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Consolidated Edison Company of New York, Inc.

Off-Site Remedial Investigation Report Addendum

Hunts Point Former Manufactured Gas Plant
Bronx, New York

August 2014

Jason Brien, P.E.
Principal Engineer

Nancy Gensky
Program Manager, Vice President

Meredith Hayes

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Prepared for:
Consolidated Edison Company of New York, Inc.

Prepared by:
ARCADIS of New York, Inc.
655 Third Avenue
12th New York
New York 10028
Tel 212.682.9271
Fax 212.682.9275

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Certification

I, Jason Brien, P.E. certify that that I am currently a New York State-registered professional engineer and that this Off-Site Remedial Investigation Report Addendum was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the Division of Environmental Remediation Technical Guidance for Site Investigation and Remediation (DER-10).

Jason Brien, P.E.
Principal Engineer

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Acronyms and Abbreviations

bgs	below ground surface
CAMP	Community Air Monitoring Plan
Con Edison	Consolidated Edison Company of New York, Inc.
DER-10	Division of Environmental Remediation-10
DSNY	New York City Department of Sanitation
DUSR	Data Usability Summary Report
groundwater standards	NYSDEC Class GA Standards
Hygienetics	Hygienetics Environmental Services, Inc.
mg/kg	milligrams per kilogram
MGP	manufactured gas plant
NAPL	non-aqueous phase liquid
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYC DOC	New York City Department of Corrections
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PID	photoionization detector
PM_{10}	particulates less than 10 microns in diameter
QA/QC	quality assurance/quality control

QAPP	Quality Assurance Project Plan
RI	remedial investigation
RIR	Off-Site Remedial Investigation Report
RIR Addendum	Off-Site Remedial Investigation Report Addendum
SCO	Soil Cleanup Objective
SSCO	Supplemental Soil Cleanup Objective
SVOC	semivolatile organic compound
TAL	Target Analyte List
TCL	Target Compound List
TCLP	toxicity characteristic leaching procedure
TestAmerica	TestAmerica Laboratories
µg/L	micrograms per liter
USEPA	United States Environmental Protection Agency
VCA	Voluntary Cleanup Agreement
VOC	volatile organic compound

1. Introduction

This Off-Site Remedial Investigation Report Addendum (RIR Addendum) has been prepared on behalf of Consolidated Edison Company of New York, Inc. (Con Edison) for the investigation of the New York City Department of Corrections (NYC DOC) property, associated with the Hunts Point former manufactured gas plant (MGP). The NYC DOC property is currently used as a parking lot for the adjacent Vernon C. Bain Correctional Center (a floating prison barge). This RIR Addendum has been prepared in accordance with the Voluntary Cleanup Agreement (VCA) between the New York State Department of Environmental Conservation (NYSDEC) and Con Edison. The VCA index number for the Hunts Point former MGP is D2-0003-02-08. This RIR Addendum was also developed in accordance with the 6 New York Codes, Rules, and Regulations (NYCRR) Part 375 Environmental Remediation Programs (NYSDEC 2006) and Division of Environmental Remediation-10 (DER-10) Technical Guidance for Site Investigation and Remediation (NYSDEC 2010).

The Hunts Point former MGP was utilized by Con Edison from 1922 to 1968. The majority of the Hunts Point former MGP property was sold to the City of New York from 1966 to 1972 for use as a wholesale cooperative food market. On-site portions of the former MGP property have been redeveloped with roads, warehouses, parking areas, a New York City Department of Sanitation (DSNY) marine transfer station, or remain undeveloped. The approximate extent of the former MGP is depicted on Figure 1-1. Off-site areas adjacent to the former MGP include the NYC DOC property, to the southwest of the former MGP, as well as the East River to the south, and the Bronx River to the east. The NYC DOC property is a filled land created after the MGP ceased operations. This RIR Addendum discusses remedial investigation (RI) activities conducted for investigation of soil and groundwater within the NYC DOC property. The Off-Site Remedial Investigation Report (RIR) (ARCADIS 2013a) documented the investigation of sediment within the Bronx and East Rivers.

1.1 Report Organization

The remaining portions of this RIR Addendum are organized into the following sections:

- *Section 2 – Site Description:* This section provides a description of the Hunts Point former MGP and the NYC DOC property.
- *Section 3 – Investigation Methods:* This section describes the RI methods used during the NYC DOC property investigation.
- *Section 4 – Investigation Results:* This section discusses the RI results and provides a summary of the soil and groundwater characteristics at the NYC DOC property.

- *Section 5 – Conceptual Site Model:* This section presents the conceptual site model for the NYC DOC property.

- *Section 6 – Conclusions:* This section provides the conclusions of the RI at the NYC DOC property.

- *Section 7 – References.* This section provides a list of documents cited in this RIR Addendum.

2. Site Description

2.1 Site Location

The Hunts Point former MGP is located in the Borough of the Bronx, New York City, Bronx County, New York (Figure 1-1). The former MGP is an approximately 160-acre tract of land on Hunts Point, a peninsula at the confluence of the Bronx and East Rivers. The former MGP is bounded by Food Center Drive to the north, Halleck Drive to the west, and the Bronx and East Rivers to the east and south, respectively. The former MGP property is considered to be on site, and the NYC DOC property and the Bronx and East Rivers are considered off site. For the purposes of site redevelopment, portions of the former MGP have been divided into parcels (Parcels A through F). Figure 2-1 shows these parcels. The former MGP also includes the Citarella property, located south of Parcel C; the Krasdale Foods property, located between Parcels D and F; and the DSNY marine transfer station, south of the Citarella property.

The NYC DOC property is located to the southwest of the former MGP and south and west of Parcel B. This property was created by placing fill into former areas of the East River or pre-existing marshland after the MGP ceased operations in 1962. The property is currently used as a parking lot for the adjacent NYC DOC Vernon C. Bain Correctional Center (a floating prison barge).

2.2 Site History

In 1922, Con Edison began purchasing land for what would become the Hunts Point MGP. Initial construction of the coke ovens and oven/producer gas manufacturing machinery occurred from 1924 through 1927, and the plant went on-line in late 1926. Between 1931 and 1932, the works were enlarged by adding carbureted water gas works. The works were again expanded in 1948. The MGP produced water gas from 1932 to 1962. In 1950, the water gas works were modified to use natural gas in addition to coal, or in place of coal, and was historically occupied by a steel truss building and three 550-gallon underground storage tanks (two held gasoline; the third was unused). Parcel B contained several above and belowground tanks used for oil and tar storage. A light oil plant and liquid petroleum-air gas production area were located on Parcel B and operated until 1952 and 1962, respectively. The historic use of Parcel C and the Citarella property included the storage of coal. In addition, two coal bridges were located adjacent to Parcel C and were used to unload the coal via conveyors. Parcel D did not contain any historic structures. Parcel E was historically used for storing gas for distribution. Historical structures included a waterless-type gasholder with a total capacity of 15 million cubic feet. Parcel F and the Krasdale Foods property did not contain any historic structures. The DSNY marine transfer station property was historically used for storing gas. The central portion of the former MGP site, located in between the above parcels, historically housed various MGP-related facilities, including coke ovens, water gas generators, condensers, settling basins, ammonia liquor cooling facilities, a laboratory, oil tanks, tar separator tanks, gas holders, gas producers, and a screening station. Figure 2-1 depicts the various parcels and historic site features. Additional details regarding the history and operations of the Hunts Point former MGP can be found in the Hunts Point Off-Site Manufactured Gas Plant History Report (Parsons 2003).

Beginning in the early 1950s, portions of the MGP were taken out of service. The liquid petroleum plant was taken off-line in 1952, as well as the oven/producer gas plant in 1954. The last components of the MGP were taken off-line in 1962, and the remaining buildings and structures were demolished. The large gas holder remained in service until it was demolished in 1968. The majority of the MGP property was then sold to the City of New York in the late 1960s through early 1970s (Parsons 2003).

Currently, Con Edison retains ownership of the northwestern portion of the former MGP near the intersection of Halleck Street and Food Center Drive, where it operates a natural gas regulating station. A majority of the remaining portions of the former MGP property are owned by New York City and occupied by warehouse-type buildings and parking areas associated with the City's cooperative food market and individual food service vendors. The DSNY marine transfer station (currently not in service) is located on the southeastern portion of the Hunts Point peninsula. Other portions (Parcels D and F) remain undeveloped.

2.3 Site Setting

2.3.1 Geologic and Hydrogeologic Setting

Based on observations during previous on-site investigations conducted to investigate the Hunts Point former MGP, the soil stratigraphy varies and is influenced by historic filling activities. Historic fill material, such as coal, slag, ash, and wood intermingled with sand and gravel and dredged sediment, is present across the former MGP property in the surface and shallow overburden to varying depths. In addition, there are large distinct areas of fill along the shoreline of Parcels D and F and the Krasdale Foods property, near the former marine transfer station, the NYC DOC property, and the western boundary of Parcel B. These large fill areas were created between 1947 and 1975; the origins of the fill are unknown but may include dredged sediment from navigational and maintenance dredging. Along the northern portion and north of the former MGP property, former wetland areas on the east and west sides of the Bronx River were mostly filled in by 1952.

Underlying the fill unit in the eastern portion of the former MGP property is a mixture of clayey silt, sand, and gravel, described as poorly sorted outwash deposits. A silty clay unit, described as a "meadowmat," underlies the outwash deposits, with the thickest intervals in the western portion of the former MGP. Borings that extended below the silty clay unit in the northwestern and southwestern portions of the former MGP identified a deeper sand unit, which extends to bedrock. Based on data collected during the various investigations completed at the former MGP, the water table generally occurs in the shallow subsurface at depths ranging from approximately 2 to 15 feet below ground surface (bgs) across the former MGP property and approximately 2 to 8 feet bgs on the NYC DOC property. In general, groundwater flow is directed from the upland to the Bronx and East Rivers. However, groundwater flow may be influenced by tidal conditions within the adjacent rivers, and the numerous subsurface utilities in the area may act as preferential pathways for groundwater flow.

2.4 Historical Remedial Investigations

Various investigations and remediation of Parcels A through F and the Krasdale Foods property have been completed and are documented in several reports. The RIR (ARCADIS 2013a) summarizes the findings of the various remedial efforts in connection with each parcel. The sections below present a summary of previous investigation and remediation conducted on Parcel B adjacent to the NYC DOC property, as well as the investigation of sediments adjacent to the former MGP. No previous investigations have been conducted on the NYC DOC property, with the exception of installation of one monitoring well (MW-1P) and five soil borings (B-1 through B-5) that were advanced in 2001 as part of Parcel B investigation activities, as described below.

2.4.1 Parcel B

The following reports were reviewed in association with Parcel B:

- *Phase II Environmental Investigation Report of Hunts Point Produce Market Complex Parcel B, Bronx, New York* (Hygienetics Environmental Services, Inc. [Hygienetics] 1998)
- *Hunts Point Cooperative Market Redevelopment Plan, Investigative Report for the Operating Unit Portion of Parcel B*, Bronx, New York (Lawler Matusky and Skelley Engineers, LLP 2001)
- *Hunts Point Food Distribution Center Redevelopment Plan, Engineering Report for the Operating Unit Portion of Parcel B*, Bronx, New York (HDR, Inc. 2008)
- *Phase I Environmental Site Assessment Report of Hunts Point Produce Market Complex Parcel A, B, C, D and E*, Bronx, New York (Hygienetics 1997a)
- *Phase II Environmental Investigation Report of Hunts Point Produce Market Complex Parcel A, B, C, D and E*, Bronx, New York (Hygienetics 1997b)
- *Hunts Point Off-Site Manufactured Gas Plant (VCA Index No. D2-003-02-08) History Report* (Parsons 2003)

Two subsurface investigations were completed in 1998 and 2001 on Parcel B. The 1998 limited investigation consisted of the completion of nine soil borings to an average depth of 10 feet bgs, and the installation of one monitoring well advanced to 23 feet bgs. The 2001 investigation consisted of the completion of 11 test trenches advanced to the clay unit, water table, or refusal; 14 temporary groundwater well points; one monitoring well; nine soil borings (three deep to determine if dense non-aqueous phase liquids were present); five test pits; and 40 geotechnical borings (to support redevelopment). A summary of the visual impacts noted during the investigations is presented below.

Wood chips, ash, slag, and coal tar were identified in several areas in Parcel B; all of the MGP-related wastes were identified above the water table. Purifier wastes, consisting of blue-green colored wood chips were observed, primarily in the western portion of Parcel B, and one of the purifier waste areas was observed adjacent to the eastern perimeter of the NYC DOC property. Coal tar was primarily observed as boils on the ground surface, with the largest measuring 62 feet wide by 68 feet long by 3 feet deep. A significant area of coal tar was observed in the northern portion of Parcel B.

An area of petroleum-contaminated soil was defined adjacent to the northeastern corner of the NYC DOC property and throughout the central portion of Parcel B. The area of impacts were typically encountered at 4 to 6 feet bgs and extended to the water table. Historical groundwater sampling revealed 1 foot of light non-aqueous phase liquid in former monitoring well MW-2, located near the former storage tanks in Parcel B. Fingerprinting results concluded that the product consisted of weathered gasoline and fuel oil. During the well installation of soil boring/monitoring well B-3/MW-1P (located in the northeastern corner of the NYC DOC property at the boundary of Parcel B), product was noted on the driller’s augers, and during the subsequent groundwater sampling, sheen and little globules of product were noted on the well sampling log. However, no visual impacts were observed at four other borings surrounding B-3/MW-1P in the NYC DOC property (B-1, B-2, B-4, and B-5). Figure 2-1 presents these former monitoring well and historical boring locations installed on the NYC DOC property.

Since the investigations described above, Parcel B was redeveloped as the Hunts Point Distribution Center with a concrete slab on-grade construction. The surrounding areas have been developed as a parking lot. As part of the redevelopment, a bulkhead rehabilitation project was completed along Parcel B, which included the relocation of approximately 14,000 cubic yards of upland and mud line material from Parcel B to raise the grade of nearby Parcel C.

The final remedy for Parcel B, incorporated during redevelopment, included the removal of 34,100 tons of material, of which, approximately 19,650 tons was coal tar-impacted material, and approximately 14,450 tons was purifier waste. Additionally, an unknown quantity of petroleum-impacted soil, co-mingled with the coal tar and purifier wastes, was also removed. Figure 2-1 depicts the extent of impacts removed during remediation. Engineering and institutional controls were implemented, including installation of an air sparge/soil vapor extraction system to address petroleum impacts, an active sub-slab depressurization system with vapor barrier, an engineered cap, and 1 foot of imported fill over the landscaped area.

2.4.2 Off-Site Sediments

An off-site RI was completed in 2013 to evaluate the potential presence and extent of MGP-related impacts in the Bronx and East Rivers, adjacent to the Hunts Point former MGP (ARCADIS 2013a). Off-site investigation activities consisted of field reconnaissance of the shoreline and a sediment investigation consisting of the advancement of sediment cores and sediment sampling and analyses.

The shoreline reconnaissance was conducted to identify outfalls and/or preferential pathways from the upland to the rivers. Along the Hunts Point shoreline, nine potential discharge features were observed and are depicted on Figure 3-1.

Eighty-one cores were advanced within the Bronx and East Rivers within three investigation areas: northern, central, and southern (Figure 3-1). Anthropogenic materials were observed within sediment cores across the investigation area that included degraded coal fragments, pyrite/coal pieces, debris, glass fragments, and wood pieces/chips/fragments. During the field investigation, non-aqueous phase liquid (NAPL) or indication of NAPL, significant sheening, or evidence of purifier waste, was not observed in any of the cores. Sheens, primarily in trace to little amounts as tiny dots within the sediment pore spaces, were observed in the sediment. Subsequent forensic evaluations concluded that the sheens were primarily associated with petroleum hydrocarbons from weathered heavy and mid-distillate oils. In addition to identifying petroleum hydrocarbons, the forensic evaluation also identified the presence of pyrogenic materials (e.g., coal tar products, such as, but not limited to, MGP residuals, creosote, asphalt sealcoat). Sheens were only observed on the water surface during the retrieval of sediment core SD-07B located near Outfall 4. In addition, blue staining on the riprap and blue-tinted surface water near Outfall 1 were also observed. Outfall 1 is the discharge point of the Krasdale Foods property storm sewer, which will be rehabilitated/replaced to mitigate groundwater impacted with purifier waste-related constituents.

One hundred twenty-five sediment samples were collected and analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), TCL semivolatile organic compounds (SVOCs), Target Analyte List (TAL) metals, cyanide, and total organic carbon. Representative constituents of interest were then selected for further evaluation and discussion based on frequency of detection, detection above screening levels, and presence in upland soil and groundwater. The representative constituents detected in the sediments from the Bronx and East Rivers included polycyclic aromatic hydrocarbons (PAHs) and six metals, including copper, nickel, lead, mercury, silver, and zinc. The distribution of these constituents, as well as select constituents observed in the upland, benzene, toluene, ethylbenzene, and xyelens; carbon disulfide; and cyanide were evaluated for patterns suggesting the origins of these constituents. Each of the six metals was detected in upland soils. With the exception of silver, these constituents were also detected in groundwater, and copper, lead, nickel, and zinc were detected in stormwater samples (from the Krasdale Foods property storm sewer). The spatial distribution of the metals generally does not correlate with the PAHs.

Overall, the distribution of PAHs above the East River background level (70 milligrams per kilogram [mg/kg])[1] in surface sediments indicates no discernible patterns, except near Outfall 4 on Parcel C. In deeper sediments below 6 feet below sediment surface, the distribution of PAHs above the East River background level indicate clusters east of the former dredged channel adjacent to Parcel C in the central area of investigation, and west of Parcel B and the NYC DOC property in the southern area of investigation. The distribution of PAHs and metals appear to be related to multiple sources and multiple pathways into the rivers. The constituents present, because of the multiple sources and pathways, are then transported/altered by physical and chemical processes within the rivers, further complicating their distribution patterns.

Based on the shoreline field reconnaissance and the distribution of constituents in sediments, an assessment of potential migration pathways into the East and Bronx Rivers was conducted. The evaluation indicated that two potential migration pathways transporting MGP-related constituents to the rivers may be present, one near Outfall 1 at the Krasdale Foods property and one near Outfall 4 at Parcel C. The storm sewer at the Krasdale Foods property (Outfall 1) will be rehabilitated/replaced to mitigate migration of groundwater impacted with purifier waste-related constituents. The NYSDEC approved the Pre-Design Investigation Report (ARCADIS 2013b), including the conceptual remedial design, and a Remedial Action Work Plan is currently being prepared. Additional investigation activities have been proposed to evaluate if there is ongoing migration of MGP-related impacts from Parcel C to the sediments in the area at and around SD-07B and Outfall 4.

[1] A total PAH concentration of 70 mg/kg was previously established as the background level for the East River using the 90^{th} percentile of the background data (AECOM 2009).

3. Investigation Methods

3.1 Objective and Overview

An investigation of the NYC DOC property was conducted to evaluate the potential presence and extent of MGP-related impacts, if any. The investigation activities consisted of the advancement of soil borings and collection of soil samples for laboratory analysis, and installation of groundwater monitoring wells and collection of groundwater samples for laboratory analysis.

Investigation activities were completed in general accordance with the NYSDEC-approved Off-Site Characterization Work Plan (ARCADIS 2012). Deviations from the proposed scope are discussed in the applicable sections below. The Field Sampling Plan and Quality Assurance Project Plan (QAPP) (Appendix B and D, respectively, of the Off-Site Characterization Work Plan) presents detailed descriptions of the field and laboratory methods.

3.2 Soil and Groundwater (Upland) Characterization

3.2.1 Soil Boring Installation

Sixteen soil borings (SB-01, SB-02A, SB-02B, SB-03, SB-04, SB-05A, SB-05B, SB-06, SB-07, SB-08A, SB-08B, SB-09, SB-10, SB-11, SB-12, and SB-14) were completed between August 27 and September 25, 2013 (SB-13 was an alternate boring location that was not advanced). Figure 3-1 presents soil boring locations. Eleven of the soil borings were advanced at the locations proposed in the Off-Site Characterization Work Plan (ARCADIS 2012). The remaining soil borings were relocated or added as follows:

- SB-02B, SB-05B, and SB-08B were relocated adjacent to borings SB-02A, SB-05A, and SB-08A due to shallow refusal depths at these locations.
- SB-12 was advanced to delineate impacts observed at SB-05B.
- SB-14 was advanced to delineate impacts observed at SB-12.

Prior to drilling, each location was hand-cleared to 5 feet bgs. The soil borings were advanced by ARCADIS' drilling subcontractor (Aquifer Drilling and Testing, Inc.) using a track-mounted rotosonic rig (Compact Rotosonic 17-C). Soil samples were collected continuously from each boring using a 5-foot-long, 3-inch-diameter core barrel and a polyethylene liner. Recovered soils were photographed, visually characterized, and screened with a photoionization detector (PID). Observations, including the presence of NAPL or other visual impacts, recovery, lithology, and PID readings, were recorded. Each soil boring was advanced to bedrock or refusal. Upon completion, each boring not converted to a monitoring well was tremie-grouted to grade using a cement/bentonite grout. Appendix A provides the soil boring logs. Figure 3-1 shows the locations of the 16 soil borings. Table 3-1 presents a summary of the soil borings, including depths, locations, laboratory analysis, potential impacts based on field observations, and the sampling rationale.

3.2.2 Soil Sampling and Analysis

If NAPL, other visual impacts, or elevated PID readings potentially related to MGP impacts were observed, soil samples were selected for laboratory analysis as follows:

- One sample was collected from the zone with the highest PID readings, presence of NAPL, or other visual impacts.
- An additional sample was collected from the 1-foot interval below the impacted zone, at or near the base of the boring, or above bedrock to define the vertical extent of impacts.

If no NAPL, other visual impacts, or elevated PID readings were observed, a sample was collected from the 1-foot interval directly above the water table.

In addition, at two locations (SB-03 and SB-04), deeper samples were collected to confirm the absence of potential MGP-related impacts above bedrock.

Twenty soil samples were collected from 13 soil borings and submitted under chain of custody protocols to TestAmerica Laboratories (TestAmerica) for the following analyses:

- TCL VOCs (United States Environmental Protection Agency [USEPA] SW-846 Method 8260)
- TCL SVOCs (USEPA SW-846 Method 8270)
- Polychlorinated biphenyls (PCBs) (USEPA SW-846 Method 8082)
- TAL metals (USEPA SW-846 Methods 6010/7470/7471)
- Cyanide (USEPA SW-846 Method 9010)

Table 3-1 provides a summary of soil samples collected and submitted for laboratory analysis. Appendix B provides the analytical laboratory data reports. A photolog is provided as Appendix C.

