1030/ASTM D-93	N/A	degrees F	N/A	degrees F
	REACTIVE CYANIDE/SULFIDE	SW9012/SW9034	0.01	mg/L	5	mg/kg

NOTES:

(1) Actual laboratory reporting limit (RL) may vary. Laboratory RL or, at a minimum, the laboratory method detection limit (MDL) will meet appropriate standard criteria.

µg/L Micrograms per liter

µg/kg Micrograms per kilogram

mg/L Milligrams per liter

mg/kg Milligrams per kilogram

TABLE 4.1 SAMPLE CONTAINERIZATION, PRESERVATION, AND HOLDING TIMES

Analysis	Bottle Type	Preservation	Holding Time [(a)]
VOCs/TCLP VOCs	3-40 mL glass vial w/ Teflon septum (water) Encore/Terracore Samplers (soil)	HCl to pH<2 (water) Cool to 4°C	14 day TCLP extraction 14 day analysis
SVOCs/TCLP SVOCs TCLP Pesticides PCBs, TCLP Herbicides	1000 mL glass w/ Teflon lined cap (water) 4 oz soil jar (soil)	Cool to 4°C	7 day water extraction 14 days / 7 days TCLP 14 day soil extraction 40 days for analysis
Metals/TCLP metals	500 mL plastic bottle 4 oz soil jar (soil)	HNO_3 to pH<2 (water) Cool to 4°C	6 months 28 day (mercury) 6 months TCLP 28 day (TCLP mercury)
Cyanide	125 mL plastic bottle	NaOH to pH>12 Cool to 4°C	14 days
Reactive Sulfide Reactive Cyanide	4 oz soil jar	Cool to 4°C	28 days

(a) Days from sample collection.

TABLE 6.1 SUMMARY OF FIELD, LABORATORY, AND DATA MANAGEMENT RECORDS

REPORT	PERSON RESPONSIBLE FOR		STORAGE
	MAINTENANCE	DISTRIBUTION	
PROJECT FILES AND FIELD SAMPLING RECORDS			
Field Log	Field Team Leader	Project Manager	Job File at Primary Contractor's Location
Photographs	Field Team Leader	Project Manager	Job File at Primary Contractor's Location
Chain-of-Custody	Field Team Leader	Project Manager	Job File at Primary Contractor's Location
Field Sampling Records	Field Team Leader	Project Manager	Job File at Primary Contractor's Location
LABORATORY RECORDS			
Reagent and Titrant Preparation Records	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory
Standards Preparation Logs	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory
Sample Preparation Logs	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory
Bench Data Sheets	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory
Instrument Run Logs	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory

TABLE 6.1 SUMMARY OF FIELD, LABORATORY, AND DATA MANAGEMENT RECORDS (CONT.)

REPORT	PERSON RESPONSIBLE FOR		STORAGE
	MAINTENANCE	DISTRIBUTION	
Strip Chart Recordings/ Chromatograms/Computer Output	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory
Analytical Data Reports	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory
Log-in Sheets	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory
Maintenance Records	Quality Assurance Manager	Laboratory Project Manager	Instrument Maintenance Logbook at Laboratory
Periodic Calibration Records	Quality Assurance Manager	Laboratory Project Manager	QA Files at Laboratory
Operational Calibration Records	Quality Assurance Manager	Laboratory Project Manager	Job File at Laboratory
Nonconformance Memos	Quality Assurance Manager	Laboratory Project Manager	Maintained in Database File at Laboratory
Corrective Action Request Forms	Quality Assurance Manager	Laboratory Project Manager	Client Correspondence Records at Laboratory
DATA VALIDATION AND AUDIT RECORDS			
Data Validation Reports	Quality Assurance Officer	Quality Assurance Officer	Job File at Primary Contractor's Location
Audit Reports	Quality Assurance Officer	Quality Assurance Officer	Job File at Primary Contractor's Location

TABLE 8.1 SUMMARY OF FIELD QC SAMPLE TYPES AND COLLECTION FREQUENCY

Field QC Sample Type	Sample Type	Collection Frequency
Rinse	Waste, Soil	1:20 Samples for non-disposable equipment.
Trip Blank	Water	For every shipment of volatile aqueous samples.
Field Duplicates	Waste, Soil	1:20 Samples
Extra Volume Sample (collected for MS/MSD)	Waste, Soil	1:20 Samples

TABLE 8.2 LABORATORY QUALITY CONTROL SAMPLE FREQUENCY

QC Sample	Frequency
Method/prep Blanks	1 per analytical batch of 1-20 samples, per preparation event
Laboratory Control Sample	1 per analytical batch of 1-20 samples, per preparation event
Surrogates	Spiked into all field and QC samples (Organic Analyses)
Matrix Spike/Matrix Spike Duplicate or Matrix (Laboratory) Duplicate	1 per batch of 1-20 samples

TABLE 8.3 OPERATIONAL CALIBRATION FORMULAS

Application	Formula	Symbols
Linear calibration curves	$C = (R - a_0)/a_1$	C = analytical concentration R = instrument response a_0 = intercept of regression curve (instrument response when concentration is zero) a_1 = slope of regression curve (change in response per change in concentration)
Calibration factors [1]	$CF = A_x / C$	C = concentration (µg/L) CF = calibration factor Ax = peak size of target compound in sample extract
Response factors [2]	$RRF = C_{is} A_x / C_x A_{is}$	C = concentration (µg/L) RF = internal standard response factor Cis = concentration of the internal standard (µg/L) Ax = area of the characteristic ion for the target compound Ais = area of the characteristic ion for the internal standard

1. Used for quantitation by the external standard technique
2. Used for quantitation by the internal standard technique

Note: For organic analysis, the laboratory will make efforts to use the best curve technique for each analyte. This practice is described in detail in the laboratory calibration criteria documents for GC analysis. This may require the use of a quadratic curve for some compounds.

TABLE 8.4 PERIODIC CALIBRATION REQUIREMENTS

Instrument	Calibration Frequency		Corrective Actions
Analytical Balances	Daily: Annually:	Sensitivity (with a Class S-verified weight) Calibrated by outside vendor against certified Class S weights	Adjust sensitivity Service balance
Thermometers	Annually:	Calibrated against certified NIST thermometers	Tag and remove from service
Automatic Pipettors	Quarterly:	Gravimetric check	Service or replacement

TABLE 8.5 SAMPLE CONCENTRATION CALCULATION FORMULAS

Application	Formula	Symbols
Linear regression calibration curves	$C = (R - a_0)/a_1$	C = analytical concentration R = instrument response a_0 = intercept of regression curve (instrument response when concentration is zero) a_1 = slope of regression curve (change in response per change in concentration)
Calibration factors [1]	$C = A_x V_f / CF V_i$	C = concentration (µg/L) CF = calibration factor A_x = peak size of target compound in sample extract V_f = final volume of extracted sample (mL) V_i = initial volume of sample extracted (mL)
Response factors [2]	$C = C_{is} A_x V_f / RF A_{is} V_I$	C = concentration (µg/L) RF = internal standard response factor C_{is} = concentration of the internal standard (µg/L) A_x = area of the characteristic ion for the target compound V_f = final volume of extracted sample (mL) A_{is} = area of the characteristic ion for the internal standard V_i = initial volume of sample extracted (mL)
Residues [3]	$R = (W - T)/V \times 1{,}000{,}000$	R[6] = residue concentration (mg/L) W = weight of dried residue + container (g) T = tare weight of container (g) V = volume of sample used (mL)
Solid samples [4]	$K = C V D / W (\%S/100)$	K = dry-weight concentration (mg/kg) C = analytical concentration (mg/L) V = final volume (mL) of processed sample solution D = dilution factor W = wet weight (g) of as-received sample taken for analysis %S = percent solids of as-received sample