3.2.3 Monitoring Well Installation

Five of the soil borings were converted to groundwater monitoring wells (MW-01 through MW-05) during the off-site investigation activities conducted in September 2013. The locations of monitoring wells MW-01 through MW-03 were installed as specified in the Off-Site Characterization Work Plan (ARCADIS 2012). MW-04 was installed to replace former monitoring well MW-1P, which could not be located in the field. MW-05 was installed adjacent to the former purifier waste area in adjacent Parcel B and based on the potential impacts observed in soil borings SB-05A/5B and SB-12 described in Section 4.1.2. Figure 3-1 depicts the monitoring well locations.

Each monitoring well was installed and constructed to the following specifications:

- Cement/bentonite grout was tremie-grouted to the proposed well bottom depth and allowed to cure overnight before the well was installed.
- Wells were constructed with 2-inch inner-diameter, threaded, flush joint, Schedule 40 polyvinyl chloride casing and screen.
- Screen lengths were 10 feet with 20-slot (0.02 inch) openings. Wells were screened across the water table between 7 and 17 feet bgs, with the exception of MW-03, which was screened between 3 and 13 feet bgs, based on observed groundwater elevations.
- The annulus around the screens was backfilled with Morie No. 2 clean silica sand to a height of 2 feet above the top of the screen.
- A bentonite seal with a minimum thickness of 1 foot was placed above the sand pack. The bentonite seal (chips) was allowed to hydrate before placement of grout above the seal.
- The remainder of the annular space was filled with a cement-bentonite grout to near the ground surface. The grout was pumped using tremie methods, and was allowed to set for a minimum of 24 hours before well development.
- Each monitoring well was closed with a sealed cap (J-plug) and was contained in a flush-mounted vault. The concrete seal or pad was sloped slightly to channel water away from the well and was approximately 1 foot deep.
- The vaults and concrete pads were completed flush to the surface.

- Monitoring wells were developed by pumping water from each well until turbidity measurements reached below 50 nephelometric turbidity units for three successive readings or once water quality indicators were determined to be stabilized (approximately 22 to 45 gallons of water). Turbidity and water quality indicators were monitored and recorded. Purge water was containerized and transported to an appropriate facility for disposal as described in Section 3.4.4.

Table 3-2 presents a monitoring well construction summary. Monitoring well construction details, provided in the soil boring logs, are included in Appendix A. Monitoring well development logs are included in Appendix D.

3.2.4 Groundwater Sampling

ARCADIS collected groundwater samples from monitoring wells MW-01 through MW-05 on October 3, 2013. Prior to sample collection, each monitoring well was gauged using an oil/water interface probe to measure and record the static groundwater level and to determine the presence or absence of NAPL. Groundwater sampling was conducted using low-flow purging and sampling with bladder pumps. Groundwater field parameters measured during purging included conductivity, dissolved oxygen, oxidation-reduction potential, pH, temperature, and turbidity. Field parameters were monitored until they were stabilized following the procedures in the Off-Site Characterization Work Plan (ARCADIS 2012). The field parameter measurements following stabilization were recorded prior to sampling, and are presented on the groundwater monitoring forms included as Appendix E. Table 3-2 presents the water-level measurements.

Five samples were collected and submitted under chain of custody protocols to TestAmerica for the following analyses:

- TCL VOCs (USEPA SW-846 Method 8260)
- TCL SVOCs (USEPA SW-846 Method 8270)
- TAL metals (USEPA SW-846 Methods 6010/7470/7471)
- Total cyanide (USEPA SW-846 Methods 9010/9012B/9016)

Table 3-3 presents a summary of groundwater samples collected and submitted for laboratory analysis. Appendix B provides the analytical laboratory data reports.

3.3 Quality Assurance/Quality Control, Data Quality, and Data Usability

Analytical data was collected in general accordance with DER-10 Technical Guidance for Site Investigation and Remediation (NYSDEC 2010) and validated in accordance with procedures described in the QAPP (Appendix D of the Off-Site Characterization Work Plan [ARCADIS 2012]). Quality assurance/quality control (QA/QC) samples (including trip blank, matrix spike, and matrix spike duplicate samples) were also collected and submitted for laboratory analysis in accordance with the procedures described in the QAPP. QA/QC samples were collected and analyzed at a frequency of one per 20 field samples. In addition, rinse blanks were collected at a frequency of one per 20 field samples when non-dedicated sampling equipment was used.

Data Usability Summary Reports (DUSRs) were prepared in accordance with Appendix B of DER-10 Technical Guidance for Site Investigation and Remediation (NYSDEC 2010). The DUSRs include an assessment of data accuracy, precision, and completeness; significant QA problems, solutions, corrections, and potential consequences; and analytical data validation reports. Data qualified with a "U" are considered a non-detect value. Data qualified with an "R" were rejected and were not included in the dataset. Other qualified data were treated as a detected value in the dataset. DUSRs are provided in Appendix F.

3.4 Investigation Support Methods

3.4.1 Notification and Access

Prior to implementing the off-site characterization activities, Con Edison negotiated an access agreement with the site owner. Con Edison provided notification to the NYC DOC and NYSDEC before commencement of field activities.

3.4.2 Utility Clearance

Prior to mobilization, hard copies of available utility plates, drawings, and/or maps from the New York City Department of Environmental Protection and Con Edison were reviewed to determine the approximate locations of utilities near the site. In accordance with 16 NYCRR Part 753 (also referred to as Code 753 utility mark out or Dig Safely Inc.), the New York City and Long Island One-Call Center was contacted prior to initiating field work to locate and mark out subsurface utilities along Halleck Street. Confirmation that utilities were marked out were received by facsimile or telephone from the participating utility companies. In addition, a geophysical survey for detectable utilities was conducted by Naeva Geophysics, Inc. on August 26, 2013. Each boring location was cleared using ground-penetrating radar and a hand-held electromagnetic metal detector.

3.4.3 Equipment Decontamination

Soil drilling equipment (i.e., core barrel, nose cone, and core retainer) and groundwater sampling equipment (i.e. bladder pumps) were cleaned prior to initiating sampling activities, between locations, and at the completion of investigation activities by scrubbing using water and Alconox® and using a steam cleaner in accordance with the procedures provided in the Off-Site Characterization Work Plan (ARCADIS 2012). Water for decontamination purposes was obtained from a fire hydrant located on the property. Disposable sampling equipment (i.e., polyethylene liners, tubing, and bladders) that were exposed to soil and groundwater were disposed after sampling at each location.

3.4.4 Investigation-Derived Waste

Residual soil, purge water, decontamination water, disposable sampling equipment, personal protective equipment, and other investigation-derived wastes were containerized in 55-gallon steel drums and shipped off site by Clean Ventures, Inc. (Elizabeth, New Jersey) to Cycle Chem, Inc. (Elizabeth, New Jersey) for subsequent disposal. Waste characterization samples were collected by compositing soil and groundwater from field activities, then were submitted for laboratory analysis on September 19, 2013 for the following waste characterization parameters: toxicity characteristic leaching procedure (TCLP) VOCs, TCLP SVOCs, TCLP metals, diesel-range organics, PCBs, sulfide, cyanide, corrosivity, and ignitability. The laboratory analytical reports for the waste characterization analyses are provided in Appendix B.

3.4.5 Survey

All soil boring and monitoring well installation locations were surveyed by Borbas Surveying and Mapping, Inc, a New York State-licensed surveyor, using a Leica DNA-10 Digital Level with a bar-coded level rod and a Leica Viva global positioning system unit. Horizontal and vertical coordinates of each soil boring and monitoring well are provided in New York Long Island State Plane coordinates North American Datum of 1983 and North American Vertical Datum of 1988 in Tables 3-1 and 3-3, respectively.

3.4.6 Community Air Monitoring

As part of the RI activities, a community air monitoring program was implemented during the completion of intrusive work in accordance with the Community Air Monitoring Plan (CAMP), as presented in the Off-Site Characterization Work Plan (ARCADIS 2012). Air quality was monitored for VOCs using a PID, and particulates less than 10 microns in diameter (PM_{10}) using a particulate meter at a dedicated station located at the perimeter of the work zone downwind of investigation activities. There were no exceedances of total VOCs and PM_{10} observed during air monitoring activities per the action levels for VOCs (less than 5 parts per million above background levels) and PM_{10} (less than 100 micrograms per cubic meter above background levels) as presented in the CAMP.

4. Investigation Results

4.1 Soil Characterization

4.1.1 Lithology

The subsurface lithology at the NYC DOC property is composed of six distinct units: two fill units, a silt-clay unit, a silt-sand unit, a weathered bedrock zone, and bedrock (schist). Lithology and subsurface conditions at the NYC DOC property are depicted on Cross-Section F-F' (Figure 4-1). Figure 3-1 shows the cross-section location.

The shallowest units directly beneath the ground surface at the NYC DOC property are the fill units. The majority of the fill beneath the NYC DOC property is composed of fine to medium sands and silty sands with occasional coarser sands and gravels (Sand and Gravel Fill). This Sand and Gravel Fill does not contain significant debris or anthropogenic materials and is likely composed of the dredged backfill material used to fill the NYC DOC property as described in Section 2.1. The second fill unit (Fill) lies primarily in the southeastern portion of the NYC DOC property (a small area of this Fill is also located in the northwestern portion of the property) (Figure 4-1). This Fill is composed of sand, gravel, cobbles, and other debris, such as brick, ash, coal, fabric/geotextile, glass, metal, slag, and wood, and contains isolated areas of purifier wastes (wood chips and wood pulp).

In the southeastern area, the Fill unit is underlain by a native silt-clay unit described as a clayey silt to silt with occasional fine sand and organic debris, such as shells. The native silt-clay unit was not observed beneath the Sand and Gravel Fill. Beneath the two fill units (and the native silt-clay unit) lies a native material, a fine sand and silt unit composed of silty fine to medium sand, with occasional coarser sand, gravel, and mica. Weathered schist bedrock underlies the fine silt-sand unit.

4.1.2 Field Observations

Soil samples were described and inspected for evidence of potential MGP-related impacts, including observations of purifier waste (blue-green discoloration) and NAPL, coating, blebs, sheens, and staining. The table below summarizes field observations where potential MGP-related impacts were observed.

Soil Boring	Field Observations
SB-05A	Blue-green discoloration, MGP-like odor from 1 to 5 feet bgs
SB-05B	Blue-green discoloration, MGP-like odor from 2 to 3 feet bgs
SB-12	MGP-like odor from 10 to 15 feet bgs Blue-green discoloration from 2 to 3 feet bgs.

Evidence of purifier waste impacts were observed at locations SB-05A/B and SB-12, which are both located adjacent to the former purifier waste area on Parcel B (Figure 3-1). Blue-green staining and wood chips were observed from 1 to 5 feet bgs at SB-05A, and blue-green stained wood chips were observed from 2 to 3 feet bgs at SB-05B. At location SB-12 (located 25 feet south of SB-05B), blue-green gravel was observed from 2 to 3 feet bgs (similar to observations in SB-05B). These staining observations could be related to the former purifier waste area on Parcel B. In addition, at SB-12, MGP-like odor was observed from 10 to 15 feet bgs. No other evidence of MGP-related impacts were observed in the soil borings.

At other borings, various debris materials (e.g. slag), sometimes with relatively elevated PID readings, were observed in the fill, and organic-type odors were observed in native soils. These observations appeared to be related to the fill materials and decaying organics and not related to potential MGP impacts. At SB-14, an isolated instance of petroleum-like odor was observed at 4 feet bgs.

4.1.3 Analytical Chemistry

Twenty samples (excluding duplicates) were collected from the 13 borings. The sampling and analytical methods are described in Section 3.2.2. Analytical results are described below and presented in Table 4-1. Figure 4-2 depicts the analytical results of specific constituents.

4.1.3.1 Screening Levels

Results obtained from the laboratory analysis of the soil samples were compared to NYSDEC Subpart 375 Remedial Program Soil Cleanup Objectives (SCOs) for restricted (commercial) and unrestricted uses and NYSDEC CP-51 Soil Cleanup Guidance – Residential Supplemental Soil Cleanup Objectives (SSCO) when SCOs were not available.

4.1.3.2 Volatile Organic Compounds

The following VOCs were detected in soil samples: 1,2,4-trichlorobenzene, 2-butanone, 2-hexanone, acetone, benzene, carbon disulfide, chloroform, dichlorodifluoromethane, ethylbenzene, isopropyl benzene, methyl acetate, methylcyclohexane, methylene chloride, styrene, tetracloroethene, toluene, trichloroethene, and total xylenes. Acetone was the only VOC to exceed its unrestricted use SCO; however, acetone is a common laboratory contaminant. Acetone exceeded its unrestricted use SCO (0.05 mg/kg) in two of 20 samples ranging from 0.063 J to 0.17 J mg/kg. Acetone is not typically associated with MGP sites and, therefore, not considered a representative constituent of interest at the NYC DOC property. No other VOCs exceeded their respective unrestricted use SCOs or SSCOs.

Detected VOC constituents without SCOs or SSCOs include 1,2,4-trichlorobenzene, 2-hexanone, dichlorodifluoromethane, methyl acetate, methylcyclohexane, and styrene. All VOCs without SCOs or

SSCOs were detected infrequently (15% or less of samples) and at low concentrations (less than 0.04 mg/kg) and, therefore, are not considered representative constituents of interest at the NYC DOC property.

4.1.3.3 Semivolatile Organic Compounds

Thirty-one SVOCs, primarily PAHs, were detected in soil samples. PAHs, including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene, exceeded their respective unrestricted use SCOs, and 2-methylnaphthalene exceeded its SSCO. With the exception of chrysene and benzo(k)fluoranthene, these constituents also exceeded the restricted (commercial) use SCOs. Exceedences of PAHs were seen sporadically throughout the site at three locations (SB-05B, SB-08B, and SB-12) (Figure 4-2). PAHs were detected at concentrations slightly exceeding SCOs in soil sample SB-05B (32 to 33 feet bgs), as well as soil samples SB-08B and SB-12. Only the shallower sample from SB-05B (2 to 3 feet bgs) contained relatively higher PAH concentrations. Total PAH concentrations (the sum of the 17 TCL PAHs) ranged from 0.404 to 239.65 mg/kg, with the highest concentrations at SB-05B. At this location, total PAHs were detected at 239.65 mg/kg (2 to 3 feet bgs) and 14.70 [22.98] mg/kg (32 to 33 feet bgs). At the remaining locations, total PAH concentrations ranged from non-detectable levels to 18.26 mg/kg. These PAH concentrations are within the range of urban background values set forth in the Characterization of Soil Background PAH and Metal Concentrations (RETEC 2007) (1.89 mg/kg to 24.8 mg/kg for surficial soils [0 to 2 inches bgs] and 0.948 mg/kg to 35 mg/kg [greater than 6 inches bgs]).

Detected SVOC constituents without SCOs or SSCOs include 1,1'-biphenyl, 1-methylnaphthalene, acetophenone, benzaldehyde, benzo(e)pyrene, butyl benzyl phthalate, carbazole, hexachlorocyclopentadine, and perylene. At SB-05B (2 to 3 feet bgs), the highest concentrations of 1,1'-biphenyl (1 J mg/kg), 1-methylnaphthalene (1.4 J mg/kg), benzo(e)pyrene (15 mg/kg), and perylene (4.4 J mg/kg) were detected at the location where the highest total PAH concentrations were detected. Acetophenone, benzaldehyde, butyl benzyl phthalate, carbazole, and hexachlorocyclopentadine were detected infrequently (5 to 35% of samples) and at low concentrations (less than 1 mg/kg) and, therefore, are not considered representative constituents of interest at the NYC DOC property.

4.1.3.4 Polychlorinated Biphenyls

PCBs were detected in four samples and consisted of Aroclors-1242, -1254, and -1260. Total PCBs exceeded the unrestricted use SCO (0.1 mg/kg) in one sample (SB-02B [10 to 11 feet bgs]) at 0.405 mg/kg. PCBs did not exceed the restricted use SCO (1 mg/kg) in any samples. Because detections and exceedances of total PCBs were infrequent, PCBs are not considered a representative constituent of interest at the NYC DOC property.

4.1.3.5 Metals and Cyanide

The following metals were detected in soil samples: aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, cyanide, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, vanadium, and zinc.

Barium, beryllium, cobalt, and manganese were not detected above their respective SCOs or SSCOs. Mercury and nickel were detected sporadically at concentrations exceeding the unrestricted use SCO only. Chromium was detected in all soil samples at concentrations exceeding the unrestricted use SCO only, and generally at concentrations within urban background values (RETEC 2007), as presented below. Since there is no SCO for total chromium, the SCO for hexavalent chromium was used to evaluate concentrations of total chromium. The SCO for hexavalent chromium was used since it is the lower of the trivalent and hexavalent chromium SCOs.. Vanadium was detected slightly above the SSCO at two locations only. Aluminum, antimony, and chromium do not contain respective SCOs or SSCOs. Calcium, iron, magnesium, potassium, and sodium are considered essential nutrients; therefore, these metals are not considered representative constituents of interest at the NYC DOC property.

Arsenic, cadmium, copper, cyanide, lead, and zinc were detected at concentrations exceeding the restricted (commercial) use SCOs and are discussed below and presented on Figure 4-2. The locations where these constituents exceed the restricted use SCOs are summarized below:

- Arsenic exceeds its restricted use SCO at two locations (SB-04 and SB-05B) at concentrations of 32 mg/kg and 39 mg/kg, respectively.
- Cadmium exceeded its restricted use SCO at SB-04 only (63.7 mg/kg).
- Copper exceeded its restricted use SCO at SB-04 only (309 mg/kg).
- Cyanide exceeded its restricted use SCO at SB-07 only (208 mg/kg).
- Lead exceeded its restricted use SCO at SB-04 only (7,190 J mg/kg).
- Zinc exceeded its restricted use SCO at SB-04 only (61,200 J mg/kg).

Aluminum and antimonydo not contain respective SCOs or SSCOs. Antimony was generally detected at low concentrations (less than 1 mg/kg); the highest concentration of antimony was detected at SB-04 (17.1 mg/kg). Relatively higher concentrations (up to 25,600 mg/kg) of aluminum were detected in SB-03 and SB-04.

As set forth above, higher metal concentrations were generally only observed at location SB-04 (9 to 10 feet bgs). This sample from SB-04 was obtained from the Fill unit on the northeastern portion of the NYC DOC property. The fill material in this interval contained cinders, brick, slag, and glass; however, no indications of NAPL, purifier wastes, or other MGP-related impacts were observed. At the deeper intervals (53 to 54 bgs and 54 to 55 bgs) sampled in the native material at SB-04, with the exception of copper, detected concentrations of these metals do not exceed the restricted or unrestricted use SCO.

With the exception of the metals concentrations detected in soil sample SB-04 (9 to 10 feet bgs), the concentrations for detected metals are generally within urban background values (RETEC 2007), as presented in the table below:

Metal	0 to 2-Inch Interval (mg/kg)	Greater than 6-Inch Interval (mg/kg)
Arsenic	4.1 – 28.1	2.2 – 20.1
Cadmium	0.27 – 1.50	0.11 – 1.90
Copper	23.2 - 141	13.0 – 114
Chromium	14.5 - 55	8.30 – 43.8
Lead	48 - 891	34.0 – 840
Zinc	64 - 515	54.5 – 1,440

At SB-04, concentrations of cadmium, copper, lead, zinc, and arsenic are elevated compared to the urban background values (RETEC 2007). Elevated concentrations could be due to the anthropogenic materials (cinders, brick, slag, and glass) observed within the fill material at this location.

4.2 Groundwater Characterization

4.2.1 Groundwater Flow Direction

Groundwater flow at the site is generally towards the southwest in the direction of the East River. Figure 4-3 depicts groundwater elevations and generalized flow. MW-03 was not used to prepare the groundwater contour map on Figure 4-3 because the well construction was believed to be compromised. Upon sample collection, approximately 6 feet of sediment was observed within the well casing. Groundwater elevations at the perimeter of the NYC DOC property are also likely influenced by the tides, and localized flow reversals likely occur along the perimeter.

4.2.2 Analytical Chemistry

Five samples (excluding duplicates) were collected from the five monitoring wells at the NYC DOC property. Table 4-2 presents the analytical results and are described below. Figure 4-4 depicts the analytical results of specific constituents.

4.2.2.1 Screening Levels

Groundwater samples were analyzed for VOCs, SVOCs, PCBs, and TAL metals and cyanide and screened against the New York State Part 703.5 Water Quality Standards for Groundwater.

4.2.2.2 Volatile Organic Compounds

The following VOCs were detected in the groundwater samples: acetone, bromomethane, carbon disulfide, chloroform, methyl-tert-butylether, and total xylenes. Concentrations of these constituents did not exceed NYSDEC Class GA Standards (groundwater standards).

4.2.2.3 Semivolatile Organic Compounds

The following SVOCs were detected in groundwater samples: acenaphthene, bis(2-ethylhexyl) phthalate, fluoranthene, naphthalene, phenanthrene, phenol, and pyrene. Concentrations of these constituents did not exceed groundwater standards.

4.2.2.4 Metals and Cyanide

The following metals were detected in groundwater: aluminum, arsenic, barium, beryllium, calcium, chromium, cobalt, copper, cyanide, iron, lead, magnesium, manganese, mercury, potassium, sodium, vanadium, and zinc. The following five metals were detected in groundwater at concentrations above their respective groundwater standards: iron, lead, magnesium, manganese, and sodium. The distribution of these five metals in groundwater is depicted on Figure 4-4. As stated previously, calcium, iron, magnesium, potassium, and sodium are essential nutrients and, therefore, not considered representative constituents of interest at the NYC DOC property.

Manganese was detected above the groundwater standard (300 micrograms per liter [µg/L]) at concentrations ranging from 596 to 8,370 µg/L in the three wells (MW-02, MW-04, and MW-05) located in the eastern portion of the NYC DOC property. Lead was also detected above the groundwater standard (25 µg/L) at a concentration of 98.7 µg/L at MW-02. These manganese and lead concentrations are likely reflective of the fill material composition and other anthropogenic materials (e.g., glass, coal, brick, slag, concrete) present in the Fill unit. These groundwater observations are not likely related to purifier wastes, as other metals and cyanide were not observed at elevated concentrations and low pH conditions were not measured (pH ranged from 5.9 to 8.7), as was observed at the Krasdale Foods property (ARCADIS 2013c).