1. Used for quantitation by the external standard technique
2. Used for quantitation by the internal standard technique
3. Used for total, filterable, nonfilterable, and volatile residues as well as gravimetric oil and grease
4. Used to calculate the dry-weight concentration of a solid sample from the analytical concentration of the processed sample.
5. Conversion factor to convert g/mL to mg/L:

$$\frac{mg}{L} = \frac{g}{mL} \times \frac{10^3 mL}{L} \times \frac{10^3 mg}{g}$$

FIGURES

FIGURE 4.1 SAMPLE CUSTODY FLOW CHART

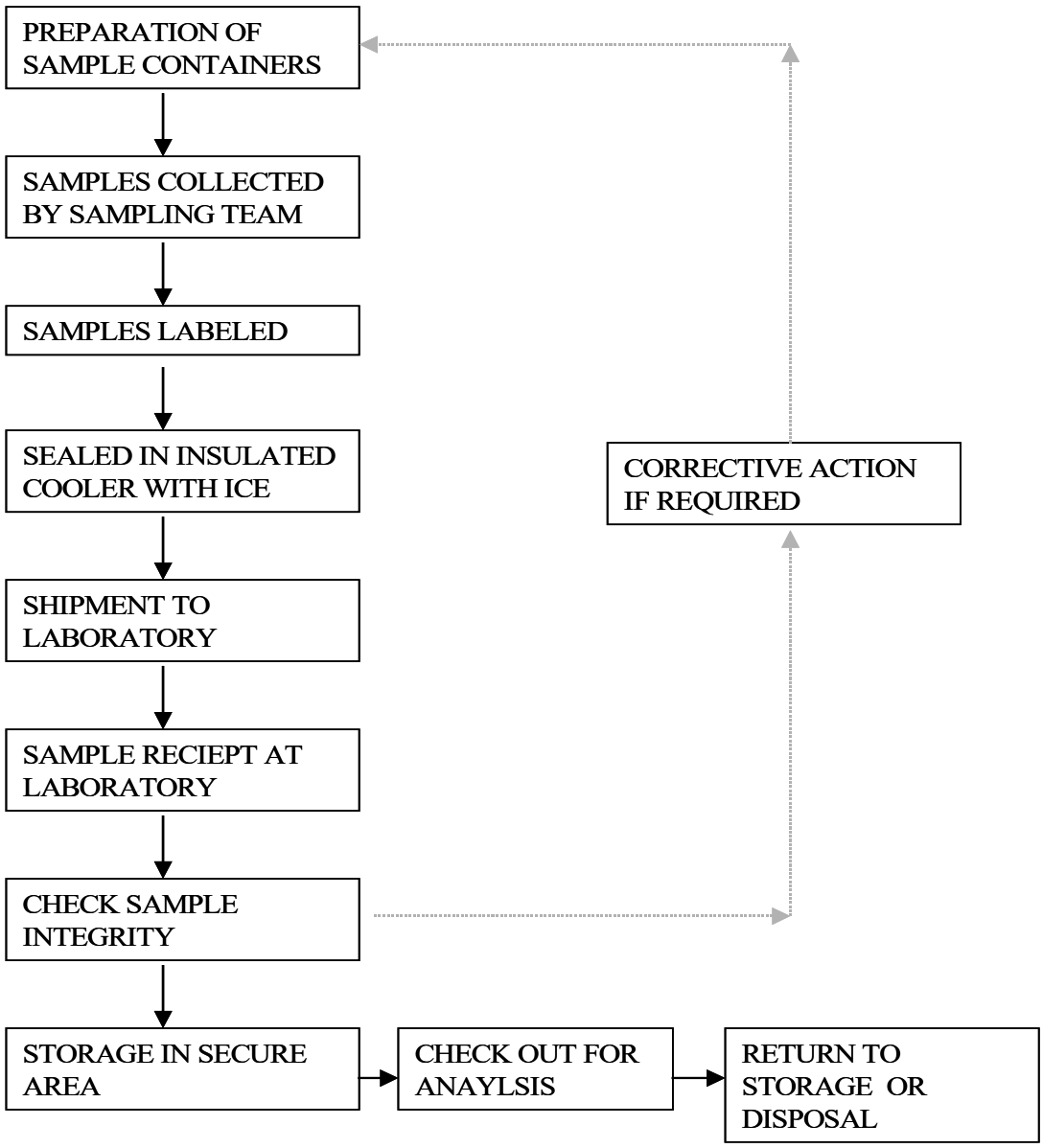


FIGURE 4.2 EXAMPLE CHAIN-OF-CUSTODY RECORD

Submitted to:

Chain Of Custody / Analysis Request

AESI Ref:
COC #:
Lab Use Only
Lab Proj #
Lab ID

Privileged & Confidential
EDD To:
Site Name:
Location of Site:

Client Contact: (name, co., address)
Sampler:
P O #
Analysis Turnaround Time:
Standard - Y
2 weeks -
1 week -
Next Day -
Hardcopy Report To:
Invoice To:

Preservative: 0 | 0 | 2

Job No.
Column Study Sediment

Sample Identification

	Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Grab/Composite	Field Filtered Sample ?	Units
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													

Special Instructions:

Notes:

Relinquished by	Company		Received by	Company		Condition		Custody Seals Intact	
	Date/Time			Date/Time		Cooler Temp.			
Relinquished by	Company		Received by	Company		Condition		Custody Seals Intact	
	Date/Time			Date/Time		Cooler Temp.			

Preservatives: 0 = None; [1 = HCL]; [2 = HNO3]; [3 = H2SO4]; [4 = NaOH]; [5 = Zn. Acetate]; [6 = MeOH]; [7 = NaHSO4]; 8 = Other (specify):

FIGURE 10.1 CORRECTIVE ACTION REQUEST

CORRECTIVE ACTION REQUEST

Number _____ Date:_____

TO: _____

You are hereby requested to take corrective actions indicated below and as otherwise determined by you (a) to resolve the noted conditions and (b) to prevent it from recurring. Your written response is to be returned to the Project quality assurance manager by _____.

Condition:

Reference Documents:

_____ _____ _____ ____ ____ _____

Originator Date Approval Date Approval Date

Response

Cause of Condition:

Corrective Action

(A) Resolution:

(B) Prevention

(B2) Affected Documents

Signature_____ Date_____

CA Follow-up

Corrective Action verified by:_____ Date _____

ATTACHMENT A SUMMARY OF ANALYTICAL DATA PACKAGE (DQO LEVEL IV)

1.0 INTRODUCTION

In order for data to be used for decision-making purposes it is essential that it be of known and documented quality. Verification and validation of data requires that appropriate quality assurance and quality control (QA/QC) procedures be followed, and that adequate documentation be included for all data generated both in the laboratory and in the field.

The QA/QC documentation provided by any laboratory, in conjunction with sample results, allows for evaluation of the following indicators of data quality:

- Integrity and stability of samples;
- Instrument performance during sample analysis;
- Possibility of sample contamination;
- Identification and quantitation of analytes;
- Analytical precision; and
- Analytical accuracy.

General laboratory documentation requirements discussed in this document are formatted into two sections, organic and inorganic analyses. These specifications are intended to establish general, analytical documentation requirements that laboratories should meet when generating data for this project.

2.0 GENERAL DOCUMENTATION REQUIREMENTS

2.1 Data Package Format

Each data package for Level IV data submitted will consist of five sections:

- Case narrative;
- Chain-of-custody documentation
- Summary of results for environmental samples;
- Summary of QA/QC results; and
- Raw data.

Level II data packages will not contain the raw data.

Data packages will be consistent with, and will supply the data and documentation required for NYSDEC ASP-defined deliverables (i.e. Category B and Category A). Summaries of data and results may be presented in a Contract Laboratory Program (CLP) type format or an equivalent format that supplies the required information as stated below. All laboratory data qualifiers shall be defined in the deliverable.