Detected metals without groundwater standards include aluminum, calcium, cobalt, potassium, and vanadium. Cobalt and vanadium were detected in one sample (MW-04) in the northeastern portion of the property. Aluminum was detected in four samples, and calcium and potassium were detected in five samples. Calcium and potassium are considered essential nutrients.

5. Conceptual Site Model

The NYC DOC property is located to the southwest of the Hunts Point former MGP and south and west of Parcel B. This property was created by placing fill into former areas of the East River or pre-existing marshland after the former MGP ceased operations. The shallow lithology in the NYC DOC property consists of two types of fill material. The majority of the fill beneath the NYC DOC property is composed of fine to medium sands and silty sands with occasional coarser sands and gravels (Sand and Gravel Fill). This Sand and Gravel Fill does not contain significant debris or anthropogenic materials and is likely composed of dredged backfill material used to fill the NYC DOC property. The second fill unit (Fill) lies primarily in the southeastern portion of the NYC DOC property. This Fill is composed of sand, gravel, cobbles, and other debris, such as brick, ash, coal, fabric/geotextile, glass, metal, slag, and wood and contains isolated areas of purifier wastes (wood chips and wood pulp).

The NYC DOC property is located adjacent to Parcel B. Prior to redevelopment of this parcel, wood chips, ash, slag, and coal tar were identified in several areas above the water table on Parcel B. Purifier wastes, consisting of blue-green colored wood chips were previously present on the southwestern portion of Parcel B adjacent to the NYC DOC property. An isolated pocket of purifier waste observed on the NYC DOC property did not appear to be a continuation of the adjacent purifier waste area that was excavated from Parcel B based on the visual confirmation and cyanide sampling performed during the Parcel B remediation and redevelopment (HDR, Inc. 2008).

Within the isolated area of purifier waste material on the NYC DOC property (near locations SB-05A, SB-05B, and SB-12), only PAHs were relatively elevated in the sample intervals that contained blue-green stained wood chips. In contrast, relatively higher concentrations of metals and cyanide were not observed in these samples from the southeastern corner of the NYC DOC property, as was observed in samples collected on the Krasdale Foods property adjacent to purifier wastes. Relatively higher metal concentrations were generally only observed in the northeastern portion of the NYC DOC property within the Fill unit (near SB-04) where the fill material contained cinders, brick, slag, and glass, but not NAPL or purifier wastes. Based on visual observations and analytical sample results, there does not appear to be significant areas of MGP-related impacts even where purifier wastes were observed. Throughout the remainder of the NYC DOC property, PAHs and metals were generally within the range of regional urban background values (RETEC 2007). The visual and soil analytical data are further supported by the groundwater analytical data. No VOCs or SVOCs were detected above groundwater standards, and relatively higher concentrations of metals and cyanide and low pH conditions were not observed in the groundwater from the NYC DOC property, such as those observed on the Krasdale Foods property adjacent to purifier wastes and coal tar.

6. Conclusions

Based on the results of the RI activities (summarized in this RIR Addendum), the extent of potential MGP-related impacts on the NYC DOC property have been sufficiently characterized and are limited to a small isolated area of purifier waste residuals (blue-green staining and wood chips) in the southeastern corner of the property. Based on the analytical results, these residuals do not appear to be adversely affecting the soil or groundwater beneath the NYC DOC property: most of the detected VOCs met the SCO or SSCO and groundwater standards, and most of the PAHs and metals were within the range of regional urban background values. Therefore, there are no further recommendations for soil and groundwater investigations beneath the NYC DOC property.

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Tables

Table 3-1
Soil Boring Sample and Analytical Program Summary

Remedial Investigation Report Addendum
Consolidated Edison Company of New York, Inc.
Hunts Point Former Manufactured Gas Plant
Bronx, New York

Sampling Location ID	Boring Depth (ft bgs)	Sample Depth Interval (ft bgs)	Sampling Rationale	Sample Date	NY Long Island State Plane Coordinates		Chemical Analyses					
					Northing (NAD83)	Easting (NAD83)	VOCs (USEPA Method 8260B)	SVOCs (USEPA Method 8270D)	PCBs (USEPA Method 8082A)	Metals (USEPA Method 6010C)	Mercury (USEPA Method 7471B)	Total Cyanide (USEPA Method 9012B)
SB-01	29	10-11	To confirm absence of MGP impacts above the water table. PID readings from 0 to 5 ft bgs (1.2 to 51.4 ppm) were assumed to be non-MGP-related.	9/13/2013	231621.3	1018022.4	X	X	X	X	X	X
SB-02A	3	NA	NA (shallow refusal; boring relocated).	NA	231739.7	1017999.1						
SB-02B	72.5	10-11	To confirm absence of MGP impacts above the water table. PID readings from 5 to 25 ft bgs (0.6 to 2.5 ppm) were assumed to be non-MGP-related.	9/4/2013	231734.7	1018011.4	X	X	X	X	X	X
SB-03	52	9-10	To confirm absence of MGP impacts above the water table. PID readings from 0 to 5 ft bgs (1.8 to 27.8 ppm) were assumed to be non-MGP-related.	9/10/2013	231361.7	1018308.7	X	X	X	X	X	X
		46-47	To confirm absence of MGP impacts in native material. PID reading of 50.4 ppm recorded at this interval.	9/11/2013			X	X	X	X	X	X
		47-48	To confirm absence of MGP impacts in native material and to complete vertical delineation, if necessary.	9/11/2013			X	X	X	X	X	X
SB-04	60	9-10	To confirm absence of MGP impacts above the water table. PID readings from 2 to 8 ft bgs (0.5 to 5.8 ppm) were assumed to be non-MGP-related.	9/9/2013	231538.8	1018622.9	X	X	X	X	X	X
		53-54	To confirm absence of MGP impacts in native material.	9/10/2013			X	X	X	X	X	X
		54-55	To confirm absence of MGP impacts in native material/weathered bedrock and to complete vertical delineation, if necessary.	9/10/2013			X	X	X	X	X	X
SB-05A	5	NA	NA (shallow refusal; boring relocated).	NA	231351.2	1018651.0						
SB-05B	58	2-3	To characterize interval containing blue-green discoloration and MGP-like odor.	8/29/2013	231351.8	1018644.7	X	X	X	X	X	X
		32-33	To confirm absence of MGP impacts in clay and silt unit beneath Fill and complete vertical delineation if necessary. PID readings ranged from 6.8 to 53.4 ppm at this interval.	9/16/2013			X	X	X	X	X	X
SB-06	57.5	8-9	To confirm absence of MGP impacts above the water table. PID readings from 2.5 to 5 ft bgs (0.3 to 7.1 ppm) were assumed to be non-MGP-	9/17/2013	231334.3	1018506.8	X	X	X	X	X	X
SB-07	70	2-3	To confirm absence of MGP impacts above the water table.	8/28/2013	231361.7	1018308.7	X	X	X	X	X	X
SB-08A	4	NA	NA (shallow refusal; boring relocated).	NA	231399.5	1018076.6						
SB-08B	72	5-6	To confirm absence of MGP impacts at the water table (the boring was hand cleared to the water table). PID readings from 3 to 5 ft bgs (1.2 to 6.8 ppm) were assumed to be non-MGP-related.	9/18/2013	231413.8	1018083.3	X	X	X	X	X	X
SB-09	57	9-10	To confirm absence of MGP impacts above the water table.	9/19/2013	231570.9	1018145.6	X	X	X	X	X	X
SB-10	53.5	12-13	To confirm absence of MGP impacts above the water table.	9/20/2013	231541.1	1018333.4	X	X	X	X	X	X
SB-11	58.5	14-15	To confirm absence of MGP impacts above the water table.	9/23/2013	231517.2	1018528.2	X	X	X	X	X	X
SB-12	20	12-13	To characterize interval containing MGP-like odor and to provide horizontal delineation for potential impacts observed in SB-05B.	9/24/2013	231326.9	1018640.3	X	X	X	X	X	X
		15-16	To complete vertical delineation, if necessary.	9/24/2013			X	X	X	X	X	X
SB-14	17.5	9-10	To provide horizontal delineation for potential impacts observed in SB-05B and SB-12 and to confirm absence of MGP impacts above the water table.	9/25/2013	231372.5	1018570.7	X	X	X	X	X	X
		15-16	To complete vertical delineation, if necessary.	9/25/2013			X	X	X	X	X	X

Notes:
ft bgs = feet below ground surface
MGP = manufactured gas plant
PCB = polychlorinated biphenyl
PID = photoionization detector
ppm = parts per million
VOC = volatile organic compound
SVOC = semi-volatile organic compound
USEPA = United States Environmental Protection Agency
NAD83 = New York Long Island State Plane North American Datum of 1983
NA = Not applicable

Table 3-2
Monitoring Well Construction and Groundwater Elevation Summary

Remedial Investigation Report Addendum
Consolidated Edison Company of New York, Inc.
Hunts Point Former Manufactured Gas Plant
Bronx, New York

Location ID	Date Completed	Coordinates		Total Depth Drilled (ft bgs)	DTW (ft)	Groundwater Elevation (ft)	Measuring Point Elev. (ft)	Well Diameter (in)	Casing/ Screen Type	Screen Slot Size (in)	Screen Length	Depth to Screened Interval (ft bgs)		Well Depth (ft bgs)
		Northing	Easting									Top	Bottom	
MW-01	9/5/2013	231734.7	1018011.4	72.5	7.01	0.82	7.83	2.0	PVC	0.020	10.0	7.0	17.0	17.0
MW-02	9/10/2013	231538.8	1018622.9	60.0	8.77	1.05	9.82	2.0	PVC	0.020	10.0	7.0	17.0	17.0
MW-03	9/13/2013	231361.7	1018308.7	70.0	2.07	6.32	8.39	2.0	PVC	0.020	10.0	3.0	13.0	13.0
MW-04	9/11/2013	231711.5	1018470.8	52.0	7.49	1.31	8.80	2.0	PVC	0.020	10.0	7.0	17.0	17.0
MW-05	9/24/2013	231326.9	1018640.3	20.0	7.13	1.02	8.15	2.0	PVC	0.020	10.0	7.0	17.0	17.0

Notes:
Coordinates are based on the North American Datum of 1983 - State Plane New York Long Island.
Elevations are based on the North American Vertical Datum of 1988.
Groundwater gauging occurred on October 3, 2013.
NAPL was not observed in any of the wells during groundwater gauging.

bgs = below ground surface
in = inches
ft = feet
NAPL = non-aqueous phase liquid
PVC = polyvinyl chloride
DTW = depth to water

Table 3-3
Groundwater Sample and Analytical Program Summary

Remedial Investigation Report Addendum
Consolidated Edison Company of New York, Inc.
Hunts Point Former Manufactured Gas Plant
Bronx, New York

Sampling Location ID	Chemical Analyses				
	VOCs (USEPA Method 8260B)	SVOCs (USEPA Method 8270D)	Metals (USEPA Method 6010C)	Mercury (USEPA Method 7471B)	Total Cyanide (USEPA Method 9012B)
MW-1	X	X	X	X	X
MW-2	X	X	X	X	X
MW-3	X	X	X	X	X
MW-4	X	X	X	X	X
MW-5	X	X	X	X	X

Notes:
Elevations are based on the North American Vertical Datum of 1988.
Groundwater sampling occurred on October 3, 2013.
NAPL was not observed in any of the wells during groundwater sampling.

NAPL = non-aqueous phase liquid
SVOC = semivolatile organic compound
USEPA = United States Environmental Protection Agency
VOC = volatile organic compound

Remedial Investigation Report Addendum
Consolidated Edison Company of New York, Inc.
Hunts Point Former Manufactured Gas Plant
Bronx, New York

Location ID: Sample Depth (ft): Date Collected:	Units	Unrestricted Use SCO	Restricted Use SCO - Public Health Commercial	CP-15 Guidance Values	SB-01 10 - 11 09/13/13	SB-02B 10 - 11 09/04/13	SB-03 9 - 10 09/10/13	SB-03 46 - 47 09/11/13	SB-03 47 - 48 09/11/13	SB-04 9 - 10 09/09/13	SB-04 53 - 54 09/10/13	SB-04 54 - 55 09/10/13	SB-05B 2 - 3 08/29/13	SB-05B 32 - 33 09/16/13	SB-06 8 - 9 09/17/13	SB-07 2 - 3 08/28/13	SB-08B 5 - 6 09/18/13	SB-09 9 - 10 09/19/13	SB-10 12 - 13 09/20/13	SB-11 14 - 15 09/23/13	SB-12 12 - 13 09/24/13	SB-12 15 - 16 09/24/13	SB-14 9 - 10 09/25/13	SB-14 15 - 16 09/25/13
Volatile Organics																								
1,1,1-Trichloroethane	mg/kg	0.68	500	- -	0.00031 U	0.00044 UJ	0.00035 U	0.00024 U	0.00027 U	0.0005 U	0.00029 U	0.00029 U	0.00027 U	0.00044 U [0.00046 U]	0.0003 U	0.00022 U	0.00031 U	0.00029 U	0.00037 U	0.0003 U	0.00043 U	0.00027 U	0.00032 U [0.00033 U]	0.00048 U
1,1,2,2-Tetrachloroethane	mg/kg	- -	- -	35	0.00096 U	R	R	R	0.00084 U	R	0.00092 U	0.00091 U	0.00085 UJ	0.0014 U [0.0014 U]	0.00094 U	0.00069 U	0.00099 U	0.00092 U	0.0012 U	0.00095 U	0.0014 UJ	0.00085 U	0.001 U [0.001 U]	0.0015 UJ
1,1,2-trichloro-1,2,2-trifluoroethane	mg/kg	- -	- -	- -	0.00031 U	0.00044 UJ	0.00035 U	0.00024 U	0.00027 U	0.0005 U	0.00029 U	0.00029 U	0.00027 U	0.00044 U [0.00046 U]	0.0003 U	0.00022 U	0.00031 U	0.00029 U	0.00037 U	0.0003 U	0.00043 U	0.00027 U	0.00032 U [0.00033 U]	0.00048 U
1,1,2-Trichloroethane	mg/kg	- -	- -	- -	0.00036 U	R	0.00041 U	0.00027 U	0.00031 U	0.00058 UJ	0.00034 U	0.00034 U	0.00031 UJ	0.00051 U [0.00054 U]	0.00035 U	0.00026 U	0.00037 U	0.00034 U	0.00043 U	0.00035 U	0.0005 U	0.00032 U	0.00037 U [0.00039 U]	0.00056 U
1,1-Dichloroethane	mg/kg	0.27	240	- -	0.00034 U	0.00049 UJ	0.00038 U	0.00026 U	0.0003 U	0.00055 U	0.00032 U	0.00032 U	0.0003 U	0.00049 U [0.00051 U]	0.00033 U	0.00024 U	0.00035 U	0.00032 U	0.0004 U	0.00033 U	0.00047 U	0.0003 U	0.00035 U [0.00037 U]	0.00053 U
1,1-Dichloroethene	mg/kg	0.33	500	- -	0.00039 U	0.00056 UJ	0.00044 U	0.0003 U	0.00034 U	0.00063 U	0.00037 U	0.00037 U	0.00034 U	0.00056 U [0.00058 U]	0.00038 U	0.00028 U	0.0004 U	0.00037 U	0.00046 U	0.00038 U	0.00054 U	0.00034 U	0.0004 U [0.00042 U]	0.00061 UJ
1,2,4-Trichlorobenzene	mg/kg	- -	- -	- -	0.00032 UB	R	R	R	0.00028 U	R	0.0003 U	0.0003 U	0.00064 J	0.00046 U [0.00048 U]	0.00031 U	0.00023 U	0.00033 U	0.0003 U	0.00038 U	0.00031 U	0.00045 UJ	0.00028 U	0.00033 U [0.00034 U]	0.0005 UJ
1,2-Dibromo-3-chloropropane	mg/kg	- -	- -	- -	0.00095 U	R	R	R	0.00083 U	R	0.00091 U	0.0009 U	0.00084 UJ	0.0014 U [0.0014 U]	0.00093 U	0.00068 U	0.00098 U	0.00091 U	0.0011 U	0.00094 U	0.0013 UJ	0.00084 U	0.00099 U [0.001 U]	0.0015 UJ
1,2-Dibromoethane	mg/kg	- -	- -	- -	0.00041 U	R	0.00046 U	0.00031 U	0.00036 U	0.00066 UJ	0.00039 U	0.00039 U	0.00036 UJ	0.00059 U [0.00061 U]	0.0004 U	0.00029 U	0.00042 U	0.00039 U	0.00049 U	0.0004 U	0.00057 U	0.00036 U	0.00042 U [0.00044 U]	0.00064 UJ
1,2-Dichlorobenzene	mg/kg	1.1	500	- -	0.000099 U	R	R	R	0.000087 U	R	0.000094 U	0.000094 U	0.000087 UJ	0.00014 U [0.00015 U]	0.000097 U	0.000071 U	0.0001 U	0.000095 U	0.00012 U	0.000097 U	0.00014 UJ	0.000088 U	0.0001 U [0.00011 U]	0.00016 UJ
1,2-Dichloroethane	mg/kg	0.02	30	- -	0.00039 U	0.00056 UJ	0.00044 U	0.0003 U	0.00034 U	0.00063 U	0.00037 U	0.00037 U	0.00034 U	0.00056 U [0.00058 U]	0.00038 U	0.00028 U	0.0004 U	0.00037 U	0.00046 U	0.00038 U	0.00054 UJ	0.00034 UJ	0.0004 UJ [0.00042 UJ]	0.00061 UJ
1,2-Dichloroethene (total)	mg/kg	- -	- -	- -	0.00035 U	0.0005 UJ	0.00039 U	0.00027 U	0.0003 U	0.00057 U	0.00033 U	0.00033 U	0.0003 U	0.0005 U [0.00052 U]	0.00034 U	0.00025 U	0.00036 U	0.00033 U	0.00042 U	0.00034 U	0.00049 U	0.00031 U	0.00036 U [0.00038 U]	0.00055 U
1,2-Dichloropropane	mg/kg	- -	- -	- -	0.00033 U	0.00047 UJ	0.00037 U	0.00025 U	0.00029 U	0.00053 U	0.00031 U	0.00031 U	0.00029 U	0.00047 U [0.00049 U]	0.00032 U	0.00024 U	0.00034 U	0.00031 U	0.00039 U	0.00032 U	0.00046 U	0.00029 U	0.00034 U [0.00036 U]	0.00051 U
1,3-Dichlorobenzene	mg/kg	2.4	280	- -	0.00011 U	R	R	R	0.000096 U	R	0.0001 U	0.0001 U	0.000096 UJ	0.00016 U [0.00016 U]	0.00011 U	0.000078 U	0.00011 U	0.0001 U	0.00013 U	0.00011 U	0.00015 UJ	0.000097 U	0.00011 U [0.00012 U]	0.00017 UJ
1,4-Dichlorobenzene	mg/kg	1.8	130	- -	0.00022 U	R	R	R	0.00019 U	R	0.00021 U	0.00021 U	0.00019 UJ	0.00031 U [0.00033 U]	0.00021 U	0.00016 U	0.00022 U	0.00021 U	0.00026 U	0.00021 U	0.00031 UJ	0.00019 U	0.00023 U [0.00024 U]	0.00034 UJ
2-Butanone	mg/kg	0.12	500	- -	0.0013 U	0.0019 UJ	0.0027 J	0.00099 U	0.0011 U	0.0031 J	0.0012 U	0.0012 U	0.0068	0.016 [0.02]	0.0013 U	0.00093 U	0.0013 U	0.0012 U	0.0015 U	0.0013 U	0.0065 J	0.0011 U	0.0013 U [0.0014 U]	0.002 U
2-Hexanone	mg/kg	- -	- -	- -	0.00062 U	0.025 J	0.00071 U	0.00048 U	0.00055 U	0.001 UJ	0.0006 U	0.00059 U	0.00055 UJ	0.0009 UJ [0.038 J]	0.00061 U	0.00045 U	0.00064 U	0.0006 U	0.00075 U	0.00061 U	0.00088 U	0.00055 U	0.00065 U [0.00068 U]	0.00098 U
4-Methyl-2-pentanone	mg/kg	- -	- -	- -	0.00049 U	0.00072 UJ	0.00056 U	0.00038 U	0.00043 U	0.00081 U	0.00047 U	0.00047 U	0.00044 U	0.00071 U [0.00074 U]	0.00048 U	0.00036 U	0.00051 U	0.00048 U	0.00059 U	0.00049 U	0.0007 U	0.00044 U	0.00051 U [0.00054 U]	0.00078 U
Acetone	mg/kg	0.05	500	- -	0.0021 UBJ	**0.17 J**	0.0071	0.0037 J	0.0032 J	0.019 J	0.003 J	0.0027 J	0.034	**0.053 J [0.073 J]**	0.002 UJ	0.0023 J	0.0027 J	0.002 UJ	0.0025 UJ	0.0021 J	0.032 J	0.0077 J	0.0047 J [0.0023 UBJ]	0.02 J
Benzene	mg/kg	0.06	44	- -	0.00032 U	0.00046 UJ	0.00036 U	0.00024 U	0.00028 U	0.00052 U	0.0003 U	0.0003 U	0.0013 J	0.00062 J [0.00053 J]	0.00031 U	0.00023 U	0.0008 J	0.0003 U	0.00038 U	0.00053 J	0.0011 J	0.00034 J	0.00033 U [0.00034 U]	0.0005 UJ
Bromodichloromethane	mg/kg	- -	- -	- -	0.00036 U	0.00052 UJ	0.00041 U	0.00027 U	0.00031 U	0.00058 U	0.00034 U	0.00034 U	0.00031 U	0.00051 U [0.00054 U]	0.00035 U	0.00026 U	0.00037 U	0.00034 U	0.00043 U	0.00035 U	0.0005 U	0.00032 U	0.00037 U [0.00039 U]	0.00056 UJ
Bromoform	mg/kg	- -	- -	- -	0.00032 U	R	0.00036 U	0.00024 U	0.00028 U	0.00052 UJ	0.0003 U	0.0003 U	0.00028 UJ	0.00046 U [0.00048 U]	0.00031 U	0.00023 U	0.00033 U	0.0003 U	0.00038 U	0.00031 U	0.00045 U	0.00028 U	0.00033 U [0.00034 U]	0.0005 U
Bromomethane	mg/kg	- -	- -	- -	0.0012 UJ	0.0017 UJ	0.0014 U	0.00091 U	0.001 U	0.0019 U	0.0011 U	0.0011 U	0.001 U	0.0017 UJ [0.0018 UJ]	0.0012 UJ	0.00086 U	0.0012 UJ	0.0011 UJ	0.0014 UJ	0.0012 UJ	0.0017 UJ	0.0011 UJ	0.0012 UJ [0.0013 UJ]	0.0019 UJ
Carbon Disulfide	mg/kg	- -	- -	100	0.00027 U	0.0087 J	0.0017 J	0.004	0.0032 J	0.0021 J	0.0024 J	0.0022 J	0.0058	0.021 [0.019]	0.00026 U	0.00019 U	0.00027 UBJ	0.00026 U	0.00032 U	0.00065 J	0.0086 J	0.0034 J	0.00032 J [0.00029 U]	0.0026 J
Carbon Tetrachloride	mg/kg	0.76	22	- -	0.00029 U	0.00042 UJ	0.00033 U	0.00022 U	0.00025 U	0.00047 U	0.00027 U	0.00027 U	0.00025 U	0.00041 U [0.00043 U]	0.00028 U	0.00021 U	0.00029 U	0.00028 U	0.00034 U	0.00028 U	0.0004 UJ	0.00025 UJ	0.0003 UJ [0.00031 UJ]	0.00045 UJ
Chlorobenzene	mg/kg	1.1	500	- -	0.00016 U	R	0.00018 U	0.00012 U	0.00014 U	0.00026 UJ	0.00015 U	0.00015 U	0.00014 UJ	0.00023 U [0.00024 U]	0.00015 U	0.00011 U	0.00016 U	0.00015 U	0.00019 U	0.00016 U	0.00022 U	0.00014 U	0.00016 U [0.00017 U]	0.00025 U
Chloroethane	mg/kg	- -	- -	- -	0.00039 UJ	0.00056 UJ	0.00044 U	0.0003 UJ	0.00034 UJ	0.00063 UJ	0.00037 UJ	0.00037 UJ	0.00034 U	0.00056 UJ [0.00058 UJ]	0.00038 UJ	0.00028 U	0.0004 UJ	0.00037 UJ	0.00046 UJ	0.00038 UJ	0.00054 UJ	0.00034 UJ	0.0004 UJ [0.00042 UJ]	0.00061 UJ
Chloroform	mg/kg	0.37	350	- -	0.00035 U	0.0005 UJ	0.00039 U	0.00027 U	0.0003 U	0.00057 U	0.00033 U	0.00033 U	0.0003 U	0.0005 U [0.00052 U]	0.00034 U	0.00025 U	0.002 J	0.00033 U	0.00042 U	0.00034 U	0.00049 U	0.00031 U	0.00036 U [0.00038 U]	0.00055 U
Chloromethane	mg/kg	- -	- -	- -	0.00039 U	0.00056 UJ	0.00044 U	0.0003 U	0.00034 U	0.00063 U	0.00037 U	0.00037 U	0.00034 U	0.00056 U [0.00058 U]	0.00038 U	0.00028 U	0.0004 U	0.00037 U	0.00046 U	0.00038 U	0.00054 U	0.00034 U	0.0004 U [0.00042 U]	0.00061 U
cis-1,2-Dichloroethene	mg/kg	0.25	500	- -	0.00035 U	0.0005 UJ	0.00039 U	0.00027 U	0.0003 U	0.00057 U	0.00033 U	0.00033 U	0.0003 U	0.0005 U [0.00052 U]	0.00034 U	0.00025 U	0.00036 U	0.00033 U	0.00042 U	0.00034 U	0.00049 U	0.00031 U	0.00036 U [0.00038 U]	0.00055 UJ
cis-1,3-Dichloropropene	mg/kg	- -	- -	- -	0.00029 U	0.00042 UJ	0.00033 U	0.00022 U	0.00025 U	0.00047 U	0.00027 U	0.00027 U	0.00025 U	0.00041 U [0.00043 U]	0.00028 U	0.00021 U	0.00029 U	0.00028 U	0.00034 U	0.00028 U	0.0004 U	0.00025 U	0.0003 U [0.00031 U]	0.00045 UJ
Cyclohexane	mg/kg	- -	- -	- -	0.0003 U	0.00043 UJ	0.00034 U	0.00023 U	0.00026 U	0.00048 U	0.00028 U	0.00028 U	0.00026 U	0.00043 U [0.00045 U]	0.00029 U	0.00021 U	0.0003 U	0.00029 U	0.00036 U	0.00029 U	0.00042 U	0.00026 U	0.00031 U [0.00032 U]	0.00047 UJ
Dibromochloromethane	mg/kg	- -	- -	- -	0.00031 U	R	0.00035 U	0.00024 U	0.00027 U	0.0005 UJ	0.00029 U	0.00029 U	0.00027 UJ	0.00044 U [0.00046 U]	0.0003 U	0.00022 U	0.00031 U	0.00029 U	0.00037 U	0.0003 U	0.00043 U	0.00027 U	0.00032 U [0.00033 U]	0.00048 U
Dichlorodifluoromethane	mg/kg	- -	- -	- -	0.00035 UJ	0.0005 UJ	0.00039 U	0.00027 U	0.0003 U	0.00057 U	0.00033 U	0.00033 U	0.0003 U	0.0005 UJ [0.0074 J]	0.00034 UJ	0.00025 U	0.00036 UJ	0.00033 U	0.00042 U	0.00034 U	0.00049 U	0.00031 U	0.00036 U [0.00038 U]	0.00055 U
Ethylbenzene	mg/kg	1	390	- -	0.00014 J	0.0063 J	0.000079 U	0.000053 U	0.000061 U	0.00011 UJ	0.000066 U	0.000066 U	0.011 J	0.00025 J [0.0003 J]	0.00013 J	0.00005 U	0.00019 J	0.000067 U	0.000083 U	0.00025 J	0.000098 U	0.000062 U	0.000072 U [0.000075 U]	0.00011 U
Isopropylbenzene	mg/kg	- -	- -	100	0.00034 U	R	R	R	0.0003 U	R	0.00032 U	0.00032 U	0.00096 J	0.0055 J [0.0059 J]	0.00033 U	0.00024 U	0.00035 U	0.00032 U	0.0004 U	0.00033 U	0.00047 UJ	0.0003 U	0.00035 U [0.00037 U]	0.00053 UJ
Methyl acetate	mg/kg	- -	- -	- -	R	0.0012 UJ	0.00095 U	0.00064 U	0.00073 U	0.0014 U	0.00079 U	0.00079 U	0.00073 U	0.0019 J [R]	R	0.0006 U	0.0028 J	R	R	0.00082 U	0.0018 J	0.00074 U	0.00086 U [0.0009 U]	0.0013 U
Methylcyclohexane	mg/kg	- -	- -	- -	0.00026 U	0.00037 UJ	0.00029 U	0.0002 U	0.00023 U	0.00051 J	0.00025 U	0.00024 U	0.00023 U	0.0024 J [0.0023 J]	0.00025 U	0.00019 U	0.00026 U	0.00025 U	0.00031 U	0.00025 U	0.00036 U	0.00023 U	0.00027 U [0.00028 U]	0.00041 UJ
Methylene Chloride	mg/kg	0.05	500	- -	0.0008 J	0.00057 UJ	0.00045 U	0.00059 J	0.00062 J	0.00065 U	0.00041 J	0.00051 J	0.00035 U	0.00066 J [0.00061 J]	0.00055 J	0.00032 J	0.00057 J	0.00038 U	0.00048 U	0.00039 UB	0.00055 J	0.00035 U	0.00041 U [0.00045 J]	0.00062 UJ
Methyl-Tert-Butylether	mg/kg	0.93	500	- -	0.00041 U	0.00059 UJ	0.00046 U	0.00031 U	0.00036 U	0.00066 U	0.00039 U	0.00039 U	0.00036 U	0.00059 U [0.00061 U]	0.0004 U	0.00029 U	0.00042 U	0.00039 U	0.00049 U	0.0004 U	0.00057 U	0.00036 U	0.00042 U [0.00044 U]	0.00064 U
Styrene	mg/kg	- -	- -	- -	0.00012 U	R	0.00014 U	0.000091 U	0.0001 U	0.00019 UJ	0.00011 U	0.00011 U	0.00085 J	0.00017 U [0.00018 U]	0.00012 U	0.000086 U	0.00012 U	0.00011 U	0.00014 U	0.00012 U	0.00017 U	0.00011 U	0.00012 U [0.00013 U]	0.00019 UJ
Tetrachloroethene	mg/kg	1.3	150	- -	0.000099 U	R	0.00011 U	0.000076 U	0.000087 U	0.00016 UJ	0.000094 U	0.000094 U	0.00014 J	0.00014 U [0.00015 U]	0.000097 U	0.000071 U	0.0001 U	0.000095 U	0.00012 U	0.000097 U	0.00014 U	0.000091 J	0.00013 J [0.00013 J]	0.00036 J
Toluene	mg/kg	0.7	500	- -	0.00011 UB	R	0.00012 UB	0.000084 UB	0.000096 UB	0.00018 UBJ	0.0001 UB	0.0001 UB	0.0011 J	0.00016 UB [0.00016 UB]	0.00011 UB	0.000078 U	0.00011 UB	0.0001 U	0.00013 UB	0.00011 UB	0.00015 UB	0.000097 UB	0.00011 U [0.00012 UB]	0.00017 U
trans-1,2-Dichloroethene	mg/kg	0.19	500	- -	0.00037 U	0.00053 UJ	0.00042 U	0.00028 U	0.00032 U	0.0006 U	0.00035 U	0.00035 U	0.00032 U	0.00053 U [0.00055 U]	0.00036 U	0.00026 U	0.00038 U	0.00035 U	0.00044 U	0.00036 U	0.00052 U	0.00033 U	0.00038 U [0.0004 U]	0.00058 UJ
trans-1,3-Dichloropropene	mg/kg	- -	- -	- -	0.00029 U	R	0.00033 U	0.00022 U	0.00025 U	0.00047 UJ	0.00027 U	0.00027 U	0.00025 UJ	0.00041 U [0.00043 U]	0.00028 U	0.00021 U	0.00029 U	0.00028 U	0.00034 U	0.00028 U	0.0004 U	0.00025 U	0.0003 U [0.00031 U]	0.00045 UJ
Trichloroethene	mg/kg	0.47	200	- -	0.00036 U	0.00052 UJ	0.00041 U	0.00027 U	0.00031 U	0.00058 U	0.00034 U	0.00034 U	0.0011 J	0.00051 U [0.00054 U]	0.00035 U	0.00026 UB	0.00037 U	0.00034 U	0.00043 U	0.00035 U	0.0005 U	0.00032 U	0.00037 U [0.00039 U]	0.00056 UJ
Trichlorofluoromethane	mg/kg	- -	- -	- -	0.00027 U	0.00039 UJ	0.0003 U	0.00021 U	0.00023 U	0.00044 U	0.00026 U	0.00025 U	0.00024 U	0.00039 U [0.0004 U]	0.00026 U	0.00019 U	0.00027 U	0.00026 U	0.00032 U	0.00026 U	0.00038 U	0.00024 U	0.00028 U [0.00029 U]	0.00042 U
Vinyl Chloride	mg/kg	0.02	13	- -	0.0003 U	0.00043 UJ	0.00034 U	0.00023 U	0.00026 U	0.00048 U	0.00028 U	0.00028 U	0.00026 U	0.00043 U [0.00045 U]	0.00029 U	0.00021 U	0.0003 U	0.00029 U	0.00036 U	0.00029 U	0.00042 U	0.00026 U	0.00031 U [0.00032 U]	0.00047 U
Xylenes (total)	mg/kg	0.26	500	- -	0.00017 J	R	0.00017 J	0.000061 U	0.000088 J	0.00013 UJ	0.000076 U	0.000075 U	0.0011 J	0.00082 J [0.0011 J]	0.0003 J	0.000057 U	0.00046 J	0.000076 U	0.00012 J	0.000078 U	0.00084 J*	0.000074 J	0.000082 U [0.000086 U]	0.00012 U
Total BTEX	mg/kg	- -	- -	- -	0.00031 J	0.0063 J	0.00017 J	ND	0.000088 J	ND	ND	ND	0.0145 J	0.00169 J [0.00193 J]	0.00043 J	ND	0.00145 J	ND	0.00012 J	0.00078 J	0.00194 J	0.000414 J	ND [ND]	ND
Total VOCs	mg/kg	- -	- -	- -	0.00111 J	0.21 J	0.01167 J	0.00829 J	0.007108 J	0.02471 J	0.00581 J	0.00541 J	0.06479 J	0.10215 J [0.16814 J]	0.00098 J	0.00262 J	0.00952 J	ND	0.00012 J	0.00353 J	0.05139 J	0.011605 J	0.00515 J [0.00058 J]	0.02296 J

Table 4-1
Summary of Soil Sample Analytical Results

Remedial Investigation Report Addendum
Consolidated Edison Company of New York, Inc.
Hunts Point Former Manufactured Gas Plant
Bronx, New York