In cases where the laboratory has varied from established methodologies, they will be required to provide the Standard Operating Procedures (SOPs) for those methods and added as an attachment to the project scoping documents or as variances to this QAPP. Inclusion of these SOPs will aid in final review of the data by data reviewers and users.

2.2 Case Narrative

The case narrative will be written on laboratory letterhead and the release of data will be authorized by the laboratory manager or their designee. The Case Narrative will consist of the following information:

- Client's sample identification and the corresponding laboratory identification;

- Parameters analyzed for each sample and the methodology used. EPA method numbers should be cited when applicable;
- Whether the holding times were met or exceeded;
- Detailed description of all analytical and/or sample receipt problems encountered;
- Discussion of reasons for any QA/QC sample result exceedances; and
- Observations regarding any occurrences which may adversely impact sample integrity or data quality.

2.3 Chain-of-Custody

Legible copies of all Chain-of-Custody forms for each sample shall be submitted in the data package. Copies of any internal laboratory tracking documents should also be included. It is anticipated that Chain-of-Custody forms and/or internal laboratory tracking documents will include the following information:

- Date and time of sampling and shipping;
- Sampler and shipper names and signatures;
- Type of sample (grab or composite);
- Analyses requested;
- Project, site, and sampling station names;
- Date and time of sample receipt;
- Laboratory sample receiver name and signature;
- Observed sample condition at time of receipt;
- Sample and/or cooler temperatures at time of receipt;
- Air bill numbers;
- Custody seal; and
- Sample numbers.

3.0 ORGANIC ANALYSES DOCUMENTATION REQUIREMENTS

These requirements are applicable to organic methods (e.g., VOCs, SVOCs, pest/PCBs).

3.1 Summary of Environmental Sample Results

The following information is to be included in the summary of sample results for each environmental sample.

- Client's sample identifications and corresponding laboratory identifications;
- Sample collection dates;
- Dates and times of sample extraction and/or analysis;
- Weights or volumes of sample used for extraction and/or analysis;
- Identification of instruments used for analysis;
- Gas Chromatography (GC) column and detector specifications;
- Dilution or concentration factor for the sample;
- Percent Difference between columns, if applicable;
- Percent Moisture or Percent Solids for soil samples;
- Method Detection Limits (MDLs) or sample Reporting Limits (RLs);
- Analytical results and associated units;

- Discussion of any manual integrations; and
- Definitions for any laboratory data qualifiers used.

3.2 Summary of QA/QC Sample Results (as applicable)

The following QA/QC sample results shall be presented on QC summary forms. They shall also include the date and time of analysis. Additional summary forms may be required for some methods. Therefore, when reporting data, laboratories should defer to specific method requirements.

All summary forms should, at a minimum, include in the header:

- Form Title;
- Project Identifier (e.g., Batch QC ID, Site Name, Case Number, Sample Delivery Group);
- Laboratory Name; and
- Sample Matrix.

3.2.1 Instrument Calibration (for each instrument used)

- **GC/MS Tuning**. Report mass listings, ion abundance criteria, and percent relative abundances. List the instrument identification (ID) and the date and time of analysis. Ensure that all ion abundances have been appropriately normalized.
- **Initial Calibration**. Report analyte concentrations of initial calibration standards and the date and time of analysis. List the instrument identification (ID), response factors (RF), relative response factors (RRF), or calibration factors (CF), percent relative standard deviation (%RSD), and retention time (RT) for each analyte. The initial calibration (IC) report must also include a sample identifier (ID), associated injection volume or quantity of sample analyzed, the acceptance criteria, such as minimum RF values, and associated maximum %RSD values.
- **Continuing Calibration**. Report the concentration of the calibration standard used for the continuing calibration and for the mid-level standard, and the date and time of analysis. List the ID, RF, RRF, CF, percent difference (%D), and RT for each analyte.
- **Quantitation Limit** or Project Required Reporting Limit (PRRL) Verification (if applicable). Report results for standards that are used to verify instrument sensitivity. Report the source for the verification standards. Report the concentration for the true value, the concentration found, the percent recovery, and control limits for each analyte analyzed. The date and time of analysis must also be reported.

3.2.2 Method Blank Analysis

List environmental samples and QC analyses associated with each method blank. Report concentrations of any analytes found in method blanks above the instrument detection limit.

3.2.3 Surrogate Standard Recovery

Report the name and concentration of each surrogate compound added. List percent recoveries of all surrogates in the samples, method blanks, matrix spike/matrix spike duplicates and other QC analyses. Also include acceptance ranges that the laboratory used for the analysis.

3.2.4 Internal Standard Summary

Report internal standard area counts of the associated calibration standard and retention times, include upper and lower acceptance limits. List internal standard area counts and retention times for all samples, method blanks, matrix spike/matrix spike duplicates and other QC analyses. Include the ID and the date and time of analysis.

3.2.5 Compound Confirmation

Report retention times of each compound on both columns as well as retention time windows of the associated standard. In addition, report determined concentrations from each column and percent differences between results. List the ID and the date and time of analysis. A summary should be generated for each sample, including dilutions and reanalyses, blanks, MSs, and MSDs.

3.2.6 Peak Resolution Summary

For primary and secondary columns report retention times of any target compounds and/or surrogates that coelute in the standards (i.e. the Performance Evaluation Mixture for Contract Laboratory Program pesticides). Calculate and report the percent resolution between each pair of compounds which coelute. Include the ID, column ID, and the date and time of analysis.

3.2.7 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

Report the name and concentration of each spiking compound. Samples are to be spiked with specified compounds of potential concern. List sample results, spiked sample results, duplicate spiked sample results, percent recovery (%R) and the relative percent difference (RPD) between the MS and MSD (if applicable). Acceptance criteria that the laboratory used for the analysis must also be presented.

3.2.8 Laboratory Duplicate Analysis

When performed, report the RPD between duplicate analyses, along with the associated acceptance criteria.

3.2.9 Laboratory QC Check Sample Analysis

Also known as the Laboratory Control Sample (LCS) or Matrix Spike Blank (MSB). Report the name and concentration of each spiking compound. List the QC check sample and duplicate (if applicable) results, %R, and RPD, if performed in duplicate. The acceptance criteria that the laboratory used for the analysis must also be presented.

3.2.10 Other QC Criteria

- **Retention time windows determination**. Report the retention time window for each analyte, for both primary and confirmation analyses.
- **Compound identification**. Report retention times and concentrations of each analyte detected in samples.
- **MDL determination**. List most recent method detection limits, with dates determined maintained in laboratory file. MDL summary forms may be submitted at start of project and not included in individual data packages.
- **Additional method suggested QC parameters, if required**.
- **Any Performance Evaluation (PE) samples** (if identified) associated with the environmental samples.

3.3 Raw Data

Legible copies of the raw data shall be organized systematically, each page shall be numbered, and a table of contents must be included with each package. Raw data for compound identification and quantitation must be sufficient to verify each result.

3.3.1 Gas Chromatographic (GC) Analyses

This section shall include legible copies of raw data for the following:

- Environmental samples arranged in sequential order by laboratory sample number, include dilutions and reanalyses;
- Instrument calibrations; and
- QC analyses (i.e., method blanks, LCS, etc.).

Raw data for both primary and confirmation analyses are to be included. Raw data for each analysis shall include the following:

- Appropriately scaled chromatograms (label all analyte peaks, internal standards and surrogate standards with chemical names). All chromatograms shall be scaled such that individual peaks can be readily resolved from any neighboring peaks;
- Appropriately scaled before and after manual integrations;
- Area print-outs or quantitation reports;
- Instrument analysis logs for each instrument used;
- Sample extraction and cleanup logs;
- Standards preparation logs and manufacturer certificates of analyses for standards, if applicable, sufficient to document traceability of all standards (including surrogates, internal standards, and spike solutions) maintained in "job file" in laboratory, unless otherwise requested;
- Percent Moisture or Percent Solids for soil samples; and
- GC/MS confirmation, as applicable.