Location ID: Sample Depth (ft): Date Collected:	Units	Unrestricted Use SCO	Restricted Use SCO - Public Health Commercial	CP-15 Guidance Values	SB-01 10 - 11 09/13/13	SB-02B 10 - 11 09/04/13	SB-03 9 - 10 09/10/13	SB-03 46 - 47 09/11/13	SB-03 47 - 48 09/11/13	SB-04 9 - 10 09/09/13	SB-04 53 - 54 09/10/13	SB-04 54 - 55 09/10/13	SB-05B 2 - 3 08/29/13	SB-05B 32 - 33 09/16/13	SB-06 8 - 9 09/17/13	SB-07 2 - 3 08/28/13	SB-08B 5 - 6 09/18/13	SB-09 9 - 10 09/19/13	SB-10 12 - 13 09/20/13	SB-11 14 - 15 09/23/13	SB-12 12 - 13 09/24/13	SB-12 15 - 16 09/24/13	SB-14 9 - 10 09/25/13	SB-14 15 - 16 09/25/13
Semivolatile Organics																								
1,1'-Biphenyl	mg/kg	- -	- -	- -	0.016 U	0.019 U	0.019 U	0.017 U	0.017 U	0.042 J	0.018 U	0.015 U	1 J	0.036 U [0.047 J]	0.016 U	0.018 U	0.02 J	0.016 U	0.016 U	0.016 U	0.034 J	0.016 U	0.016 U [0.016 U]	0.017 U
1,2,4,5-Tetrachlorobenzene	mg/kg	- -	- -	- -	0.042 U	0.052 U	0.052 U	0.046 U	0.046 U	0.049 U	0.047 U	0.041 U	1 U	0.097 U [0.12 U]	0.042 U	0.049 U	0.045 U	0.043 U	0.043 U	0.043 U	0.068 U	0.044 U	0.043 U [0.043 U]	0.044 U
1,2,4-Trichlorobenzene	mg/kg	- -	- -	- -	0.037 U	0.045 U	0.045 U	0.04 U	0.04 U	0.043 U	0.041 U	0.036 U	0.88 U	0.085 U [0.11 U]	0.037 U	0.043 U	0.04 U	0.038 U	0.037 U	0.038 U	0.059 U	0.038 U	0.038 U [0.038 U]	0.039 U
1,2-Dichlorobenzene	mg/kg	1.1	500	- -	0.043 U	0.053 U	0.053 U	0.047 U	0.047 U	0.05 U	0.048 U	0.042 U	1 U	0.099 U [0.13 U]	0.043 U	0.051 U	0.047 U	0.044 U	0.044 U	0.044 U	0.069 U	0.045 U	0.044 U [0.044 U]	0.045 U
1,3-Dichlorobenzene	mg/kg	2.4	280	- -	0.034 U	0.041 U	0.041 U	0.037 U	0.037 U	0.039 U	0.038 U	0.033 U	0.81 U	0.077 U [0.099 U]	0.034 U	0.039 U	0.036 U	0.034 U	0.034 U	0.034 U	0.054 U	0.035 U	0.035 U [0.034 U]	0.035 U
1,4-Dichlorobenzene	mg/kg	1.8	130	- -	0.04 U	0.049 U	0.049 U	0.043 U	0.043 U	0.046 U	0.045 U	0.039 U	0.96 U	0.092 U [0.12 U]	0.04 U	0.047 U	0.043 U	0.041 U	0.041 U	0.041 U	0.064 U	0.042 U	0.041 U [0.041 U]	0.042 U
1-Methylnaphthalene	mg/kg	- -	- -	- -	0.014 U	0.37 J	0.017 U	0.015 U	0.015 U	0.052 J	0.015 U	0.013 U	1.4 J	0.14 J [0.24 J]	0.014 U	0.016 U	0.053 J	0.014 U	0.014 U	0.015 J	0.1 J	0.024 J	0.014 U [0.014 U]	0.025 J
2,2'-Oxybis(1-Chloropropane)	mg/kg	- -	- -	- -	0.017 U	0.021 U	0.021 U	0.018 U	0.018 U	0.02 U	0.019 U	0.016 U	0.4 U	0.039 U [0.05 U]	0.017 U	0.02 U	0.018 U	0.017 U	0.017 U	0.017 U	0.027 U	0.018 U	0.017 U [0.017 U]	0.018 U
2,3,4,6-Tetrachlorophenol	mg/kg	- -	- -	- -	0.039 U	0.048 U	0.048 U	0.042 U	0.042 U	0.045 U	0.043 U	0.038 U	0.93 U	0.09 U [0.11 U]	0.039 U	0.046 U	0.042 U	0.04 U	0.039 U	0.04 U	0.062 U	0.041 U	0.04 U [0.04 U]	0.041 U
2,4,5-Trichlorophenol	mg/kg	- -	- -	100	0.036 U	0.044 U	0.044 U	0.039 U	0.039 U	0.042 U	0.04 U	0.035 U	0.86 U	0.082 U [0.11 U]	0.036 U	0.042 U	0.039 U	0.037 U	0.036 U	0.036 U	0.057 U	0.037 U	0.037 U [0.037 U]	0.038 U
2,4,6-Trichlorophenol	mg/kg	- -	- -	- -	0.036 U	0.044 U	0.044 U	0.039 U	0.039 U	0.042 U	0.04 U	0.035 U	0.86 U	0.082 U [0.11 U]	0.036 U	0.042 U	0.039 U	0.037 U	0.036 U	0.036 U	0.057 U	0.037 U	0.037 U [0.037 U]	0.038 U
2,4-Dichlorophenol	mg/kg	- -	- -	100	0.035 U	0.043 U	0.043 U	0.038 U	0.038 U	0.04 U	0.039 U	0.034 U	0.83 U	0.08 U [0.1 U]	0.035 U	0.041 U	0.038 U	0.036 U	0.035 U	0.035 U	0.056 U	0.036 U	0.036 U [0.035 U]	0.037 U
2,4-Dimethylphenol	mg/kg	- -	- -	- -	0.055 U	0.067 U	0.067 U	0.059 U	0.059 U	0.064 U	0.061 U	0.053 U	1.3 UJ	0.13 U [0.16 U]	0.055 U	0.064 U	0.059 U	0.056 U	0.055 U	0.056 U	0.088 U	0.057 U	0.056 U [0.056 U]	R
2,4-Dinitrophenol	mg/kg	- -	- -	100	0.15 UJ	0.18 UJ	0.18 UJ	0.16 UJ	0.16 UJ	0.17 UJ	0.16 UJ	0.14 UJ	3.5 U	0.34 UJ [0.43 UJ]	0.15 U	0.17 U	0.16 UJ	0.15 U	0.15 UJ	0.15 U	0.24 UJ	0.15 UJ	0.15 UJ [0.15 U]	0.16 UJ
2,4-Dinitrotoluene	mg/kg	- -	- -	- -	0.025 U	0.031 U	0.031 U	0.027 U	0.027 U	0.029 U	0.028 U	0.025 U	0.61 U	0.058 U [0.074 U]	0.025 U	0.03 U	0.027 U	0.026 U	0.026 U	0.026 U	0.041 U	0.026 U	0.026 U [0.026 U]	0.027 U
2,6-Dichlorophenol	mg/kg	- -	- -	- -	0.04 U	0.049 U	0.049 U	0.043 U	0.043 U	0.046 U	0.045 U	0.039 U	0.96 U	0.092 U [0.12 U]	0.04 U	0.047 U	0.043 U	0.041 U	0.041 U	0.041 U	0.064 U	0.042 U	0.041 U [0.041 U]	0.042 U
2,6-Dinitrotoluene	mg/kg	- -	- -	1.03	0.032 U	0.039 U	0.039 U	0.034 U	0.034 U	0.037 U	0.035 U	0.031 U	0.76 U	0.073 U [0.093 U]	0.032 U	0.037 U	0.034 U	0.032 U	0.032 U	0.032 U	0.051 U	0.033 U	0.032 U [0.032 U]	0.033 U
2-Chloronaphthalene	mg/kg	- -	- -	- -	0.045 U	0.055 U	0.055 U	0.049 U	0.049 U	0.053 U	0.05 U	0.044 U	1.1 U	0.1 U [0.13 U]	0.046 U	0.053 U	0.049 U	0.046 U	0.046 U	0.046 U	0.073 U	0.047 U	0.047 U [0.046 U]	0.048 U
2-Chlorophenol	mg/kg	- -	- -	- -	0.036 U	0.044 U	0.044 U	0.039 U	0.039 U	0.042 U	0.04 U	0.035 U	0.86 U	0.082 U [0.11 U]	0.036 U	0.042 U	0.039 U	0.037 U	0.036 U	0.036 U	0.057 U	0.037 U	0.037 U [0.037 U]	0.038 U
2-Methyl-4,6-dinitrophenol	mg/kg	- -	- -	- -	0.1 U	0.13 U	0.13 UJ	0.11 UJ	0.11 UJ	0.12 UJ	0.11 UJ	0.099 UJ	2.4 U	0.23 U [0.3 U]	0.1 U	0.12 U	0.11 U	0.1 U	0.1 UJ	0.1 U	0.16 UJ	0.11 U	0.1 U [0.1 U]	0.11 U
2-Methylnaphthalene	mg/kg	- -	- -	0.41	0.016 U	0.09 J	0.019 U	0.017 U	0.017 U	0.12 J	0.018 U	0.015 U	**1.2 J**	0.059 J [0.11 J]	0.016 U	0.018 U	0.044 J	0.016 U	0.016 U	0.026 J	0.085 J	0.028 J	0.016 U [0.016 U]	0.027 J
2-Methylphenol	mg/kg	0.33	500	- -	0.042 U	0.052 U	0.052 U	0.046 U	0.046 U	0.049 U	0.047 U	0.041 U	*1 U*	0.097 U [0.12 U]	0.042 U	0.049 U	0.045 U	0.043 U	0.043 U	0.043 U	0.068 U	0.044 U	0.043 U [0.043 U]	0.044 UJ
2-Nitroaniline	mg/kg	- -	- -	- -	0.039 U	0.048 U	0.048 U	0.042 U	0.042 U	0.045 U	0.043 U	0.038 U	0.93 U	0.09 U [0.11 U]	0.039 U	0.046 U	0.042 U	0.04 U	0.039 U	0.04 U	0.062 U	0.041 U	0.04 U [0.04 U]	0.041 U
2-Nitrophenol	mg/kg	- -	- -	- -	0.039 U	0.048 U	0.048 U	0.042 U	0.042 U	0.045 U	0.043 U	0.038 U	0.93 U	0.09 U [0.11 U]	0.039 U	0.046 U	0.042 U	0.04 U	0.039 U	0.04 U	0.062 U	0.041 U	0.04 U [0.04 U]	0.041 U
3 & 4 Methylphenol	mg/kg	- -	- -	- -	0.078 U	0.095 U	0.095 U	0.085 U	0.085 U	0.09 U	0.087 U	0.076 U	1.9 U	0.18 U [0.23 U]	0.078 U	0.091 U	0.084 U	0.08 U	0.079 U	0.079 U	0.12 U	0.081 U	0.08 U [0.08 U]	0.082 U
3,3-Dichlorobenzidine	mg/kg	- -	- -	- -	0.05 U	0.062 UJ	0.062 U	0.055 U	0.055 U	0.059 U	0.056 U	0.049 U	1.2 U	0.12 U [0.15 U]	0.051 U	0.059 U	0.055 U	0.052 U	0.051 U	0.051 U	0.081 U	0.053 U	0.052 U [0.052 U]	0.053 UJ
3-Nitroaniline	mg/kg	- -	- -	- -	0.04 U	0.049 U	0.049 U	0.043 U	0.043 U	0.046 U	0.045 U	0.039 U	0.96 U	0.092 U [0.12 U]	0.04 U	0.047 U	0.043 U	0.041 U	0.041 U	0.041 U	0.064 U	0.042 U	0.041 U [0.041 U]	0.042 U
4-Bromophenyl Phenyl Ether	mg/kg	- -	- -	- -	0.019 U	0.023 U	0.023 U	0.021 U	0.021 U	0.022 U	0.021 U	0.018 U	0.45 U	0.044 U [0.056 U]	0.019 U	0.022 U	0.02 U	0.019 U	0.019 U	0.019 U	0.03 U	0.02 U	0.019 U [0.019 U]	0.02 U
4-Chloro-3-Methylphenol	mg/kg	- -	- -	- -	0.042 U	0.052 U	0.052 U	0.046 U	0.046 U	0.049 U	0.047 U	0.041 U	1 U	0.097 U [0.12 U]	0.042 U	0.049 U	0.045 U	0.043 U	0.043 U	0.043 U	0.068 U	0.044 U	0.043 U [0.043 U]	0.044 U
4-Chloroaniline	mg/kg	- -	- -	- -	0.034 U	0.041 U	0.041 U	0.037 U	0.037 U	0.039 U	0.038 U	0.033 U	0.81 U	0.077 U [0.099 U]	0.034 U	0.039 U	0.036 U	0.034 U	0.034 U	0.034 U	0.054 U	0.035 U	0.035 U [0.034 U]	0.035 U
4-Chlorophenyl Phenyl Ether	mg/kg	- -	- -	- -	0.016 U	0.019 U	0.019 U	0.017 U	0.017 U	0.018 U	0.018 U	0.015 U	0.38 U	0.036 U [0.046 U]	0.016 U	0.018 U	0.017 U	0.016 U	0.016 U	0.016 U	0.025 U	0.016 U	0.016 U [0.016 U]	0.017 U
4-Nitroaniline	mg/kg	- -	- -	- -	0.034 U	0.041 U	0.041 U	0.037 U	0.037 U	0.039 U	0.038 U	0.033 U	0.81 U	0.077 U [0.099 U]	0.034 U	0.039 U	0.036 U	0.034 U	0.034 U	0.034 U	0.054 U	0.035 U	0.035 U [0.034 U]	0.035 U
4-Nitrophenol	mg/kg	- -	- -	- -	0.088 U	0.11 U	0.11 U	0.096 U	0.096 U	0.1 U	0.099 U	0.086 U	2.1 U	0.2 U [0.26 U]	0.089 U	0.1 U	0.096 U	0.09 U	0.09 U	0.09 U	0.14 U	0.092 U	0.091 U [0.09 U]	0.093 U
Acenaphthene	mg/kg	20	500	- -	0.014 U	0.92	0.017 U	0.015 U	0.015 U	0.016 U	0.015 U	0.013 U	0.35 J	0.23 J [0.38 J]	0.014 U	0.016 U	0.053 J	0.014 U	0.014 U	0.014 U	0.19 J	0.054 J	0.014 U [0.014 U]	0.071 J
Acenaphthylene	mg/kg	100	500	- -	0.016 U	0.11 J	0.019 U	0.017 U	0.017 U	0.018 U	0.018 U	0.015 U	1.2 J	0.088 J [0.17 J]	0.016 U	0.018 U	0.13 J	0.016 U	0.016 U	0.042 J	0.086 J	0.04 J	0.016 U [0.016 U]	0.017 U
Acetophenone	mg/kg	- -	- -	- -	0.017 UB	0.021 UB	0.021 UB	0.018 UB	0.018 UB	0.02 UB	0.019 UB	0.016 UB	0.69 J	0.039 UB [0.05 UB]	0.017 U	0.02 UB	0.018 UB	0.017 UB	0.017 UB	0.017 UB	0.045 J	0.023 J	0.063 J [0.06 J]	0.33 J
Aniline	mg/kg	- -	- -	- -	0.036 U	0.044 U	0.044 U	0.039 U	0.039 U	0.042 U	0.04 U	0.035 U	0.86 U	0.082 U [0.11 U]	0.036 U	0.042 U	0.039 U	0.037 U	0.036 U	0.036 U	0.057 U	0.037 U	0.037 U [0.037 U]	0.038 UJ
Anthracene	mg/kg	100	500	- -	0.015 U	0.78	0.018 U	0.016 U	0.016 U	0.041 J	0.016 U	0.014 U	3.6 J	0.63 J [1]	0.015 U	0.017 U	0.43	0.015 U	0.051 J	0.12 J	0.6	0.25 J	0.015 U [0.015 U]	0.26 J
Atrazine	mg/kg	- -	- -	- -	0.017 U	0.021 UJ	0.021 U	0.018 U	0.018 U	0.02 U	0.019 U	0.016 U	0.4 U	0.039 U [0.05 U]	0.017 U	0.02 U	0.018 U	0.017 U	0.017 U	0.017 U	0.027 U	0.018 U	0.017 U [0.017 U]	0.018 U
Azobenzene	mg/kg	- -	- -	- -	0.02 U	0.024 U	0.025 U	0.022 U	0.022 U	0.023 U	0.022 U	0.019 U	0.48 U	0.046 U [0.059 U]	0.02 U	0.023 U	0.022 U	0.02 U	0.02 U	0.02 U	0.032 U	0.021 U	0.021 U [0.02 U]	0.021 U
Benzaldehyde	mg/kg	- -	- -	- -	0.017 U	0.021 UB	0.021 U	0.018 U	0.018 U	0.02 UB	0.019 U	0.016 U	0.4 U	0.039 U [0.05 U]	0.017 U	0.02 U	0.018 U	0.017 U	0.021 J	0.017 U	0.027 U	0.018 U	0.017 U [0.017 U]	0.059 J
Benzidine	mg/kg	- -	- -	- -	R	R	R	R	R	R	R	R	R	R [R]	R	R	R	R	R	R	0.16 U	0.11 U	0.1 U [0.1 U]	R
Benzo(a)anthracene	mg/kg	1	5.6	- -	0.047 J	0.73	0.017 UB	0.015 U	0.015 U	0.016 UB	0.015 U	0.013 U	**16**	**1.6 [2.6]**	0.029 J	0.016 U	**1.4**	0.03 J	0.2 J	0.28 J	**1.5**	0.52	0.035 J [0.038 J]	0.42
Benzo(a)pyrene	mg/kg	1	1	- -	0.057 J	0.7	0.015 UB	0.014 U	0.014 U	0.015 UB	0.014 U	0.012 U	**17**	**1.4 [2.3]**	0.035 J	0.015 U	**1.3**	0.025 J	0.21 J	0.25 J	**1.4**	0.46	0.04 J [0.042 J]	0.39
Benzo(b)fluoranthene	mg/kg	1	5.6	- -	0.071 J	0.55	0.1 J	0.026 UJ	0.026 UJ	0.1 J	0.027 UJ	0.024 UJ	**20**	**0.77 J [1.3]**	0.038 J	0.028 U	**1.3**	0.025 U	0.29 J	0.29 J	**1.5**	0.51	0.043 U [0.036 J]	0.37
Benzo(e)pyrene	mg/kg	- -	- -	- -	0.056 J	0.42 J	0.083 J	0.018 U	0.018 U	0.18 J	0.019 U	0.016 U	15	0.9 [1.4]	0.027 J	0.02 U	0.98	0.017 U	0.2 J	0.17 J	0.97	0.36	0.031 J [0.033 J]	0.3 J
Benzo(g,h,i)perylene	mg/kg	100	500	- -	0.039 J	0.17 J	0.092 J	0.015 U	0.015 U	0.13 J	0.015 U	0.013 U	18	0.48 J [0.65 J]	0.025 J	0.016 U	0.53	0.014 U	0.14 J	0.14 J	0.51 J	0.24 J	0.035 J [0.044 J]	0.2 J
Benzo(k)fluoranthene	mg/kg	0.8	56	- -	0.045 J	0.7	0.14 J	0.034 U	0.034 U	0.091 J	0.035 U	0.031 U	**18**	**0.91 [1.7]**	0.032 U	0.037 U	**1.2**	0.032 U	0.2 J	0.24 J	**1.3**	0.44	0.044 U [0.036 J]	0.45
Benzoic Acid	mg/kg	- -	- -	100	0.059 U	0.072 UBJ	0.072 UJ	0.064 UJ	0.064 UJ	0.13 J	0.066 UJ	0.057 UJ	1.4 U	0.14 J [0.17 U]	0.059 U	0.069 U	0.064 U	0.06 U	0.14 J	0.06 U	0.095 UJ	0.062 UJ	0.061 UJ [0.06 UJ]	0.19 J
Benzyl Alcohol	mg/kg	- -	- -	- -	0.017 U	0.021 U	0.021 U	0.018 U	0.018 U	0.02 U	0.019 U	0.016 U	0.4 U	0.039 U [0.05 U]	0.017 U	0.02 U	0.018 U	0.017 U	0.017 U	0.017 U	0.027 U	0.018 U	0.017 U [0.017 U]	0.018 U
bis(2-Chloroethoxy)methane	mg/kg	- -	- -	- -	0.016 U	0.019 U	0.019 U	0.017 U	0.017 U	0.018 U	0.018 U	0.015 U	0.38 U	0.036 U [0.046 U]	0.016 U	0.018 U	0.017 U	0.016 U	0.016 U	0.016 U	0.025 U	0.016 U	0.016 U [0.016 U]	0.017 U
bis(2-Chloroethyl)ether	mg/kg	- -	- -	- -	0.016 U	0.019 U	0.019 U	0.017 U	0.017 U	0.018 U	0.018 U	0.015 U	0.38 U	0.036 U [0.046 U]	0.016 U	0.018 U	0.017 U	0.016 U	0.016 U	0.016 U	0.025 U	0.016 U	0.016 U [0.016 U]	0.017 U
Bis(2-ethylhexyl) Phthalate	mg/kg	- -	- -	50	0.022 UB	0.99	0.027 UBJ	0.024 UBJ	0.024 UBJ	0.026 UBJ	0.025 UBJ	0.022 UBJ	0.53 U	0.051 UB [0.065 UB]	0.022 UB	0.026 U	0.024 UB	0.025 J	0.1 J	0.057 J	0.15 J	0.082 J	0.03 J [0.034 J]	0.053 J
Butyl Benzyl Phthalate	mg/kg	- -	- -	- -	0.03 J	0.026 U	0.026 U	0.023 U	0.066 J	0.024 U	0.023 U	0.021 U	0.5 U	0.048 U [0.062 U]	0.024 J	0.025 U	0.053 J	0.022 U	0.042 J	0.046 J	0.034 U	0.022 J	0.022 U [0.021 U]	0.022 U
Caprolactam	mg/kg	- -	- -	- -	0.037 U	0.045 U	0.045 U	0.04 U	0.04 U	0.043 U	0.041 U	0.036 U	0.88 U	0.085 U [0.11 U]	0.037 U	0.043 U	0.04 U	0.038 U	0.037 U	0.038 U	0.059 U	0.038 U	0.038 U [0.038 U]	0.039 U
Carbazole	mg/kg	- -	- -	- -	0.016 U	0.33 J	0.019 U	0.017 U	0.017 U	0.018 U	0.018 U	0.015 U	0.42 J	0.036 U [0.046 U]	0.016 U	0.018 U	0.057 J	0.016 U	0.016 U	0.04 J	0.17 J	0.04 J	0.016 U [0.016 U]	0.06 J
Chrysene	mg/kg	1	56	- -	0.065 J	0.82	0.023 UB	0.021 U	0.021 U	0.022 UB	0.021 U	0.018 U	**19**	**1.8 [2.9]**	0.035 J	0.022 U	**1.3**	0.03 J	0.26 J	0.25 J	**1.5**	0.52	0.042 J [0.051 J]	0.45
Dibenzo(a,h)anthracene	mg/kg	0.33	0.56	- -	0.045 J	0.052 J	0.031 J	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	**3.7 J**	0.18 J [0.29 J]	0.012 U	0.014 U	0.2 J	0.012 U	0.042 J	0.048 J	0.2 J	0.061 J	0.012 U [0.012 U]	0.072 J
Dibenzofuran	mg/kg	7	350	- -	0.017 U	0.37 J	0.021 U	0.018 U	0.018 U	0.03 J	0.019 U	0.016 U	5.1 J	0.039 U [0.05 U]	0.017 U	0.02 U	0.063 J	0.017 U	0.017 U	0.05 J	0.1 J	0.044 J	0.017 U [0.017 U]	0.067 J
Diethyl Phthalate	mg/kg	- -	- -	100	0.016 U	0.019 U	0.019 U	0.017 U	0.017 U	0.018 U	0.018 U	0.015 U	0.38 U	0.036 U [0.046 U]	0.016 U	0.018 U	0.017 U	0.016 U	0.016 U	0.016 U	0.025 U	0.016 U	0.016 U [0.016 U]	0.017 U
Dimethyl Phthalate	mg/kg	- -	- -	100	0.016 U	0.019 U	0.019 U	0.017 U	0.017 U	0.018 U	0.018 U	0.015 U	0.38 U	0.036 U [0.046 U]	0.016 U	0.018 U	0.017 U	0.016 U	0.016 U	0.016 U	0.025 U	0.016 U	0.016 U [0.016 U]	0.017 U
Di-n-butyl Phthalate	mg/kg	- -	- -	100	0.019 J	0.043 J	0.019 U	0.017 U	0.017 U	0.018 U	0.018 U	0.015 U	0.38 U	0.036 U [0.046 U]	0.016 U	0.018 U	0.026 J	0.016 U	0.021 J	0.016 U	0.025 U	0.016 U	0.016 UB [0.016 UB]	0.017 U
Di-n-octyl Phthalate	mg/kg	- -	- -	100	0.024 U	0.03 U	0.03 UJ	0.026 UJ	0.026 UJ	0.028 UJ	0.027 UJ	0.024 UJ	0.58 U	0.056 U [0.071 U]	0.024 U	0.028 U	0.026 U	0.025 U	0.025 U	0.025 U	0.039 U	0.025 U	0.025 U [0.025 U]	0.025 U
Fluoranthene	mg/kg	100	500	- -	0.076 J	2.4	0.087 J	0.014 U	0.014 U	0.13 J	0.014 U	0.012 U	32	2 [3]	0.046 J	0.015 U	2.1	0.048 J	0.33 J	0.54	3.1	0.92	0.044 J [0.038 J]	0.79
Fluorene	mg/kg	30	500	- -	0.016 U	0.86	0.019 U	0.017 U	0.017 U	0.018 U	0.018 U	0.015 U	3.3 J	0.14 J [0.26 J]	0.016 U	0.018 U	0.13 J	0.016 U	0.016 U	0.072 J	0.25 J	0.07 J	0.016 U [0.016 U]	0.094 J
Hexachlorobenzene	mg/kg	0.33	6	- -	0.048 U	0.059 U	0.059 U	0.053 U	0.053 U	0.056 U	0.054 U	0.047 U	1.2 U	0.11 U [0.14 U]	0.049 U	0.057 U	0.052 U	0.049 U	0.049 U	0.049 U	0.078 U	0.051 U	0.05 U [0.049 U]	0.051 U
Hexachlorobutadiene	mg/kg	- -	- -	- -	0.037 U	0.045 U	0.045 U	0.04 U	0.04 U	0.043 U	0.041 U	0.036 U	0.88 U	0.085 U [0.11 U]	0.037 U	0.043 U	0.04 U	0.038 U	0.037 UJ	0.038 U	0.059 UJ	0.038 U	0.038 U [0.038 U]	0.039 U

Table 4-1
Summary of Soil Sample Analytical Results

Remedial Investigation Report Addendum
Consolidated Edison Company of New York, Inc.
Hunts Point Former Manufactured Gas Plant
Bronx, New York