Note: Additional raw data may be required for some methods. Therefore, when reporting data, laboratories should defer to specific method requirements.

3.3.2 Gas Chromatographic / Mass Spectrometric (GC/MS) Analyses

This section shall include legible copies of raw data for the following:

- Environmental samples arranged in sequential order by laboratory sample number, include dilutions and reanalyses;
- Mass spectrometer tuning and mass calibration (BFB, DFTPP);
- Initial and continuing instrument calibrations; and
- QC analyses (i.e., method blanks, LCS, etc.).

Raw data for each analysis shall include the following:

- Appropriately scaled chromatograms (label all analyte peaks, internal standards and surrogate standards with chemical names). All chromatograms shall be scaled such that individual peaks can be readily resolved from any neighboring peaks;
- Appropriately scaled before and after manual integrations;
- Ion scans and enhanced spectra of target analytes and tentatively identified compounds (TICs), with the associated best-match spectra;
- Area print-outs and quantitation reports;
- Instrument analysis logs for each instrument used;
- Sample extraction and cleanup logs;
- Standards preparation logs and manufacturer certificates of analyses for standards, if applicable, sufficient to document traceability of all standards (including surrogates, internal standards, and spike solutions) maintained in "job file" in laboratory, unless otherwise requested; and
- Moisture Content (Percent Moisture) for sediment samples.

Note: Additional raw data may be required for some methods. Therefore, when reporting data, laboratories should defer to specific method requirements.

4.0 INORGANIC ANALYSES DOCUMENTATION REQUIREMENTS

4.1 Summary of Environmental Sample Results

The following information is to be included in the summary of sample results for each environmental sample:

- Client's sample identifications and corresponding laboratory identifications;
- Sample collection dates;
- Dates and times of sample digestion and/or analysis;
- Weights or volumes of sample used for digestion and/or analysis;
- Identification of instruments and analytical techniques used for analysis;
- Instrument specifications;
- Dilution or concentration factor for the sample;
- Percent Moisture or Percent Solids for soil samples;
- Detection Limits: MDLs, RLs;
- Analytical results and associated units; and
- Definitions for any laboratory data qualifiers used.

4.2 Summary of QA/QC Results

The following QA/QC sample results shall be presented on QC summary forms. They shall also include the date and time of analysis. Additional summary forms may be required for some methods. Therefore, when reporting data, laboratories should defer to specific method requirements.

All summary forms shall, at a minimum, include in the header:

- Form Title;
- Project Identifier (e.g., Batch QC ID, Site Name, Case Number, Sample Delivery Group);
- Laboratory Name; and
- Sample Matrix.

4.2.1 Instrument Calibration Verification (if applicable)

The order for reporting of calibration verifications for each analyte must follow the chronological order in which the standards were analyzed.

- **Initial Calibration Verification.** Report the source for the calibration verification standards. Report the concentration for the true value, the concentration found, the percent recovery, and control limits for each element analyzed. The date and time of analysis must also be reported.
- **Continuing Calibration Verification**. Report the source for calibration verification standards. Report the concentration for the true value, the concentration found, the percent recovery, and control limits for each element analyzed. The date and time of analysis must also be reported.
- **Quantitation Limit** or PRRL Verification (if applicable). Report results for standards that are used to verify instrument sensitivity. Report the source for the verification standards. Report the concentration for the

true value, the concentration found, the percent recovery, and control limits for each element analyzed. The date and time of analysis must also be reported.

4.2.2 Blank Analysis

Report analyte concentrations above the instrument detection limits found in the initial calibration blanks (ICBs), continuing calibration blanks (CCBs), and in method/ preparation blanks. The date and time of analysis must also be reported. The order for reporting ICB and CCB results for each analyte must follow the chronological order in which the blanks were analyzed.

4.2.3 Matrix Spike (MS) Analysis

Report concentrations of the unspiked sample result, the spiked sample result and the concentration of the spiking solution added to the pre-digestion spike for each analyte. Calculate and report the %R and list control limits. If performed in duplicate, provide the %R for the MSD and the RPD.

4.2.4 Post Digestion Spike Analysis (if applicable)

In addition to matrix spikes, post-digestion spikes are often required by the method. Report concentrations of the unspiked sample results, spiked sample results, and the concentration of the spiking solution added. Calculate and report the %R and list control limits.

4.2.5 Laboratory Duplicate Analysis

Report concentrations of original and duplicate sample results. Calculate and report the RPD and list control limits.

4.2.6 Laboratory Control Sample

Identify the source for the LCS. Report the found concentration of the laboratory control sample and the true concentration for all analytes. Calculate and report the %R and list control limits.

4.2.7 Other QC Criteria (if applicable)

- **Method of Standard Additions (MSA)**. This summary must be included if MSA analyses are performed. Report absorbance values with corresponding concentration values. Report the final analyte concentration and list the associated correlation coefficient and control limits.
- **ICP-AES Serial Dilution**. Report initial and serial dilution results, associated %D, and control limits.
- **ICP-AES Linear Dynamic Ranges.** For each instrument and wavelength used, report the date on which linear ranges were established, the integration time, and the upper limit concentration.
- **MDL Determination**. List most recent method detection limits as determined using the September 2017 promulgation of the 40CFR136, with dates determined maintained in laboratory file. MDL summary forms may be submitted at start of project and not included in individual data packages.
- **Any Performance Evaluation (PE) Samples** (if identified) associated with the environmental samples.

4.3 Raw Data

Legible copies of the raw data shall be organized systematically, each page shall be numbered, and a table of contents must be included with each package. Data should be organized sequentially by method and analysis date. Raw data for compound identification and quantitation must be sufficient to verify each result.

4.3.1 Atomic Absorption (AA) and Atomic Emission (AE) Spectrometric Analyses

This section shall include legible copies of raw data for the following:

- Environmental sample results, include dilutions and reanalyses;
- Instrument calibrations; and
- QC analyses (i.e., method blanks, LCS, etc.).
- Measurement print-outs for all instruments used or copies of logbook pages for analyses that do not provide instrument print-outs;
- Absorbance units, emission intensities, or other measurements for all analyses;
- Sample preparation and digestion logs that include reagents used, standards referenced to standards preparation logs, volumes of reagents, digestion times, etc.;
- Instrument analysis logs for each instrument used or summary of sample analyses;
- Standards preparation logs and manufacturer certificates of analyses for standards, if applicable, sufficient to document traceability of all standards (including spike solutions) maintained in "job file" in laboratory, unless otherwise requested;
- Wavelengths used for the analyses; and
- Percent Moisture or Percent Solids for soil samples.

Note: Additional raw data may be required for some methods. Therefore, when reporting data, laboratories should defer to specific method requirements.

4.3.2 Titrimetric and Colorimetric Analyses

This section shall include legible copies of raw data for the following:

- Environmental sample results, include dilutions and reanalyses;
- Calibrations; and
- QC analyses (i.e., method blanks, LCS, etc.).

Raw data for each analysis shall include the following:

- Copies of logbook pages for analyses that do not provide instrument print-outs and calculations used to derive reported sample concentrations;
- Titrant volumes, titration end-points, absorbance units, or other measurements for all analyses;
- Sample preparation and digestion logs that include reagents used, standards referenced to standards preparation logs, volumes of reagents, digestion times, sample volumes, solution normalities, etc.;
- Standards preparation logs and manufacturer certificates of analyses for standards, if applicable, sufficient to document traceability of all standards (including spike solutions) maintained in "job file" in laboratory, unless otherwise requested; and
- Wavelengths used for the analyses.