Location ID: Sample Depth (ft): Date Collected:	Units	Unrestricted Use SCO	Restricted Use SCO - Public Health Commercial	CP-15 Guidance Values	SB-01 10 - 11 09/13/13	SB-02B 10 - 11 09/04/13	SB-03 9 - 10 09/10/13	SB-03 46 - 47 09/11/13	SB-03 47 - 48 09/11/13	SB-04 9 - 10 09/09/13	SB-04 53 - 54 09/10/13	SB-04 54 - 55 09/10/13	SB-05B 2 - 3 08/29/13	SB-05B 32 - 33 09/16/13	SB-06 8 - 9 09/17/13	SB-07 2 - 3 08/28/13	SB-08B 5 - 6 09/18/13	SB-09 9 - 10 09/19/13	SB-10 12 - 13 09/20/13	SB-11 14 - 15 09/23/13	SB-12 12 - 13 09/24/13	SB-12 15 - 16 09/24/13	SB-14 9 - 10 09/25/13	SB-14 15 - 16 09/25/13
Hexachlorocyclopentadiene	mg/kg	- -	- -	- -	0.068 U	0.43 J	0.084 UJ	0.074 UJ	0.074 UJ	0.079 UJ	0.076 UJ	0.067 UJ	1.6 U	0.16 U [0.2 U]	0.069 U	0.08 U	0.074 U	0.07 U	0.069 U	0.07 U	0.11 U	0.071 UJ	0.07 UJ [0.07 U]	R
Hexachloroethane	mg/kg	- -	- -	- -	0.036 U	0.044 U	0.044 U	0.039 U	0.039 U	0.042 U	0.04 U	0.035 U	0.86 U	0.082 U [0.11 U]	0.036 U	0.042 U	0.039 U	0.037 U	0.036 U	0.036 U	0.057 U	0.037 U	0.037 U [0.037 U]	0.038 U
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	5.6	- -	0.043 J	0.17 J	0.076 J	0.016 U	0.016 U	0.08 J	0.016 U	0.014 U	**15**	0.42 J [0.55 J]	0.021 J	0.017 U	**0.58**	0.015 U	0.11 J	0.14 J	0.5 J	0.2 J	0.039 J [0.031 J]	0.19 J
Isophorone	mg/kg	- -	- -	100	0.044 U	0.054 U	0.054 U	0.048 U	0.048 U	0.051 U	0.049 U	0.043 U	1.1 U	0.1 U [0.13 U]	0.045 U	0.052 U	0.048 U	0.045 U	0.045 U	0.045 U	0.071 U	0.046 U	0.045 U [0.045 U]	0.047 U
Naphthalene	mg/kg	12	500	- -	0.016 U	0.78 J	0.019 U	0.017 U	0.017 U	0.041 J	0.018 U	0.015 U	2.3 J	0.097 J [0.17 J]	0.016 U	0.018 U	0.053 J	0.016 U	0.031 J	0.06 J	0.14 J	0.059 J	0.016 U [0.016 U]	0.048 J
Nitrobenzene	mg/kg	- -	- -	3.7	0.043 U	0.053 U	0.053 U	0.047 U	0.047 U	0.05 U	0.048 U	0.042 U	1 U	0.099 U [0.13 U]	0.043 U	0.051 U	0.047 U	0.044 U	0.044 U	0.044 U	0.069 U	0.045 U	0.044 U [0.044 U]	0.045 U
N-Nitrosodiphenylamine	mg/kg	- -	- -	- -	0.017 U	0.021 U	0.021 U	0.018 U	0.018 U	0.02 U	0.019 U	0.016 U	0.4 U	0.039 U [0.05 U]	0.017 U	0.02 U	0.018 U	0.017 U	0.017 U	0.017 U	0.027 U	0.018 U	0.017 U [0.017 U]	0.018 U
N-Nitroso-di-n-propylamine	mg/kg	- -	- -	- -	0.048 U	0.059 U	0.059 U	0.053 U	0.053 U	0.056 U	0.054 U	0.047 U	1.2 U	0.11 U [0.14 U]	0.049 U	0.057 U	0.052 U	0.049 U	0.049 U	0.049 U	0.078 U	0.051 U	0.05 U [0.049 U]	0.051 U
N-Nitrosodimethylamine	mg/kg	- -	- -	- -	0.037 U	0.045 U	0.045 U	0.04 U	0.04 U	0.043 U	0.041 U	0.036 U	0.88 U	0.085 U [0.11 U]	0.037 U	0.043 U	0.04 U	0.038 U	0.037 U	0.038 U	0.059 U	0.038 U	0.038 U [0.038 U]	0.039 U
Pentachlorophenol	mg/kg	0.8	6.7	- -	0.072 UJ	0.088 U	0.088 UJ	0.078 UJ	0.078 UJ	0.083 UJ	0.08 UJ	0.07 UJ	*1.7 U*	0.16 UJ [0.21 UJ]	0.072 U	0.084 U	0.077 UJ	0.073 U	0.072 UJ	0.073 U	0.11 UJ	0.075 UJ	0.074 UJ [0.073 U]	0.075 UJ
Perylene	mg/kg	- -	- -	- -	0.028 J	0.23 J	0.083 J	0.024 U	0.024 U	0.026 U	0.025 U	0.022 U	4.4 J	0.31 J [0.48 J]	0.022 U	0.026 U	0.38	0.023 U	0.075 J	0.07 J	0.4 J	0.12 J	0.023 U [0.023 U]	0.11 J
Phenanthrene	mg/kg	100	500	- -	0.026 J	2.7 J	0.047 J	0.014 U	0.014 U	0.18 J	0.014 U	0.012 U	30	1.2 [1.6]	0.021 J	0.015 U	1.5	0.015 J	0.18 J	0.37	2.1	0.59	0.023 J [0.017 J]	0.85
Phenol	mg/kg	0.33	500	- -	0.042 U	0.052 U	0.052 U	0.046 U	0.046 U	0.049 U	0.047 U	0.041 U	*1 U*	0.097 U [0.12 U]	0.042 U	0.049 U	0.045 U	0.043 U	0.043 U	0.043 U	0.068 U	0.044 U	0.043 U [0.043 U]	0.046 J
Pyrene	mg/kg	100	500	- -	0.078 J	2.5	0.13 J	0.016 UJ	0.016 UJ	0.32 J	0.016 UJ	0.014 UJ	39	2.7 [4]	0.064 J	0.017 U	2.5	0.044 J	0.32 J	0.66	3.3	1.4	0.071 J [0.059 J]	0.9
Pyridine	mg/kg	- -	- -	- -	0.038 U	0.046 U	0.046 U	0.041 U	0.041 U	0.044 U	0.042 U	0.037 U	0.91 U	0.087 U [0.11 U]	0.038 U	0.044 U	0.041 U	0.039 U	0.038 U	0.039 U	0.061 U	0.04 U	0.039 U [0.039 U]	0.04 U
Total PAHs	mg/kg	- -	- -	- -	0.592 J	15.032 J	1.045 J	ND	ND	1.803 J	ND	ND	239.65 J	14.704 J [22.98 J]	0.314 J	ND	14.75 J	0.192 J	2.364 J	3.528 J	18.261 J	6.362 J	0.416 J [0.392 J]	5.582 J
Total SVOCs	mg/kg	- -	- -	- -	0.862 J	18.035 J	1.323 J	0.052 J	0.249 J	2.386 J	0.058 J	0.049 J	267.66 J	16.317 J [25.275 J]	0.396 J	0.029 J	16.382 J	0.269 J	3.113 J	4.021 J	20.23 J	7.077 J	0.557 J [0.537 J]	6.822 J
PCBs																								
Aroclor-1016	mg/kg	- -	- -	- -	0.0059 U	0.014 U	0.0071 U	0.0063 U	0.0065 U	0.0071 U	0.0064 U	0.0056 U	0.0071 U	0.008 U [0.0089 U]	0.0058 U	0.0069 U	0.013 U	0.0058 U	0.006 U	0.0059 U	0.0065 U	0.0063 U	0.0059 U [0.006 U]	0.006 U
Aroclor-1221	mg/kg	- -	- -	- -	0.0045 U	0.01 U	0.0054 U	0.0049 U	0.005 U	0.0054 U	0.0049 U	0.0043 U	0.0055 U	0.0062 U [0.0068 U]	0.0045 U	0.0053 U	0.0099 U	0.0044 U	0.0046 U	0.0045 U	0.005 U	0.0049 U	0.0045 U [0.0046 U]	0.0046 U
Aroclor-1232	mg/kg	- -	- -	- -	0.0035 U	0.008 U	0.0042 U	0.0037 U	0.0038 U	0.0042 U	0.0038 U	0.0033 U	0.0042 U	0.0047 U [0.0053 U]	0.0034 U	0.0041 U	0.0076 U	0.0034 U	0.0035 U	0.0035 U	0.0039 U	0.0037 U	0.0035 U [0.0035 U]	0.0035 U
Aroclor-1242	mg/kg	- -	- -	- -	0.0071 U	0.16	0.0085 U	0.0076 U	0.0077 U	0.0085 U	0.0077 U	0.0067 U	0.0085 U	0.0096 U [0.011 U]	0.007 U	0.0082 U	0.015 U	0.0069 U	0.0072 U	0.0071 U	0.0089 J	0.0076 U	0.0071 U [0.0071 U]	0.0072 U
Aroclor-1248	mg/kg	- -	- -	- -	0.0021 U	0.0048 U	0.0025 U	0.0023 U	0.0023 U	0.0025 U	0.0023 U	0.002 U	0.0025 U	0.0029 U [0.0032 U]	0.0021 U	0.0025 U	0.0046 U	0.0021 U	0.0021 U	0.0021 U	0.0023 U	0.0023 U	0.0021 U [0.0021 U]	0.0021 U
Aroclor-1254	mg/kg	- -	- -	- -	0.003 U	0.17	0.0035 U	0.0032 U	0.0032 U	0.0035 U	0.0032 U	0.0028 U	0.0036 U	0.004 U [0.0045 U]	0.0029 U	0.0034 U	0.0064 U	0.0029 U	0.003 U	0.003 U	0.014 J	0.0072 J	0.003 U [0.003 U]	0.003 U
Aroclor-1260	mg/kg	- -	- -	- -	0.0025 U	0.075 J	0.003 U	0.0027 U	0.0028 U	0.003 U	0.0028 U	0.0024 U	0.003 U	0.0034 U [0.0038 U]	0.0025 U	0.003 U	0.0055 U	0.0025 U	0.0026 U	0.0025 U	0.0072 J	0.0041 J	0.0065 J [0.009 J]	0.0026 U
Aroclor-1262	mg/kg	- -	- -	- -	0.0016 U	0.0036 U	0.0019 U	0.0017 U	0.0017 U	0.0019 U	0.0017 U	0.0015 U	0.0019 U	0.0021 U [0.0024 U]	0.0016 U	0.0018 U	0.0034 U	0.0015 U	0.0016 U	0.0016 U	0.0018 U	0.0017 U	0.0016 U [0.0016 U]	0.0016 U
Aroclor-1268	mg/kg	- -	- -	- -	0.0015 U	0.0034 U	0.0018 U	0.0016 U	0.0016 U	0.0018 U	0.0016 U	0.0014 U	0.0018 U	0.002 U [0.0022 U]	0.0015 U	0.0017 U	0.0032 U	0.0014 U	0.0015 U	0.0015 U	0.0016 U	0.0016 U	0.0015 U [0.0015 U]	0.0015 U
Total PCBs	mg/kg	0.1	1	- -	ND	**0.405**	ND	ND	ND	ND	ND	ND	ND	ND [ND]	ND	ND	ND	ND	ND	ND	0.0301 J	0.0113 J	0.0065 J [0.009 J]	ND
Inorganics																								
Aluminum	mg/kg	- -	- -	- -	1,100 J	5,110 J	7,440	19,200	25,600	4,940 J	14,600	23,200	1,330	10,200 J [13,200 J]	2,290 J	1,390	3,100 J	3,260 J	2,910 J	3,630 J	5,650 J	4,220 J	8,110 J [11,500 J]	5,310 J
Antimony	mg/kg	- -	- -	- -	0.29 UJ	0.41 J	0.6 J	0.71 J	0.64 J	17.1	0.59 J	1.6 J	5.1	0.86 J [1.2 J]	4.3 J	0.34 U	0.43 J	0.35 UJ	0.35 J	0.41 J	1.4 J	0.92 J	0.56 J [0.57 J]	0.61 J
Arsenic	mg/kg	13	16	- -	2.3	3.9	4.4	0.86	1	**32**	1.3	1.7	**39**	**12.5 [15.1]**	1.3	2.6	3.1	1.6	1.6	1.5	6.4 J	9.7 J	3.4 J [6.4 J]	7.2 J
Barium	mg/kg	350	400	- -	7.1 J	35.3 J	28.6 J	165 J	207 J	180 J	124 J	166 J	196	65.4 J [71 J]	5.2 J	7.7 J	24.9 J	0.37 UBJ	0.29 UBJ	0.29 UBJ	110 J	52.3 J	113 J [122 J]	67.9 J
Beryllium	mg/kg	7.2	590	- -	0.14 J	0.29 J	0.33 J	0.39	0.51	0.022 UB	0.027 UB	0.77	0.067 J	0.48 [0.88]	0.16 J	0.22 J	0.2 J	0.023 UB	0.018 UB	0.018 UB	0.51	0.37 J	0.9 [1.3]	0.59
Cadmium	mg/kg	2.5	9.3	- -	0.094 J	1.1	0.17 J	0.2 J	0.21 J	**63.7**	0.14 J	0.27 J	0.056 U	0.47 [0.45 J]	0.056 U	0.054 U	0.14 J	0.062 J	0.054 J	0.072 J	0.3 J	0.17 J	0.058 U [0.087 J]	0.11 J
Calcium	mg/kg	- -	- -	- -	1,570 J	1,660 J	2,680 J	2,670 J	4,290 J	5,910 J	2,620 J	2,580 J	3,400	2,950 J [3,680 J]	254 J	898	59,600 J	387 J	790 J	2,520 J	5,770 J	36,900 J	1,050 J [1,280 J]	1,070 J
Chromium	mg/kg	1[1]	400[1]	- -	**7.8 J**	**40.2 J**	**15.1 J**	**43.7 J**	**58.2 J**	**17.7 J**	**34.5 J**	**50.9 J**	**19.5**	**27.9 J [33.6 J]**	**13.5 J**	**8.2 J**	**8.1 J**	**9.5 J**	**8.6 J**	**13 J**	**17.9 J**	**12 J**	**18.4 J [28.3 J]**	**20.9 J**
Cobalt	mg/kg	- -	- -	30	0.048 UBJ	4.4 J	5.6 J	17.4 J	19.7 J	8.7 J	11.3 J	24.4 J	3.7	7 J [8.9 J]	0.058 UBJ	1.4 J	3.1 J	3.5 J	3.3 J	3.5 J	5.4	4.8	8.2 [12.3]	3.7 J
Copper	mg/kg	50	270	- -	5.5 J	**60.9**	9.2	**72.8**	**77.7**	**309**	40.4	**91.6**	**190**	50.4 J [49.6 J]	4.5 J	2	22.8 J	5.9 J	5.8 J	12.9 J	**99.5 J**	45.2 J	**53.9 J [118 J]**	**67.1 J**
Cyanide	mg/kg	27	27	- -	0.03 UB	0.29 J	0.038 UB	0.033 UB	0.067 UB	3	0.034 UB	0.03 UB	3.8	0.042 UB [0.044 UB]	0.029 UB	**208**	1.8	0.031 UB	0.06 UB	0.03 UB	4.5 J	5 J	5.4 J [10.1 J]	3.8 J
Iron	mg/kg	- -	- -	2,000	**4,510 J**	**11,900 J**	**15,400 J**	**32,200 J**	**38,500 J**	**59,000 J**	**30,500 J**	**58,400 J**	**23,400**	**20,800 J [26,800 J]**	**7,730 J**	**6,430 J**	**10,700 J**	**8,730 J**	**8,100 J**	**10,300 J**	**21,000 J**	**13,500 J**	**17,100 J [22,800 J]**	**14,000 J**
Lead	mg/kg	63	1,000	- -	7.6 J	55.6 J	18.6 J	5.7 J	7 J	**7,190 J**	4.1 J	8.6 J	**124**	**124 J [113 J]**	4.7 J	2.8 J	50.7 J	4.1	6.1	8.9	**221**	**103**	29.7 [47.1]	**184**
Magnesium	mg/kg	- -	- -	- -	733 J	2,130 J	3,190 J	9,930 J	13,000 J	883 J	7,900 J	10,600 J	454	5,130 J [6,600 J]	984 J	602 J	32,700 J	1,400 J	1,320 J	1,790 J	4,670 J	8,850 J	3,220 J [3,720 J]	1,660 J
Manganese	mg/kg	1,600	10,000	- -	24 J	99.3 J	238 J	322 J	375 J	299 J	383 J	786 J	89.4	319 J [416 J]	42.4 J	132 J	112 J	0.32 UBJ	0.25 UBJ	0.25 UBJ	115 J	111 J	309 J [481 J]	115 J
Mercury	mg/kg	0.18	2.8	- -	0.0087 UB	**0.73 J**	0.11	0.009 U	0.0093 U	0.16	0.0092 U	0.0082 U	**2.4**	**2.5 [1.7]**	0.0087 UB	0.0097 UB	0.0094 UB	0.0094 UB	0.0083 UB	0.0097 UB	**0.48**	0.17	0.12 [0.099]	**0.44**
Nickel	mg/kg	30	310	- -	2.9	18.3 J	12.6 J	**41.7 J**	**47 J**	26.7 J	24.7 J	**54.4 J**	16.5	16.9 [21.5]	8.8	3.4	8.8	11.3 J	11.1 J	11.9 J	15.7 J	13.8 J	15.5 J [24.7 J]	10.5 J
Potassium	mg/kg	- -	- -	- -	865 J	998 J	1,630	12,000	17,400	385	8,920	14,800	659	2,740 J [3,430 J]	373 J	1,340 J	753 J	10.6 UBJ	8.4 UBJ	8.4 UBJ	2,730 J	1,700 J	4,960 J [5,510 J]	1,790 J
Selenium	mg/kg	3.9	1,500	- -	0.51 U	0.64 UJ	0.8 U	0.56 U	0.55 U	0.6 U	0.74 U	0.51 U	0.62 U	0.76 U [1.5 J]	0.62 U	0.6 U	0.52 U	0.61 U	0.49 U	0.49 U	0.67 U	0.66 U	0.65 U [0.71 J]	0.74 J
Silver	mg/kg	2	1,500	- -	0.076 U	1.6 J	0.12 U	0.084 U	0.081 U	1.9	0.11 U	0.076 U	0.093 U	0.65 J [1 J]	0.093 U	0.089 U	0.078 U	0.092 U	0.073 U	0.073 U	0.15 J	0.17 J	0.097 U [0.095 U]	0.16 J
Sodium	mg/kg	- -	- -	- -	87.2 J	670 J	311 J	293 J	516	336 J	285 J	338	549	2,590 J [3,390]	123 J	5.2 UB	254 J	228 J	4.2 UB	4.2 UB	1,620	1,080 J	337 J [510]	946
Thallium	mg/kg	- -	- -	- -	0.24 U	0.3 U	0.38 U	0.49 J	0.41 J	0.75 J	0.8 J	0.55 J	0.35 J	0.44 J [0.34 U]	0.29 U	0.28 U	0.24 U	0.29 U	0.23 U	0.23 U	0.32 U	0.31 U	0.81 J [0.7 J]	0.32 J
Vanadium	mg/kg	- -	- -	100	7.1 J	19.8	22 J	77.7 J	**111 J**	21.6 J	65.9 J	**109 J**	15.3	28.8 J [36.3 J]	10.1 J	7.3	16 J	0.092 UBJ	0.073 UBJ	0.073 UBJ	22 J	16.2 J	24.9 J [31.6 J]	21.2 J
Zinc	mg/kg	109	10,000	- -	9.5 J	73.9 J	57.9 J	71.7 J	92.4 J	**61,200 J**	58.7 J	79.1 J	68.9	**118 J [125 J]**	11.6 J	16	75.2 J	0.39 UBJ	0.31 UBJ	0.31 UBJ	104 J	61 J	44.1 J [61.4 J]	52.9 J

Table 4-1
Summary of Soil Sample Analytical Results

Remedial Investigation Report Addendum
Consolidated Edison Company of New York, Inc.
Hunts Point Former Manufactured Gas Plant
Bronx, New York

Notes:

Constituents detected above Unrestricted Use SCO or CP-15 guidance values are bolded.
Constituents detected above Restricted Use SCO are shaded and bolded.
Constituents that were not detected but the method detection limit exceeded the Restricted Use SCO/Unrestricted Use SCO/CP-15 guidance values are italicized.
Samples that were not detected are reported at the method detection limit.
Qualifiers are as follows:

J	=	Result is less than the reporting limit but greater than or equal to the method detection limit. The concentration is an approximate value.
ND	=	None detected. This applies to summations where there were no detects for all individual constituents.
R	=	The value was rejected during data validation.
U	=	The compound was analyzed for but not detected. The associated value is the method detection limit.
B	=	Compound was found in the blank and sample.
*	=	Recovery or relative percent difference exceeds control limits.

Unrestricted Use SCO from Table 375-6.8(a) of the NYSDEC (2006) Remedial Program Soil Cleanup Objectives.
Restricted Use SCO from Table 375-6.8(b) of the NYSDEC (2006) Remedial Program Soil Cleanup Objectives.
CP-15 Guidance Values from Table 1 of the NYDEC (2010) CP-15/Soil Cleanup Guidance.
Results for duplicate samples are presented in brackets.
[1] Since there is no SCO for total chromium, the SCO for hexavalent chromium was used to compare analytical values of total chromium. The SCO for hexavalent chromium was used since it is the lower trivalent and hexavalent chromium SCOs.
- - = not applicable
BTEX = benzene, toluene, ethylbenzene, and xylenes
ft = feet
mg/kg = milligrams per kilogram
NYSDEC = New York State Department of Environmental Conservation
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyl
SCO = soil cleanup objective
SVOC = semivolatile organic compound
VOC = volatile organic compound
Total BTEX = The summation of detected values for benzene, toluene, ethylbenzene, and xylenes. Non-detects were taken as zero.
Total PAHs = The summation of the 17 Target Analyte List PAHs. Non-detects were taken as zero.
Total PCBs = The summation of all detected PCBs. Non-detects were taken as zero.
Total VOCs = The summation of all detected VOCs. Non-detects were taken as zero.
Total SVOCs = The summation of all detected SVOCs. Non-detects were taken as zero.

Table 4-2
Summary of Groundwater Sample Analytical Results

Remedial Investigation Report Addendum
Consolidated Edison Company of New York, Inc.
Hunts Point Former Manufactured Gas Plant
Bronx, New York

Location ID: / Date Collected:	Units	Groundwater Standard	MW-01 10/03/13	MW-02 10/03/13	MW-03 10/03/13	MW-04 10/03/13	MW-05 10/03/13
Volatile Organics							
1,1,1-Trichloroethane	µg/L	5	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U [0.16 U]
1,1,2,2-Tetrachloroethane	µg/L	5	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U [0.17 U]
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	5	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U [0.18 U]
1,1,2-Trichloroethane	µg/L	1	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U [0.18 U]
1,1-Dichloroethane	µg/L	5	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U [0.16 U]
1,1-Dichloroethene	µg/L	5	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U [0.18 U]
1,2,4-Trichlorobenzene	µg/L	5	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U [0.18 U]
1,2-Dibromo-3-chloropropane	µg/L	0.04	*0.22 U*	*0.22 U*	*0.22 U*	*0.22 U*	*0.22 U [0.22 U]*
1,2-Dibromoethane	µg/L	5	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U [0.18 U]
1,2-Dichlorobenzene	µg/L	3	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U [0.15 U]
1,2-Dichloroethane	µg/L	0.6	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U [0.15 U]
1,2-Dichloroethene (total)	µg/L	5	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U [0.16 U]
1,2-Dichloropropane	µg/L	1	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U [0.17 U]
1,3-Dichlorobenzene	µg/L	3	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U [0.18 U]
1,4-Dichlorobenzene	µg/L	3	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U [0.15 U]
2-Butanone	µg/L	- -	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U [1.1 U]
2-Hexanone	µg/L	50	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U [1.1 U]
4-Methyl-2-pentanone	µg/L	- -	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U [0.9 U]
Acetone	µg/L	50	1.2 J	0.97 J	1.7 J	3.7 J	0.92 U [0.92 U]
Benzene	µg/L	1	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U [0.17 U]
Bromodichloromethane	µg/L	50	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U [0.16 U]
Bromoform	µg/L	50	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U [0.17 U]
Bromomethane	µg/L	5	0.43 UJ	0.43 UJ	0.53 J	0.43 J	0.43 UJ [0.43 UJ]
Carbon Disulfide	µg/L	60	0.15 U	0.15 U	0.15 U	0.3 J	0.15 U [0.15 U]
Carbon Tetrachloride	µg/L	5	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U [0.17 U]
Chlorobenzene	µg/L	5	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U [0.19 U]
Chloroethane	µg/L	5	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ	0.12 UJ [0.12 UJ]
Chloroform	µg/L	7	0.16 U	0.16 U	0.4 J	0.16 U	0.16 U [0.16 U]
Chloromethane	µg/L	- -	0.12 UB	0.12 U	0.12 UB	0.12 UB	0.12 U [0.12 U]
cis-1,2-Dichloroethene	µg/L	5	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U [0.16 U]
cis-1,3-Dichloropropene	µg/L	0.4	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U [0.16 U]
Cyclohexane	µg/L	- -	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U [0.23 U]
Dibromochloromethane	µg/L	50	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U [0.17 U]
Dichlorodifluoromethane	µg/L	5	0.09 U	0.09 U	0.09 UJ	0.09 UJ	0.09 U [0.09 UJ]
Ethylbenzene	µg/L	5	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U [0.18 U]
Isopropylbenzene	µg/L	5	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U [0.17 U]
Methyl acetate	µg/L	- -	R	R	R	R	R [R]
Methylcyclohexane	µg/L	- -	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U [0.25 U]
Methylene Chloride	µg/L	5	0.21 U	0.21 U	0.21 U	0.21 UB	0.21 U [0.21 U]
Methyl-Tert-Butylether	µg/L	10	0.17 U	0.32 J	0.17 UJ	0.17 UJ	0.17 UJ [0.17 UJ]
Styrene	µg/L	5	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U [0.17 U]
Tetrachloroethene	µg/L	5	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U [0.18 U]
Toluene	µg/L	5	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U [0.17 U]
trans-1,2-Dichloroethene	µg/L	5	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U [0.17 U]
trans-1,3-Dichloropropene	µg/L	5	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U [0.18 U]
Trichloroethene	µg/L	5	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U [0.14 U]
Trichlorofluoromethane	µg/L	5	0.092 U	0.092 U	0.092 U	0.092 U	0.092 U [0.092 U]
Vinyl Chloride	µg/L	2	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U [0.09 U]
Xylenes (total)	µg/L	5	0.17 U	0.17 U	0.57 J	0.17 U	0.17 U [0.17 U]
Total BTEX	µg/L	- -	ND	ND	0.57 J	ND	ND [ND]
Total VOCs	µg/L	- -	1.2 J	1.29 J	3.2 J	4.43 J	ND [ND]

Table 4-2
Summary of Groundwater Sample Analytical Results

Remedial Investigation Report Addendum
Consolidated Edison Company of New York, Inc.
Hunts Point Former Manufactured Gas Plant
Bronx, New York

Location ID: Date Collected:	Units	Groundwater Standard	MW-01 10/03/13	MW-02 10/03/13	MW-03 10/03/13	MW-04 10/03/13	MW-05 10/03/13
Semivolatile Organics							
1,1'-Biphenyl	µg/L	- -	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U [0.49 U]
1,2,4,5-Tetrachlorobenzene	µg/L	- -	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U [0.64 U]
1,2,4-Trichlorobenzene	µg/L	5	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U [0.54 U]
1,2-Dichlorobenzene	µg/L	3	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U [0.72 U]
1,3-Dichlorobenzene	µg/L	3	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U [0.55 U]
1,4-Dichlorobenzene	µg/L	3	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U [0.52 U]
1-Methylnaphthalene	µg/L	- -	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U [0.69 U]
2,2'-Oxybis(1-Chloropropane)	µg/L	- -	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U [0.81 U]
2,3,4,6-Tetrachlorophenol	µg/L	- -	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U [0.55 U]
2,4,5-Trichlorophenol	µg/L	- -	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U [0.4 U]
2,4,6-Trichlorophenol	µg/L	- -	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U [0.61 U]
2,4-Dichlorophenol	µg/L	- -	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U [0.88 U]
2,4-Dimethylphenol	µg/L	1	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U [0.71 U]
2,4-Dinitrophenol	µg/L	10	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U [1.5 U]
2,4-Dinitrotoluene	µg/L	5	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U [0.65 U]
2,6-Dichlorophenol	µg/L	- -	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U [0.67 U]
2,6-Dinitrotoluene	µg/L	5	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U [0.51 U]
2-Chloronaphthalene	µg/L	10	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U [0.66 U]
2-Chlorophenol	µg/L	- -	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U [0.75 U]
2-Methyl-4,6-dinitrophenol	µg/L	- -	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U [1.6 U]
2-Methylnaphthalene	µg/L	- -	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U [0.65 U]
2-Methylphenol	µg/L	- -	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U [0.48 U]
2-Nitroaniline	µg/L	5	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U [1.2 U]
2-Nitrophenol	µg/L	- -	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U [0.85 U]
3 & 4 Methylphenol	µg/L	- -	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U [1.1 U]
3,3-Dichlorobenzidine	µg/L	5	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U [1.1 U]
3-Nitroaniline	µg/L	5	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U [1.2 U]
4-Bromophenyl Phenyl Ether	µg/L	- -	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U [0.82 U]
4-Chloro-3-Methylphenol	µg/L	- -	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U [0.95 U]
4-Chloroaniline	µg/L	5	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U [0.47 U]
4-Chlorophenyl Phenyl Ether	µg/L	- -	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U [0.63 U]
4-Nitroaniline	µg/L	5	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U [1.7 U]
4-Nitrophenol	µg/L	- -	1 U	1 U	1 U	1 U	1 U [1 U]
Acenaphthene	µg/L	20	0.63 U	0.63 U	6.2 J	0.63 U	0.63 U [0.63 U]
Acenaphthylene	µg/L	- -	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U [0.38 U]
Acetophenone	µg/L	- -	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U [0.84 U]
Aniline	µg/L	- -	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U [0.58 U]
Anthracene	µg/L	50	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U [0.33 U]
Atrazine	µg/L	- -	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U [0.7 U]
Azobenzene	µg/L	- -	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U [0.51 U]
Benzaldehyde	µg/L	- -	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U [0.74 U]
Benzidine	µg/L	- -	6.4 U	6.4 U	6.4 U	6.4 U	6.4 U [6.4 U]
Benzo(a)anthracene	µg/L	- -	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U [0.46 U]
Benzo(a)pyrene	µg/L	- -	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U [0.45 U]
Benzo(b)fluoranthene	µg/L	0.002	*0.78 U*	*0.78 U*	*0.78 U*	*0.78 U*	*0.78 U [0.78 U]*
Benzo(e)pyrene	µg/L	- -	1 U	1 U	1 U	1 U	1 U [1 U]
Benzo(g,h,i)perylene	µg/L	- -	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U [0.37 U]
Benzo(k)fluoranthene	µg/L	0.002	*0.82 U*	*0.82 U*	*0.82 U*	*0.82 U*	*0.82 U [0.82 U]*
Benzoic Acid	µg/L	- -	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U [5.1 U]
Benzyl Alcohol	µg/L	- -	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U [0.69 U]
bis(2-Chloroethoxy)methane	µg/L	5	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U [1.3 U]
bis(2-Chloroethyl)ether	µg/L	1	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U [0.81 U]
Bis(2-ethylhexyl) Phthalate	µg/L	5	1 U	1.3 J	1 U	1 U	1 U [1 U]
Butyl Benzyl Phthalate	µg/L	50	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U [1.2 U]
Caprolactam	µg/L	- -	0.34 UJ	0.34 U	0.34 U	0.34 U	0.34 U [0.34 U]

Table 4-2
Summary of Groundwater Sample Analytical Results

Remedial Investigation Report Addendum
Consolidated Edison Company of New York, Inc.
Hunts Point Former Manufactured Gas Plant
Bronx, New York

Location ID: Date Collected:	Units	Groundwater Standard	MW-01 10/03/13	MW-02 10/03/13	MW-03 10/03/13	MW-04 10/03/13	MW-05 10/03/13
Carbazole	µg/L	- -	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U [0.65 U]
Chrysene	µg/L	0.002	*0.55 U*	*0.55 U*	*0.55 U*	*0.55 U*	*0.55 U [0.55 U]*
Dibenzo(a,h)anthracene	µg/L	- -	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U [0.51 U]
Dibenzofuran	µg/L	- -	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U [0.47 U]
Diethyl Phthalate	µg/L	50	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U [0.69 U]
Dimethyl Phthalate	µg/L	50	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U [0.62 U]
Di-n-butyl Phthalate	µg/L	- -	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U [0.64 U]
Di-n-octyl Phthalate	µg/L	- -	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U [0.94 U]
Fluoranthene	µg/L	50	0.43 U	0.43 U	0.96 J	0.43 U	0.43 U [0.43 U]
Fluorene	µg/L	50	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U [0.64 U]
Hexachlorobenzene	µg/L	0.04	*0.47 U*	*0.47 U*	*0.47 U*	*0.47 U*	*0.47 U [0.47 U]*
Hexachlorobutadiene	µg/L	0.5	*0.74 U*	*0.74 U*	*0.74 U*	*0.74 U*	*0.74 U [0.74 U]*
Hexachlorocyclopentadiene	µg/L	5	1.2 U	1.2 U	1.2 U	1.2 U^	1.2 U [1.2 U]
Hexachloroethane	µg/L	5	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U [0.74 U]
Indeno(1,2,3-c,d)pyrene	µg/L	0.002	*0.38 U*	*0.38 U*	*0.38 U*	*0.38 U*	*0.38 U [0.38 U]*
Isophorone	µg/L	50	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U [0.63 U]
Naphthalene	µg/L	10	0.51 U	0.51 U	0.68 J	0.51 U	0.51 U [0.51 U]
Nitrobenzene	µg/L	0.4	*0.74 U*	*0.74 U*	*0.74 U*	*0.74 U*	*0.74 U [0.74 U]*
N-Nitroso-di-n-propylamine	µg/L	- -	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U [0.69 U]
N-Nitrosodimethylamine	µg/L	- -	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U [0.62 U]
N-Nitrosodiphenylamine	µg/L	50	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U [0.6 U]
Pentachlorophenol	µg/L	- -	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U [2.1 U]
Perylene	µg/L	- -	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U [0.66 U]
Phenanthrene	µg/L	50	0.45 U	0.45 U	0.6 J	0.45 U	0.45 U [0.45 U]
Phenol	µg/L	1	0.42 U	0.42 U	0.42 U	0.57 J	0.42 U [0.42 U]
Pyrene	µg/L	50	0.53 U	0.53 U	0.71 J	0.53 U	0.53 U [0.53 U]
Pyridine	µg/L	- -	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U [0.62 U]
Total PAHs	µg/L	- -	ND	ND	9.15 J	ND	ND [ND]
Total SVOCs	µg/L	- -	ND	1.3 J	9.15 J	0.57 J	ND [ND]
Inorganics							
Aluminum	µg/L	- -	278	2,980	744	3,420	107 U [107 U]
Antimony	µg/L	3	*5.3 U*	*5.3 U*	*5.3 U*	*5.3 U*	*5.3 U [5.3 U]*
Arsenic	µg/L	25	4.3 U	13.1	6.8 J	6.5 J	5.1 J [4.6 J]
Barium	µg/L	1,000	141 J	75.9 J	4.8 U	76.1 J	69.3 J [51.1 J]
Beryllium	µg/L	3	0.24 U	0.3 J	0.24 U	0.31 J	0.24 U [0.24 U]
Cadmium	µg/L	5	0.88 U	0.88 U	0.88 U	0.88 U	0.88 U [0.88 U]
Calcium	µg/L	- -	241,000	96,100	28,500	122,000	252,000 [203,000]
Chromium	µg/L	50	1.2 J	5.6 J	0.84 U	7.6 J	0.84 U [0.84 U]
Cobalt	µg/L	- -	0.67 U	0.67 U	0.67 U	0.74 J	0.67 U [0.67 U]
Copper	µg/L	200	6.9 J	23.7 J	5.1 J	13 J	4.3 U [4.3 U]
Cyanide	µg/L	200	1.6 J	9.1 J	1.6 U	4 J	5.5 J [11.1]
Iron	µg/L	300	**2,610 J**	**48,100 J**	**1,480 J**	**9,180 J**	**6,120 J [4,960 J]**
Lead	µg/L	25	9.8 U	**98.7**	4.9 U	8.9 J	7.1 J [4.9 U]
Magnesium	µg/L	35,000	**741,000**	**45,900**	4,040 J	**57,800**	**548,000 [435,000]**
Manganese	µg/L	300	206	**8,370**	86.5	**1,000**	**727 [596]**
Mercury	µg/L	0.7	0.038 U	0.16 J	0.038 U	0.038 U	0.038 U [0.038 U]
Nickel	µg/L	100	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U [2.5 U]
Potassium	µg/L	- -	250,000	31,400	4,140 J	46,100	197,000 [163,000]
Selenium	µg/L	10	7.9 U	7.9 U	7.9 U	7.9 U	7.9 U [7.9 U]
Silver	µg/L	50	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U [1.3 U]
Sodium	µg/L	20,000	**6,750,000**	**128,000**	**56,000**	**729,000**	**4,850,000 [4,020,000]**
Thallium	µg/L	0.5	*6.8 U*	*6.8 U*	*6.8 U*	*6.8 U*	*6.8 U [6.8 U]*
Vanadium	µg/L	- -	1.3 U	1.3 U	1.3 U	2.1 J	1.3 U [1.3 U]
Zinc	µg/L	2,000	11.4 J	121	17.3 J	101	36.9 [19.7 J]

Table 4-2
Summary of Groundwater Sample Analytical Results

Remedial Investigation Report Addendum
Consolidated Edison Company of New York, Inc.
Hunts Point Former Manufactured Gas Plant
Bronx, New York

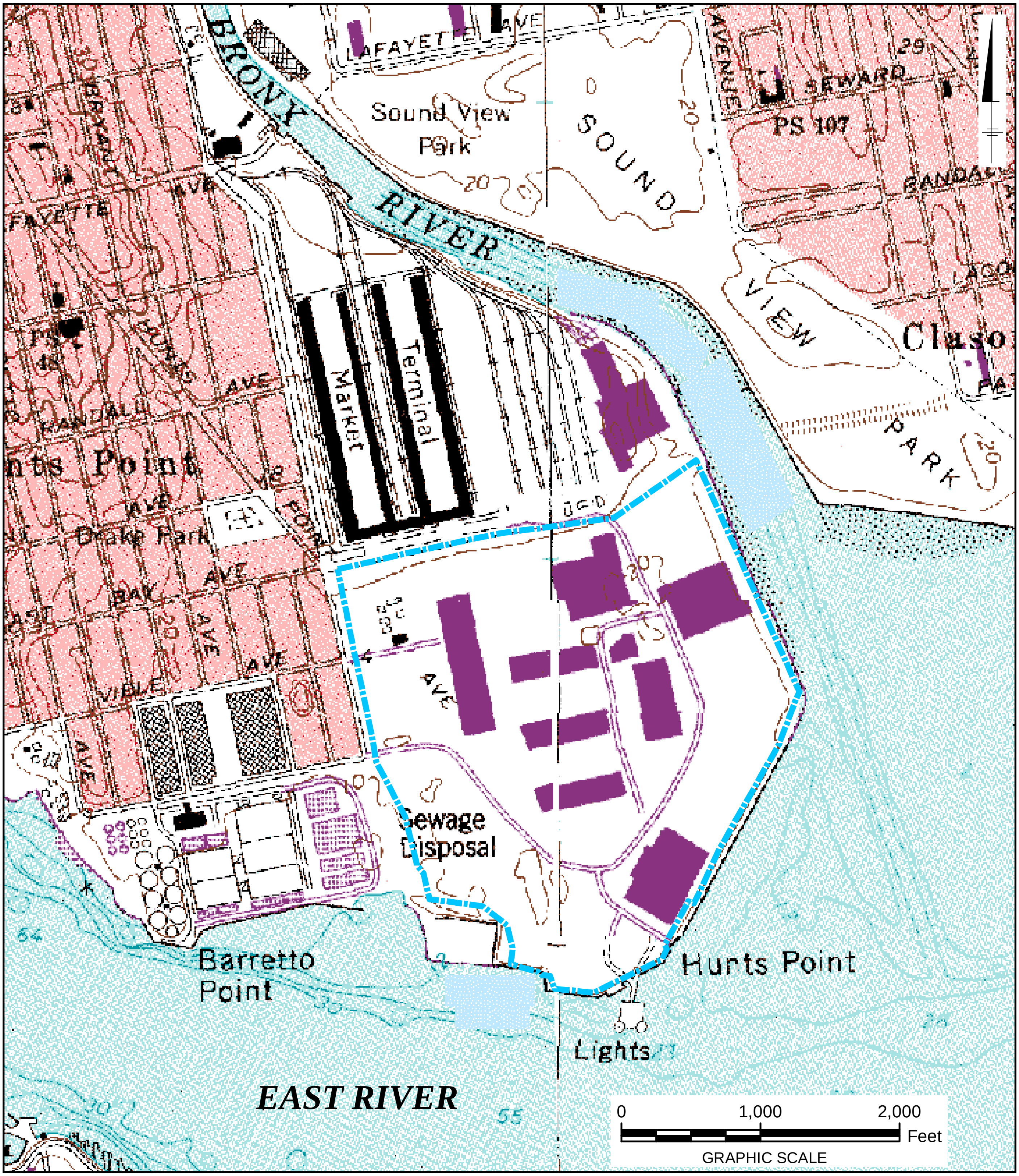
Notes:

Constituents detected above the Groundwater Quality Standard are bolde
Constituents that were not detected but the method detection limit exceeded the Groundwater Quality Standard values are italici
Samples that were not detected are reported at the method detection lin
Qualifiers are as follows

J	=	Result is less than the reporting limit but greater than or equal to the method detection limit. The concentration is approximate value.
ND	=	None detected. This applies to summations where there were no detects for all individual constituer
R	=	The value was rejected during data validatio
U	=	The compound was analyzed for but not detected. The associated value is the method detection lir
B	=	Compound was found in the blank and sample.

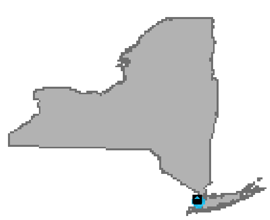
Groundwater Quality Standards from Technical and Operational Guidance Series, New York State Ambient Water Quality Standards and Guidance Values (June 1998), Part 703.5, Table 1.
Results for duplicate samples are presented in bracket
- - = not applicable
PAH = polycyclic aromatic hydrocarbo
SVOC = semivolatile organic compoun
Total PAHs = The summation of the 17 Target Analyte List PAHs. Non-detects were taken as ze
Total VOCs = The summation of all detected VOCs. Non-detects were taken as zer
Total BTEX = The summation of detected values for benzene, toluene, ethylbenzene and xylenes. Non-detects were taken as z
VOC = volatile organic compoun
µg/L = micrograms per liter

Figures



LEGEND:

APPROXIMATE EXTENT OF FORMER MGP



AREA LOCATION

NOTE:

1. 1979 FLUSHING, N.Y. AND CENTRAL PARK, N.Y. - N.J. USGS QUADRANGLE.

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
HUNTS POINT FORMER MANUFACTURED GAS PLANT

REMEDIAL INVESTIGATION REPORT ADDENDUM

SITE LOCATION MAP

ARCADIS

FIGURE 1-1

City: SYR Div/Group: SWG Created By: J.RAPP Last Saved By: jrapp
Hunts Point (Project #)
Q:\ConEd\HuntsPoint\RIR_Adendum\mxd\SiteLocationMap.mxd 1/21/2014 11:46:28 AM

LEGEND:

- HISTORICAL SOIL BORING
- FORMER MONITORING WELL
- CURRENT/FORMER OUTFALL LOCATION
- COAL TAR (EXTENT UNKNOWN)
- SHEEN (EXTENT UNKNOWN)
- TAR BOILS (EXTENT UNKNOWN)

VISUAL OBSERVATION:

- SHEEN
- STAINING AND ODOR
- PURIFIER WASTE AND ODOR
- TAR SATURATED
- HISTORICAL SITE FEATURE (APPROXIMATE)
- HISTORICAL SURFACE DRAINAGE (APPROXIMATE)
- BRONX RIVER FEDERAL NAVIGATION CHANNEL
- CURRENT/FORMER DREDGED CHANNEL (APPROXIMATE)
- FILLED LAND (1947-1975)
- PURIFIER WASTE AREA
- SHEEN
- COAL TAR
- TAR BOILS
- MIXTURE OF COAL TAR AND PURIFIER WASTE AREA
- APPROXIMATE EXTENT OF FORMER MGP
- PARCEL BOUNDARY
- PETROLEUM IMPACTS

NOTES:

1. IMAGERY OBTAINED FROM ESRI IMAGE SERVICE.
2. PARCEL BOUNDARIES ADOPTED FROM CADD FILE PREPARED BY LAWLER, MATUSKY, AND SKELLY ENGINEERS, LLP.
3. HISTORIC SITE FEATURES ADOPTED FROM CADD FILE PREPARED BY PARSONS ENGINEERING SCIENCE.
4. SITE CHARACTERIZATION DETAILS FOR PARCEL C ADOPTED FROM RESPONSE PLAN FOR THE OPERATING UNIT PORTION OF PARCEL C, LAWLER, MATUSKY, AND SKELLY ENGINEERS, LLP, REVISED OCTOBER 2001. EXTENT OF COAL TAR, TAR BOILS, AND SHEEN DEPICTED FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL EXTENT OBSERVED DURING INVESTIGATION ACTIVITIES WAS NOT REPORTED.
5. SITE CHARACTERIZATION DETAILS FOR PARCEL D AND ADJACENT PERIMETER PARCEL ADOPTED FROM INVESTIGATIVE REPORT FOR PARCEL D, LAWLER, MATUSKY, AND SKELLY ENGINEERS, LLP, REVISED OCTOBER 2005.
6. SITE CHARACTERIZATION DETAILS FOR PARCEL F ADOPTED FROM SITE INVESTIGATIVE REPORT FOR PARCEL F, HDR/LMS, NOVEMBER 2007.
7. COAL TAR AND PURIFIER WASTE ON PERIMETER PARCEL EXCAVATED DURING THE CONSTRUCTION OF THE IROQUOIS PIPELINE.
8. SOIL BORING OBSERVATIONS ON THE KRASDALE PROPERTY ARE SUMMARIZED IN THE SITE CHARACTERIZATION REPORT (ARCADIS 2013).