Note: Additional raw data may be required for some methods. Therefore, when reporting data, laboratories should defer to specific method requirements.

4.3.3 Gravimetric Analyses

This section shall include legible copies of raw data for the following:

- Environmental sample results, include dilutions and reanalyses;
- Calibrations; and
- QC analyses (i.e., method blanks, LCS, etc.).

Raw data for each analysis shall include the following:

- Copies of logbook pages for analyses that do not provide instrument print-outs and calculations used to derive reported sample concentrations;
- Weights, sample volumes, or other measurements for all analyses;
- Sample preparation and digestion logs that include reagents used, standards referenced to standards preparation logs, volumes of reagents, drying times, drying temperatures, etc.; and
- Standards preparation logs and manufacturer certificates of analyses for standards, if applicable, sufficient to document traceability of all standards maintained in "job file" in laboratory, unless otherwise requested.

Note: Additional raw data may be required for some methods. Therefore, when reporting data, laboratories should defer to specific method requirements.

SUMMARY OF REQUIRED LABORATORY DELIVERABLES FOR
LEVEL IV DQO DATA PACKAGE (REQUIREMENTS WILL VARY BY METHOD)

Method Requirements	Laboratory Deliverables
Requirements for all methods:	
Parsons project identification number	Case narrative
Discussion of unusual circumstances or problems	Case narrative
Analytical method description and reference citation	Case narrative
Field sample identification	Signed chain-of-custody forms and sample results form
Laboratory assigned sample number	Signed chain-of-custody forms and sample results form
Sample matrix description	Signed chain-of-custody forms and sample results form
Date of sample collection	Signed chain-of-custody forms and sample results form
Date of sample receipt at laboratory	Signed chain-of-custody forms
Analytical method description and reference citation	Signed chain-of-custody forms and case narrative
Sample analysis results	USEPA CLP form or equivalent sample analysis results summary form (e.g., ASP Form I-VOA)
Dates of sample preparation and analysis (including first run and any subsequent runs)	Specific deliverable depends on type of analysis
Laboratory analytical QC batch info and sample analysis associations	Specific deliverable depends on type of analysis
Instrument analysis sequence log	Specific deliverable depends on type of analysis
Analytical holding times compliance	USEPA CLP form or equivalent holding time summary form
Method detection limit (MDL) determination	USEPA CLP form or equivalent MDL summary form
Method reporting limits (RLs) achieved	Specific deliverable depends on type of analysis (see below)
Dilution or concentration factors	Specific deliverable depends on type of analysis
Discussion of unusual circumstances or problems	Case narrative
Laboratory Control Sample (LCS) results	USEPA CLP form or equivalent LCS results summary form
“Raw” analytical data sufficient to recreate and check analysis results for all calibrations, QC sample results, and sample results	Sequentially numbered pages with tabulated index

REQUIRED LABORATORY DELIVERABLES (Continued)

Method Requirements	Laboratory Deliverables
Matrix spike / matrix spike duplicate	USEPA CLP form or equivalent MS/MSD summary form (e.g., NYSDEC ASP Form III-SV
Method blank analysis	USEPA CLP form or equivalent method blank summary form (e.g., NYSDEC ASP Form IV-SV)
GC/MS instrument performance check. Tuning and mass calibration (abundance) using 4-bromofluorobenzene (BFB) for method SW8260B and decafluoro-triphenyphosphine (DFTPP) for method SW8270C	USEPA CLP form or equivalent instrument tuning/performance check summary form
Internal Standard Area Counts and Retention Time, as applicable	USEPA CLP form or equivalent internal standard summary form (e.g., NYSDEC ASP Form VIII-SV)
GC/MS initial calibration data	USEPA CLP form or equivalent initial calibration summary form (e.g., NYSDEC ASP Form VI-SV)
GC/MS continuing calibration data.	USEPA CLP form or equivalent continuing calibration summary form (e.g., NYSDEC ASP Form VII-SV)
GC/MS calibration verification (initial and continuing)/2nd source calibration verification (ICV/CCV)	USEPA CLP form or equivalent calibration verification summary form
GC continuing calibration data for volatile and semivolatile analyses. If calibration factors are used, calibration factors and their percent differences from the initial calibration must be reported. Retention time windows and analyte retention times must be included in this form	USEPA CLP form or equivalent calibration verification summary form
GC/MS internal standard area and retention time summary data	USEPA CLP form or equivalent internal standard summary form
GC second column confirmation, as applicable. To be done for all compounds that are detected above method detection limits	Chromatograms of all confirmations of all samples and the standard laboratory form for all positive results
Surrogate Compound percent recovery summary	USEPA form or equipment percent recovery summary form (e.g., NYSDEC ASP Form II-SV)
"Raw" analytical data sufficient to recreate and check analysis results for all calibrations, QC sample results, and sample results	Sequentially numbered pages with tabulated index
Requirements for inorganic analytical methods:	
Initial and Continuing Calibration Verification	USEPA CLP form or equivalent calibration verification summary form(s) (e.g., NYSDEC ASP Form II-IN)

REQUIRED LABORATORY DELIVERABLES (Continued)

Method Requirements	Laboratory Deliverables
ICP Interference Check Sample (ICS), as applicable	USEPA CLP form or equivalent ICS standard summary form (e.g., NYSDEC ASP Form IV-IN)
ICP Interelement Correction Factors, as applicable	USEPA CLP form or equivalent internal standard summary form (e.g., NYSDEC ASP Form XII-IN
IDL or MDL determination	USEPA CLP form or equivalent IDL or MDL summary form(s)
Post-digestion spike, as applicable	USEPA CLP form or equivalent post-digestion spike summary form(s) (e.g., NYSDEC ASP Form V-IN)
ICP linear range	USEPA CLP form or equivalent linear range summary form(s) (e.g., NYSDEC ASP Form XII-IN)
ICP serial dilution, as applicable	USEPA CLP form or equivalent serial dilution summary form(s) (e.g., NYSDEC ASP Form IX-IN)
Method of standard addition (MSA), as applicable	USEPA CLP form or equivalent MSA summary form(s)
Laboratory duplicate results, as applicable	USEPA CLP form or equivalent duplicate analysis summary form(s) (e.g., NYSDEC ASP Form VI-IN)
Requirements for other methods:	
Preparation and analysis logs	No format
Sample results	No format
MS/MSD results	No format
Lab duplicate sample results	No format
Laboratory control sample	Control limits
Method blank results	No format
Initial calibration results	No format
Continuing calibration check (calibration verification)	No format. Report percent relative standard deviation or percent difference from initial calibration

APPENDIX K

CONSTRUCTION QUALITY ASSURANCE PROJECT PLAN

DRAFT CONSTRUCTION QUALITY ASSURANCE PROJECT PLAN FOR CONSTRUCTION ACTIVITY AT THE FORMER FARRINGTON STREET GAS WORKS SITE PARCEL 2 QUEENS, NEW YORK (SITE NO. V00560)

Prepared For:

Consolidated Edison Company of New York, Inc.

4 Irving Place
New York, NY 10003

Prepared By:

301 Plainfield Road, Suite 350
Syracuse, New York 13212

AUGUST 2022

TABLE OF CONTENTS

1.0 INTRODUCTION 4

1.1 Objectives 4

1.2 CQAPP Organization 4

2.0 PROJECT MANAGEMENT 6

2.1 Roles and Responsibilities 6

2.1.1 Regulatory Agency's 6

2.1.1.1 New York State Department of Environmental Conservation 6

2.1.1.2 New York State Department of Health 6

2.1.1.3 U.S. Environmental Protection Agency 6

2.1.2 Owner (Con Edison) 6

2.1.3 Owner's Representative 6

2.1.4 Remedial Design Engineer (Parsons) 7

2.1.5 Remedial Action Contractor (To Be Determined) 8

2.1.6 Laboratory Services 9

2.2 Communication 9

2.2.1 Lines of Communication 9

2.2.2 Pre-Construction Meeting 9

2.2.3 Progress Meetings 10

2.2.4 Construction Wrap-Up Meeting 10

3.0 CONSTRUCTION OVERSIGHT TASKS 11

3.1 Inspections 11

3.1.1 Routine Work Inspections 11

3.1.2 Stormwater Pollution Prevention Plan (SWPPP) Inspections 11

3.1.2 Pre-Final and Final Inspections 11

3.2 Quality Control and Assurance Testing 12

4.0 DOCUMENTATION 13

4.1 Technical Submittals 13

4.2 Field Logbook 13

4.3 Daily Field Reports 13
4.4 Monthly Progress Report 13
4.5 Construction Certification Report and Record Drawings 13
4.6 Field Change Form 14

LIST OF FIGURES

Figure 1 Organization Chart

LIST OF ACRONYMS

ACRONYM	Definition
CO	Order on Consent
Con Edison	Consolidated Edison Company of New York
CQA	Construction Quality Assurance
CQC	Construction Quality Control
CQAPP	Construction Quality Assurance Project Plan
CQCI	Construction Quality Control Inspector
HASP	Health and Safety Plan
HSO	Health and Safety Officer
NYSDEC	New York State Department of Environmental Conservation
QA/QC	Quality Assurance/Quality Control
RA	Remedial Action
RDR	Remedial Design Report
RFI	Request for Information
SPDES	Stormwater Pollution Discharge Elimination System
SWPPP	Stormwater Pollution Prevention Plan
UCS	unconfined compressive strength

1.0 INTRODUCTION

This Construction Quality Assurance Project Plan (CQAPP) details the construction quality control (CQC) and construction quality assurance (CQA) activities to be implemented during construction. The CQC/CQA program described herein will be implemented to verify that the remedy is constructed consistent with the project final Remedial Design (RD) for the Former Farrington Street Gas Works Site, Parcel 2 (the "Site"), the details of which are included in the Remedial Action (RA) Contract Documents (referred to as RA Contract herein). The remedy is being implemented to comply with the requirements of the RA Order on Consent (CO).

In the context of this document, CQC and CQA are defined as:

Construction Quality Control (CQC) - Those actions providing a means to measure and regulate the characteristics of an item or service in relation to contractual and regulatory requirements. CQC refers to the actions taken by the contractor, manufacturers, or installers to verify that the materials and the workmanship of the various components of the construction meet the requirements of the RA Contract, including the Design Drawings and the Technical Specifications.

Construction Quality Assurance (CQA) - The planned and systematic means and actions designed to check with adequate confidence that the materials and/or services meet contractual and regulatory requirements and will perform satisfactorily in service. CQA refers to means and actions employed by Consolidated Edison Company of New York, Inc. (Con Edison) and/or their representative to check conformity of the various components of the construction with the requirements of the Design Drawings and the Technical Specifications.

The Contractor shall prepare and submit, under separate cover, a Construction Quality Control Plan (CQCP) to Con Edison following Contractor selection and Notice to Proceed. This CQAPP may be modified during finalization of the CQCP and other construction documents, as necessary.

1.1 Objectives

The objectives of this CQAPP are to:

Describe the quality program to be implemented to verify that the project is constructed in accordance with the requirements of the RA Contract and industry standards.

Define the CQC and CQA teams, associated roles and responsibilities, and communication process.

Describe guidelines and procedures for inspection and testing of construction/operational activities; and

Describe the documentation and record keeping protocol to be followed for pre-, during, and post-construction activities, including specifying requirements for documenting any deficiencies or field changes.

1.2 CQAPP Organization

The CQAPP is organized as follows:

Section 1 – Introduction: provides the purpose of the CQC/CQA program and the objectives and organization of this CQAPP.

Section 2 – Project Management: presents the key project roles involved in implementation of the remedy, their responsibilities, and the reporting structure and communication.

Section 3 – Construction Oversight Tasks: describes the construction oversight activities to be conducted during construction to monitor implementation of the remedy.

Section 4 – Documentation: presents the procedures for processing pre-, during, and post-construction submittals and documentation, identifying construction deficiencies and acceptable corrective actions, and identifying and approving field changes.

2.0 PROJECT MANAGEMENT

The project team responsible for the implementation and quality of this program consists primarily of the following parties:

Regulatory Agency – New York State Department of Environmental Conservation (NYSDEC); New York State Department of Health (NYSDOH), and U.S. Environmental Protection Agency (USEPA).
Owner – Consolidated Edison (Con Edison)
Owner's Representative - To be determined
Remedial Design (RD) Engineer – Parsons
RA Contactor– To be determined
Laboratory Services – To be determined

Each of these responsible parties is described below. A chain of command will be established for communication and decisive decision-making. An organizational chart of the RA project team is provided in Figure 2-1.

2.1 Roles and Responsibilities

The roles and responsibilities of the selected parties involved with the RA construction are described below.

2.1.1 Regulatory Agency's

2.1.1.1 New York State Department of Environmental Conservation

Regulatory oversight of the remedy at this Site is being conducted by the NYSDEC.

2.1.1.2 New York State Department of Health

Regulatory oversight of the remedy with respect to human health at this Site is being conducted by the NYSDOH.

2.1.1.3 U.S. Environmental Protection Agency

Regulatory oversight of the remedy with respect to polychlorinated biphenyl (PCBs) and toxic substances control act (TSCA) regulations at this Site is being conducted by the USEPA.

2.1.2 Owner (Con Edison)

The Remedial Action (RA) for the Site will be implemented under the RA CO that has an effective date of July 25, 2018. Con Edison is responsible for implementing the corrective measures in accordance with the CO. Con Edison is the Owner of the project and have ultimate responsibility and authority for all aspects of the project implementation and remedial construction.

2.1.3 Owner's Representative

The Owner's Representative refers to the project manager and/or CQA officer with authority to oversee the construction and ensure compliance with the CQAPP.

The Owner's Representative will coordinate review of technical submittals and respond as detailed in Section 4, respond to requests for information (RFIs), review design, material, and equipment changes, and provide recommendations related to the CQA/CQC during construction. In addition, the Owner's Representative is

responsible for implementing this CQAPP and verifying compliance with the RA Contract. The Owner's Representative will provide CQA and aid the CQC program by monitoring the day-to-day construction CQC activities and documenting that the work is being performed in accordance with the RA Contract. The Owner's Representative will serve as the primary point of contact for communication with the RA Contractor and the Owner. The Owner's Representative will support the Owner in communicating with NYSDEC.

The Owner's Representative will also include the Health and Safety Site Manager, CQA field inspector(s), and other support personnel. These individuals will be present onsite to monitor the work performed by the RA Contractor and to support the Owner's Representative in assuring compliance with the requirements set forth in the RA Contract and this CQAPP. These individuals will communicate all findings directly to the Owner's Representative. An organizational chart of the RA project team will be developed following RA Contractor selection and identification of the Owner's on-site team. The Owner's Site resources will collectively have the following responsibilities:

- Provide overall coordination of the on-site remedial activities.
- Provide independent health and safety observation of all field activities, and utilize stop work authority when appropriate (note that the RA Contractor will have primary responsibility for on-site health and safety).
- Conduct independent inspections and analysis to verify the quality of the work and check that the required documentation is submitted.
- Review survey data to verify that the work has been performed in accordance with the requirements specified in the RA Contract and this CQAPP with respect to locations and elevations. The raw data and prepared drawings will be reviewed and used to confirm the requirements are met or inform the RA Contractor that additional work is required.
- Identify noted problems/deficiencies during the construction activities (based on CQC testing results) so corrective actions can be taken.
- Communicate problems/deficiencies to the attention of the project technical team, as appropriate.
- Perform and document field and laboratory testing at the frequency established in this CQAPP.
- Review CQA/CQC testing documentation completed on the project and relay the information regarding compliance with requirements to the RA Contractor. In incidences of non-compliance, record the requirements for re-work and order the re-test, re-survey, or re-inspection when the RA Contractor indicates corrections have been made.
- Observe and inspect construction materials delivered to the Site to determine general conformance with the RA Contract and CQAPP.
- Observe and record daily field activities and prepare daily construction reports.