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
HUNTS POINT FORMER MANUFACTURED GAS PLANT

REMEDIAL INVESTIGATION REPORT ADDENDUM

HISTORIC SITE FEATURES

ARCADIS

FIGURE
2-1

City:SYR Div/Group: SWG Created By:J.Rapp Last Saved By: jrapp
CON ED HUNTS POINT (43027.0.6000)
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City: SYR Div/Group: SWG Created By: J.RAPP Last Saved By: jrapp
Hunts Point (Project #)
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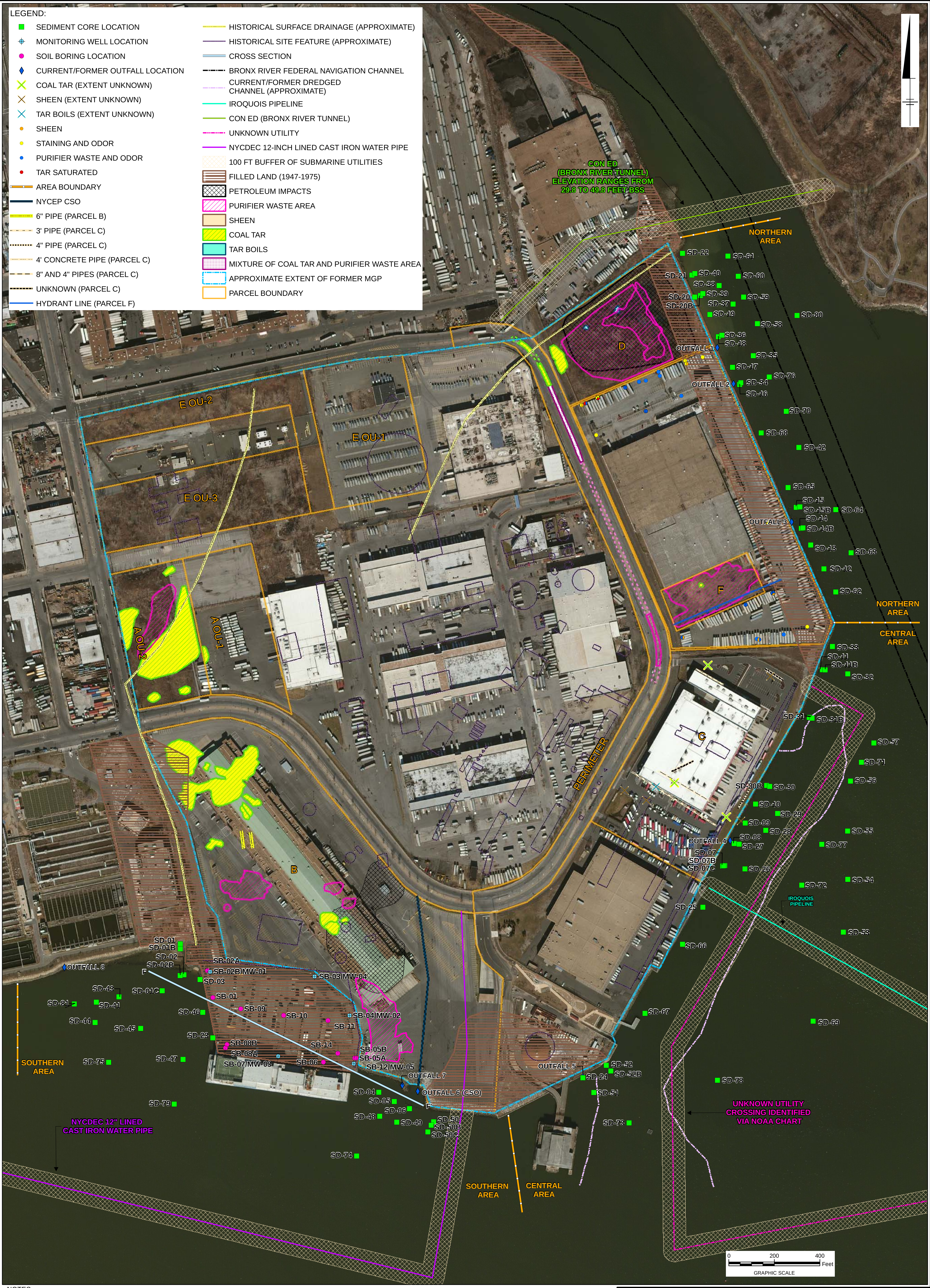


NOTES:

1. IMAGERY OBTAINED FROM ESRI IMAGE SERVICE.
2. ALL LOCATIONS ARE APPROXIMATE.
3. PARCEL BOUNDARIES ADOPTED FROM CADDFILE PREPARED BY LAWLER, MATUSKY, AND SKELLY ENGINEERS, LLP.
4. SITE CHARACTERIZATION DETAILS FOR PARCEL C ADOPTED FROM RESPONSE PLAN FOR THE OPERATING UNIT PORTION OF PARCEL C, LAWLER, MATUSKY, AND SKELLY ENGINEERS, LLP, REVISED OCTOBER 2001. EXTENT OF COAL TAR, TAR BOILS, AND SHEEN DEPICTED FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL EXTENT OBSERVED DURING INVESTIGATION ACTIVITIES WAS NOT REPORTED.
5. SITE CHARACTERIZATION DETAILS FOR PARCEL D AND ADJACENT PERIMETER PARCEL ADOPTED FROM INVESTIGATIVE REPORT FOR PARCEL D, LAWLER, MATUSKY, AND SKELLY ENGINEERS, LLP, REVISED OCTOBER 2005.
6. SITE CHARACTERIZATION DETAILS FOR PARCEL F ADOPTED FROM SITE INVESTIGATIVE REPORT FOR PARCEL F, HDR/LMS, NOVEMBER 2007.
7. COAL TAR AND PURIFIER WASTE ON PERIMETER PARCEL EXCAVATED DURING THE CONSTRUCTION OF THE IROQUOIS PIPELINE.
8. SOIL BORING OBSERVATIONS ON THE KRASDALE PROPERTY ARE SUMMARIZED IN THE SITE CHARACTERIZATION REPORT (ARCADIS 2013).
9. THE BRONX RIVER TUNNEL SUBMARINE CROSSING LOCATION IS BASED ON THE CONSOLIDATED EDISON COMPANY OF NEW YORK, INC. ELECTRICAL ENGINEERING DEPARTMENT. DRAWING NO. E0-1233-A – SUBMARINE, TUNNEL, AND OVERHEAD TRANSMISSION LINE CROSSING FOR ELECTRIC CABLES AND GAS MAINS ON THE SYSTEM, REVISION 28 (ORIGINALLY DATED 7/6/1937 AND LAST REVISED ON 8/1/2005) AS WELLAS PLATE NO. 6-P OF THE GAS MAINS AND SERVICE PLATE LAST MODIFIED ON 5/1/2012.
10. THE POTENTIAL UNIDENTIFIED UTILITY CROSSINGS AND IROQUOIS PIPELINE ARE APPROXIMATE AND BASED ON A REVIEW OF THE NAVIGATIONAL CHART FOR THE EAST RIVER FROM TALLMAN ISLAND TO QUEENSBORO BRIDGE (CHART NUMBER 12339, EDITION 46, JUNE 2008) AVAILABLE AT THE NOAA OFFICE OF COAST SURVEY ON-LINE CHART VIEWER.
11. THE NYCDEC 12-INCH LINED CAST IRON WATER PIPE UPLAND LOCATION IS BASED ON THE WATER MAPPING FIGURE PROVIDED THE NYCDEC BUREAU OF WATER, PRINTED ON APRIL 12, 2012 FOR THE KRASDALE PROPERTY UTILITY REQUEST.
12. HISTORIC SITE FEATURES ADOPTED FROM CADD FILE PREPARED BY PARSONS ENGINEERING SCIENCE.

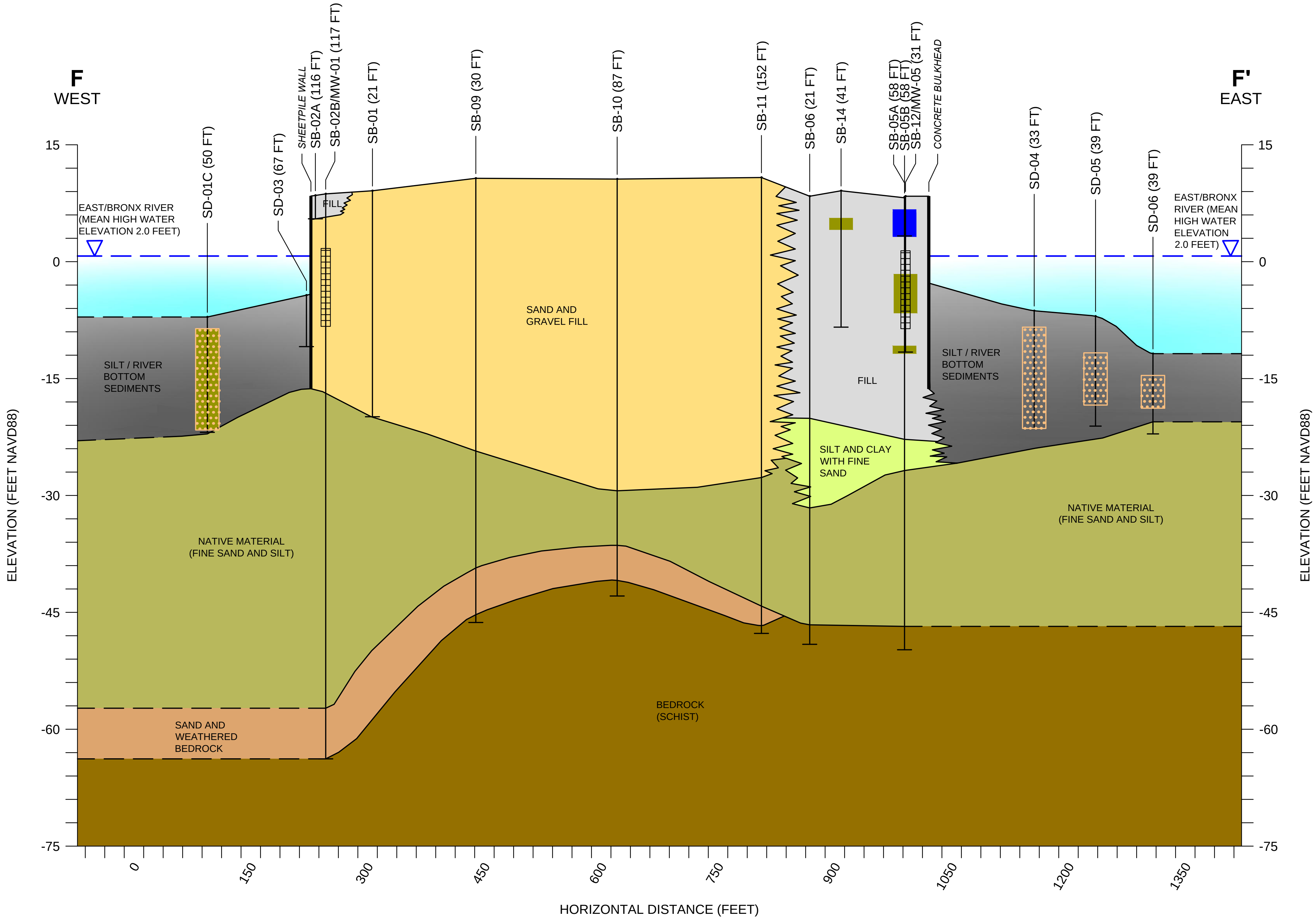
NYCEP = NEW YORK CITY ENVIRONMENTAL PROTECTION
CSO = COMBINED SEWER OVERFLOW

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
HUNTS POINT FORMER MANUFACTURED GAS PLANT
REMEDIAL INVESTIGATION REPORT ADDENDUM

INVESTIGATION LOCATION MAP

ARCADIS

FIGURE
3-1



LEGEND:

SD-04 (33) — BORING ID (AND DISTANCE PROJECTED IF OVER 20 FEET)

TOP OF SEDIMENT

TRACE TO LITTLE SHEEN

ODOR

PURIFIER WASTE / ODOR

WELL SCREEN

BORING BOTTOM

FILL

SAND AND GRAVEL FILL

SILT / RIVER BOTTOM SEDIMENTS

SILT AND CLAY WITH FINE SAND

NATIVE MATERIAL (FINE SAND AND SILT)

SAND AND WEATHERED BEDROCK

BEDROCK (SCHIST)

VERTICAL SCALE (FEET): 0 – 15

HORIZONTAL SCALE (FEET): 0 – 150

NOTES:

1. ELEVATIONS IN NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
2. MHW OBTAINED FROM NOAA STATION 8518639, PORT MORRIS, EAST 138TH STREET.
3. FOR IN-RIVER CORES, DEPTHS HAVE BEEN ADJUSTED BASED ON PERCENT RECOVERY OBTAINED IN EACH CORE.
4. THE DEPTHS OF THE SHEETPILE WALL AND BULKHEAD ARE UNKNOWN.

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
HUNTS POINT FORMER MANUFACTURED GAS PLANT
REMEDIAL INVESTIGATION REPORT ADDENDUM

CROSS SECTION F-F'

ARCADIS

FIGURE **4-1**

SB-02B	mg/kg
10' - 11'	
Total PCBs	0.4
Acetone	0.17 J
Copper	60.9
Iron	11,900 J
Mercury	0.73 J

SB-01	mg/kg
10' - 11'	
Iron	4,510 J

SB-09	mg/kg
9' - 10'	
Iron	8,730 J

SB-03	mg/kg
9' - 10'	
Iron	15,400 J
46' - 47'	
Copper	72.8
Iron	32,200 J
Nickel	41.7 J
47' - 48'	
Copper	77.7
Iron	38,500 J
Nickel	47 J
Vanadium	111 J

SB-04	mg/kg
9' - 10'	
Arsenic	32
Cadmium	63.7
Copper	309
Iron	59,000 J
Lead	7,190 J
Zinc	61,200 J
53' - 54'	
Iron	30,500 J
54' - 55'	
Copper	91.6
Iron	58,400 J
Nickel	54.4 J
Vanadium	109 J

SB-10	mg/kg
12' - 13'	
Iron	8,100 J

SB-11	mg/kg
14' - 15'	
Iron	10,300 J

SB-14	mg/kg
9' - 10'	
Copper	53.9 J [118 J]
Iron	17,100 J [22,800 J]
15' - 16'	
Copper	67.1 J
Iron	14,000 J
Lead	184
Mercury	0.44

SB-08B	mg/kg
5' - 6'	
Benzo(a)anthracene	1.4
Benzo(a)pyrene	1.3
Benzo(b)fluoranthene	1.3
Benzo(k)fluoranthene	1.2
Chrysene	1.3
Indeno(1,2,3-c,d)pyrene	0.58
Iron	10,700 J

SB-07	mg/kg
2' - 3'	
Cyanide	208
Iron	6,430 J

SB-06	mg/kg
8' - 9'	
Iron	7,730 J

SB-12	mg/kg
12' - 13'	
Benzo(a)anthracene	1.5
Benzo(a)pyrene	1.4
Benzo(b)fluoranthene	1.5
Benzo(k)fluoranthene	1.3
Chrysene	1.5
Copper	99.5 J
Iron	21,000 J
Lead	221
Mercury	0.48
15' - 16'	
Iron	13,500 J
Lead	103

SB-05B	mg/kg
2' - 3'	
2-Methylnaphthalene	1.2 J
Benzo(a)anthracene	16
Benzo(a)pyrene	17
Benzo(b)fluoranthene	20
Benzo(k)fluoranthene	18
Chrysene	19
Dibenzo(a,h)anthracene	3.7 J
Indeno(1,2,3-c,d)pyrene	15
Arsenic	39
Copper	190
Iron	23,400
Lead	124
Mercury	2.4
32' - 33'	
Acetone	0.053 J [0.073 J]
Benzo(a)anthracene	1.6 [2.6]
Benzo(a)pyrene	1.4 [2.3]
Benzo(b)fluoranthene	0.77 J [1.3]
Benzo(k)fluoranthene	0.91 [1.7]
Chrysene	1.8 [2.9]
Arsenic	12.5 [15.1]
Iron	20,800 J [26,800 J]
Lead	124 J [113 J]
Mercury	2.5 [1.7]
Zinc	118 J [125 J]

LEGEND:

- CURRENT/FORMER OUTFALL LOCATION
- SOIL BORING LOCATION
- HISTORICAL SITE FEATURE (APPROXIMATE)
- HISTORICAL SURFACE DRAINAGE (APPROXIMATE)
- APPROXIMATE EXTENT OF FORMER MGP
- PARCEL BOUNDARY
- FILLED LAND (1947-1975)
- PURIFIER WASTE AREA
- COAL TAR
- PETROLEUM IMPACTS

Soil Cleanup Objectives (SCOs)	Unrestricted Use SCO	Restricted Use SCO	CP-15 Guidance Values
Total PCBs	0.1	1	- -
Acetone	0.05	500	- -
2-Methylnaphthalene	- -	- -	0.41
Benzo(a)anthracene	1	5.6	- -
Benzo(a)pyrene	1	1	- -
Benzo(b)fluoranthene	1	5.6	- -
Benzo(k)fluoranthene	0.8	56	- -
Chrysene	1	56	- -
Dibenzo(a,h)anthracene	0.33	0.56	- -
Indeno(1,2,3-c,d)pyrene	0.5	5.6	- -
Arsenic	13	16	- -
Cadmium	2.5	9.3	- -
Copper	50	270	- -
Cyanide	27	27	- -
Iron	- -	- -	2,000
Lead	63	1,000	- -
Mercury	0.18	2.8	- -
Nickel	30	310	- -
Vanadium	- -	- -	100
Zinc	109	10,000	- -

NOTES:

1. IMAGERY OBTAINED FROM ESRI IMAGE SERVICE.
2. ALL LOCATIONS ARE APPROXIMATE.
3. PARCEL BOUNDARIES ADOPTED FROM CADD FILE PREPARED BY LAWLER, MATUSKY, AND SKELLY ENGINEERS, LLP.
4. HISTORIC SITE FEATURES ADOPTED FROM CADD FILE PREPARED BY PARSONS ENGINEERING SERVICE.
5. COMPOUNDS EXCEEDING SCOS ARE PRESENTED.
6. CONSTITUENTS DETECTED ABOVE UNRESTRICTED USE SCO OR CP-15 GUIDANCE VALUES ARE BOLDED.
7. CONSTITUENTS DETECTED ABOVE RESTRICTED USE SCO ARE SHADED AND BOLDED.
8. RESULTS FOR DUPLICATE SAMPLES ARE SHOWN IN BRACKETS.
9. TOTAL CHROMIUM CONCENTRATIONS ARE NOT INCLUDED AS NO SCOS ARE AVAILABLE. SCOS FOR HEXAVALENT CHROMIUM AND TRIVALENT CHROMIUM ARE AVAILABLE. TOTAL CHROMIUM CONCENTRATIONS ARE COMPARED HEXAVALENT CHROMIUM SCOS IN TABLE 4-1

ABBREVIATIONS:

J = RESULT IS LESS THAN THE REPORTING LIMIT BUT GREATER THAN OR EQUAL TO THE METHOD DETECTION LIMIT

MG/KG = MILLIGRAMS PER KILOGRAM

CSO = COMBINED SEWER OVERFLOW

PCB = POLYCHLORINATED BIPHENYL

SCO = SOIL CLEANUP OBJECTIVES

TOTAL PCBs = THE SUMMATION OF ALL DETECTED PCBs (AROCLORS 1016,1221,1232,1242,1248,1254,1260,1262, AND1268) NON-DETECTS WERE TAKEN AS ZERO

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
HUNTS POINT FORMER MANUFACTURED GAS PLANT

REMEDIAL INVESTIGATION REPORT ADDENDUM

SOIL SAMPLE ANALYTICAL RESULTS

ARCADIS

FIGURE
4-2

City:SYR Div/Group: SWG Created By:J.Rapp Last Saved By: jrapp
CON ED HUNTS POINT (43027.0.6000)
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LEGEND:

- CURRENT/FORMER OUTFALL LOCATION
- MONITORING WELL LOCATION
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION
- APPROXIMATE EXTENT OF FORMER MGP
- PARCEL BOUNDARY

0 100 200 Feet
GRAPHIC SCALE

NOTES:
1. IMAGERY OBTAINED FROM ESRI IMAGE SERVICE.
2. PARCEL BOUNDARIES ADOPTED FROM CADD FILE PREPARED BY LAWLER, MATUSKY, AND SKELLY ENGINEERS, LLP.
3. * INDICATES WELL TIDALLY INFLUENCED; GROUNDWATER ELEVATION NOT USED FOR CONTOUR.
4. ALL ELEVATIONS ARE PROVIDED IN NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) IN FEET.

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
HUNTS POINT FORMER MANUFACTURED GAS PLANT

REMEDIAL INVESTIGATION REPORT ADDENDUM

GROUNDWATER CONTOUR MAP

ARCADIS

FIGURE
4-3

City:SYR Div/Group: SWG Created By:J.Rapp Last Saved By: jrapp
CON ED HUNTS POINT (43027.0.6000)
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MW-01	µg/L
Iron	2,610 J
Magnesium	741,000
Sodium	6,750,000

MW-04	µg/L
Iron	9,180 J
Magnesium	57,800
Manganese	1,000
Sodium	729,000

MW-02	µg/L
Iron	48,100 J
Lead	98.7
Magnesium	45,900
Manganese	8,370
Sodium	128,000

MW-03	µg/L
Iron	1,480 J
Sodium	56,000

MW-05	µg/L
Iron	6,120 J [4,960 J]
Magnesium	548,000 [435,000]
Manganese	727 [596]
Sodium	4,850,000 [4,020,000]

LEGEND:

- CURRENT/FORMER OUTFALL LOCATION
- MONITORING WELL LOCATION
- HISTORICAL SITE FEATURE (APPROXIMATE)
- HISTORICAL SURFACE DRAINAGE (APPROXIMATE)
- APPROXIMATE EXTENT OF FORMER MGP
- PARCEL BOUNDARY
- FILLED LAND (1947-1975)
- PURIFIER WASTE AREA
- COAL TAR
- PETROLEUM IMPACTS

0 100 200 Feet

GRAPHIC SCALE

Groundwater Quality Standards	µg/L
Iron	300
Lead	25
Magnesium	35,000
Manganese	300
Sodium	20,000

NOTES:

1. IMAGERY OBTAINED FROM ESRI IMAGE SERVICE.
2. ALL LOCATIONS ARE APPROXIMATE.
3. PARCEL BOUNDARIES ADOPTED FROM CADD FILE PREPARED BY LAWLER, MATUSKY, AND SKELLY ENGINEERS, LLP.
4. HISTORIC SITE FEATURES ADOPTED FROM CADD FILE PREPARED BY PARSONS ENGINEERING SERVICE.
5. COMPOUNDS EXCEEDING THE GROUNDWATER QUALITY STANDARDS ARE PRESENTED.
6. DUPLICATE SAMPLING RESULTS ARE PROVIDED IN BRACKETS ADJACENT TO THE PARENT SAMPLE.

ABBREVIATIONS:

µg/L = MICROGRAMS PER LITER

J = RESULT IS LESS THAN THE REPORTING LIMIT BUT GREATER THAN OR EQUAL TO THE METHOD DETECTION LIMIT.

CSO= COMBINED SEWER OVERFLOW

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
HUNTS POINT FORMER MANUFACTURED GAS PLANT

REMEDIAL INVESTIGATION REPORT ADDENDUM

GROUNDWATER SAMPLE ANALYTICAL RESULTS

ARCADIS

FIGURE
4-4

City:SYR Div/Group: SWG Created By:J.Rapp Last Saved By: jrapp
CON ED HUNTS POINT (43027.0.6000)
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