2.1.4 Remedial Design Engineer (Parsons)

The RD Engineer will work as independent design professionals to provide design, engineering, and technical support services in connection with the project. The RD Engineer will provide input on submittal and field change order review, as requested, and resolution of technical issues that may arise during implementation of corrective measures.

The RD Engineer representatives will collectively have the following responsibilities:

- Provide the appropriate technical review of submittals and field change orders from the RA Contractor.
- Assist in the review and interpretation of the field and laboratory testing results.
- Assist with resolution of problems/deficiencies identified during the construction activities so corrective actions can be taken.

The RD Engineer will include members of the design team as well as the Engineer(s) of Record for the project and will have on-site representation during construction.

2.1.5 Remedial Action Contractor (To Be Determined)

The RA Contractor will provide the labor, materials, equipment, and subcontractors required to construct the project in accordance with the requirements set forth in the RA Contract and this CQAPP. The RA Contractor will be responsible for the CQC of the constructed work product as well as the necessary inspections and tests required to confirm that the work complies with the RA Contract. The RA Contractor will exercise authority over the RA Contractor's workforce, including CQC personnel and any subcontracted CQC support services.

The RA Contractor will have the following responsibilities for implementing the procedures presented in this CQAPP:

- Submit a CQC organization chart, subject to review and approval by the Owner's Representative, developed to present CQC personnel and how these personnel will integrate with other management, production, and construction functions and personnel.
- Review and understand the requirements set forth in the RA Contract and this CQAPP.
- Maintain lines of communication with the Owner's Representative.
- Coordinate with material and equipment suppliers to document compliance with the CQAPP requirements.
- Provide the Owner's Representative with at least five (5) workdays written notice of any construction material sample results, tests, or inspections required by the CQAP or other RA Contract Documents.
- Prepare and submit to the Owner's Representative all CQC testing results, shop drawings, and other required submittals specified in the Technical Specifications or CQAPP.
- Identify any potential issues as early as possible to allow resolution in a manner that will not impact the quality or schedule of construction activities.
- Maintain a continuous record of approved changes or modifications to the approach presented in the RA Contract.

The RA Contractor's project team will include the members listed below.

RA Contractor Project Manager

- Coordinates with Owner's Representative.
- Provides centralized leadership for construction activities.
- Plans overall work effort.
- Defines personnel and equipment requirements and secures resource commitments.
- Communicates directly with the RA Contractor Construction Manager for project needs.
- Prepares for and attends meetings as needed.
- Procures, contracts with, and monitors subcontractors.
- Establishes and maintains work budgets and schedules with milestones.
- Monitors the financial status of the project (including negotiating change orders and submitting pay applications).
- Maintains overall project quality control and safety standards.
- Manages the development and implementation of corrective actions.

RA Contractor Construction Manager

- Oversees the day-to-day operations at the Site.
- Directs the work crew on daily operations.
- Makes field decisions for the RA Contractor, attends meetings, and controls subcontractors' work activities.
- Communicates directly with the Owner's Representative.

RA Contractor Construction Quality Control Inspector (CQCI)

- Oversees the on-site execution of the CQC components of this CQAPP.
- Provides required documentation to ensure that the RA Contractor's construction activities comply with the RDR and RA Contract Documents.
- Provides required notification to Owner's Representative prior to collection of samples.
- Coordinates the collection and testing of required CQC samples.
- Transmits results to the Owner's Representative.

RA Contractor Health and Safety Officer (HSO)

- Oversees the implementation of the Health and Safety Plan (HASP) for RA Contractor personnel.
- Acts as the RA Contractor's liaison to the Owner's Representative to provide required documentation to ensure that the RA Contractor's construction activities comply with the project-specific HASP, as well as the applicable Owner's permits and procedures.

2.1.6 Laboratory Services

Analytical samples will be submitted to an Owner-approved National Environmental Laboratory Accreditation Program (NELAP)-accredited and New York State Environmental Laboratory Approval Program (ELAP) approved laboratory. The laboratory will be responsible for completion of the analytical procedures in accordance with set requirements of the analytical method and reporting limits, as well as generation and distribution of completed laboratory data packages for all field and CQC/CQA samples collected during performance of construction activities. Laboratory sample requirements are provided in the Quality Assurance Project Plan (QAPP) (Appendix J of the RDR). The name(s) of the selected laboratory(ies) will be provided to NYSDEC once services have been procured.

2.2 Communication

Open channels of communication are important in delivering a final product that meets the goals of the RA Contract. This section describes lines of communication, meetings, and other forms of communication.

2.2.1 Lines of Communication

Lines of communication during construction between the RA Contractor and Owner and between the RA Contractor and the RD Engineer will be routed through the Owner's Representative, who, in turn, will direct the necessary course of action.

2.2.2 Pre-Construction Meeting

A pre-construction meeting(s) will be held prior to the commencement of construction activity. The Owner, Owner's Representative, RD Engineer, the RA Contractor, and other subcontractors will attend the meeting. NYSDEC and other agencies, as needed, will be notified of and invited to attend the meeting.

The pre-construction meeting will include a review of the project documents and addendums; schedule; safety; Con Edison site-specific safety and training requirements; Con Ed Site access requirements, Site control; and CQC and CQA procedures. The purpose of the pre-construction meeting is to review, in detail, the operating concepts and the existing Site conditions that will guide the work. Prior to the meeting, the RA Contractor will submit a construction schedule and personnel list. The RA Contractor will submit construction schedule and personnel list updates, as necessary, throughout the project. The Owner's Representative will document and distribute minutes of the meeting.

2.2.3 Progress Meetings

Progress meetings will be conducted weekly to discuss the prior week's completed work and the next week's anticipated work. The NYSDEC and other agencies, Con Edison representatives, Parsons' representatives, the RA Contractor's Construction Manager, and/or Project Manager will participate, at a minimum. The agency's issues will be raised and addressed during the meeting. One weekly meeting will be substituted by a monthly meeting for which a larger audience of Con Edison and agency personnel will be invited to participate. A brief project summary will be provided at the monthly meeting.

The Owner's Representative will arrange the details of the meetings (i.e., agenda, meeting minutes, location, etc.) and prepare and distribute meeting minutes.

2.2.4 Construction Wrap-Up Meeting

Following substantial completion of the RA, the project team will meet to discuss the final punch list, Site operation, maintenance, and monitoring, and project completion issues. The Final Engineering (Construction Certification) Report expectations will also be discussed.

3.0 CONSTRUCTION OVERSIGHT TASKS

3.1 Inspections

Inspections will be conducted by members of the project team at various points of the project to ensure consistent quality is maintained. The Owner's Representative will conduct inspections on a daily basis. NYSDEC and the other agencies are free to conduct inspections during any work hour period.

3.1.1 Routine Work Inspections

The Owner's Representative will conduct routine inspections of the overall Site condition, in addition to specific work elements. Overall Site condition items include field trailer, parking lot, access roads, staging areas, soil erosion and sediment control measures, security fence/gate(s), and survey markings. Specific work elements include excavation of impacted soils, *in situ* stabilization/solidification (ISS) areas and equipment, construction water management, decontamination, stockpiling and solidification of excavated soil, and loading and manifesting of waste disposal trucks. The RA Contractor will also be required to inspect all aspects of the project on a regular basis.

3.1.2 Stormwater Pollution Prevention Plan (SWPPP) Inspections

Erosion and sediment control and stormwater management practices identified in the project SWPPP will be inspected and maintained in effective operating condition. Inspections will be performed by a "qualified inspector" as defined in Appendix A of the NYSDEC Stormwater Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity, Permit No. GP-0-20-001 (issued January 29, 2020). At a minimum the qualified inspector will inspect the following:

- Erosion and sediment control practices to ascertain integrity and effectiveness.
- Stormwater management practices to ensure that they are constructed in conformance with the RD.
- Areas of disturbance that have not achieved final stabilization.
- Points of discharge to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site, and points of discharge from the construction site.

Following completion of each inspection, the qualified inspector will prepare an inspection report in accordance with the requirements of the SWPPP documenting the results of the inspection.

3.1.2 Pre-Final and Final Inspections

Following notification of substantial completion by the RA Contractor, Con Edison, NYSDEC and the Owner's Representative will conduct a pre-final inspection of the Site. A final written work punch list will be prepared by the Owner's Representative and will be reviewed by Con Edison for submittal to the RA Contractor. The final punch list will enable the RA Contractor to understand the project completion expectations and schedule work activities, including demobilization, accordingly. Once punch list items have been addressed by the RA Contractor and approved by Con Edison in writing, the NYSDEC inspector will conduct a final inspection. Upon written NYSDEC approval, the RA activities will be considered completed. The RA Contractor will then demobilize from the Site.

3.2 Quality Control and Assurance Testing

QA/QC testing is part of ensuring that the RA is completed in accordance with the RD. Both the RA Contractor and the Owner's Representative will have testing responsibilities:

RA Contractor's Responsibilities:

- ISS requirements (grout, continuity, etc.)
- Sampling/testing and analysis required for the initial submittal and approval of offsite materials to be used at the Site
- Repeat testing/sampling and analysis performed by the RA Engineer due to the RA Contractor's negligence or failure to meet specification requirements
- Waste classification and/or paint filter testing, if necessary
- Construction water sampling, if necessary
- Compaction testing
- Pre-, interim, and post-condition surveys
- Instrumentation and monitoring
- Worker Protection Air Monitoring in accordance with the HASP

Owner's Representative Responsibilities:

- ISS post-mix sampling (unconfined compressive strength [UCS] testing); and
- Community Air Monitoring.

4.0 DOCUMENTATION

4.1 Technical Submittals

The RA Contractor will prepare and transmit technical submittals in accordance with the requirements of the RD and the Contract Documents. The Owner's Representative will be responsible for tracking the submittal package during the review process and notifying all parties of any schedule impacts so that the review process schedule is met. The Owner's Representative will retain copies of all technical submittal documents, including revisions and maintain an accurate file throughout the project. The Owner's Representative will also maintain a comprehensive submittal log. As appropriate, certain submittals (i.e., those that demonstrably change the scope of work and/or construction schedule) will also be provided to NYSDEC for review and approval.

4.2 Field Logbook

The Owner's Representative and RA Contractor will maintain daily field logbooks for the project. Construction activities will be documented with the following details at a minimum: dates, times, weather conditions, personnel onsite, equipment used, materials used, visitors, health and safety issues, work activities completed, delays and other construction-related issues.

4.3 Daily Field Reports

The Owner's Representative will prepare a daily field report that summarizes construction activities. The daily field report will include details about the work completed, onsite equipment, employees, Site visitors, weather, issues discussed directions given to the RA Contractor, Site photos, Community Air Monitoring data and associated corrective measures, and sketches of work completed as necessary. The report will be submitted to Con Edison, NYSDEC, the RA Contractor, and other appropriate parties via email on a daily basis.

The RA Contractor will also prepare daily field reports of construction activities and submit them to Con Edison. Information in the daily field reports will include the RA Contractor's manpower and equipment onsite, work performed that day, general information on weather, material received, etc.

The RA Contractor will prepare a daily quality assurance/quality control (QA/QC) report summarizing the activities. The report will be submitted to Con Edison on a daily basis. Any QA/QC issues will be addressed at the daily QA/QC meeting between the RA Contractor and Con Edison. The QA/QC reports will be attached to the daily field report.

4.4 Monthly Progress Report

Per the CO, Con Edison will submit a monthly progress report to the NYSDEC. The Monthly Progress Report will summarize work activities and other issues pertinent to the RA completion.

4.5 Construction Certification Report and Record Drawings

A Construction Certification Report (CCR) will be prepared and submitted to the NYSDEC following the RA completion. A Professional Engineer licensed in the State of New York will certify that the construction was

performed in accordance with the design and approved field changes. The CCR will include a description of the completed RA work activities, approved changes to the design, record drawings, a project photo log, sampling/ analysis summary table, waste manifests, material trip tickets and/or summary table, and other pertinent information. Record drawings will be prepared based on the Design Drawings, and RA Contractor markups on the Design Drawings conducted throughout the construction, and RA Contractor As-Built Drawings based on the construction survey information collected during construction. The record drawings will be signed/sealed by a Professional Engineer licensed in the State of New York.

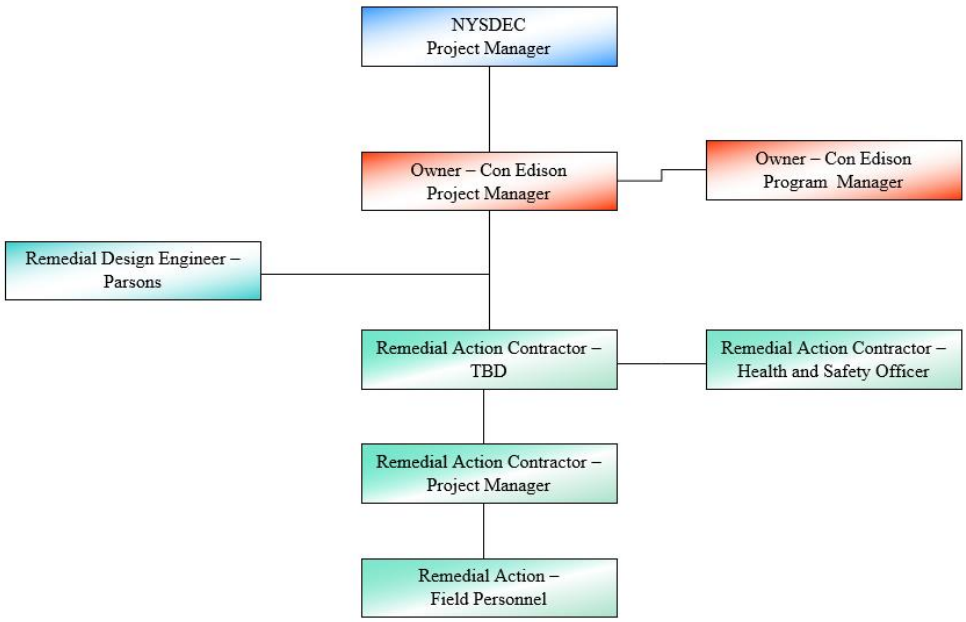
4.6 Field Change Form

Changes to the approved RD will require approval by the RD Engineer and Con Edison, and if deemed significant, by the NYSDEC. Material substitutions (i.e., “or equals”, “or equivalents”) are not considered a field change and will be approved by the RD Engineer as part of the technical submittal review process. The documentation collected over the course of the project will support a determination of whether construction activities are being/have been carried out in accordance with RA Contract requirements. The documentation process includes identification of construction tasks that will be observed and documented; assignment of responsibilities for the observation, testing, and documentation of these tasks; and the completion of the required reports, data sheets, forms, and checklists to provide an accurate record of the work performed in support of implementation of the remedy.

FIGURES

FIGURE 1

PROJECT ORGANIZATION CHART



PARSONS