Cedar Street Former Manufactured Gas Plant Site

WESTCHESTER COUNTY

NEW ROCHELLE, NEW YORK

SITE MANAGEMENT PLAN

NYSDEC Site Number: 360173

Prepared for:

Consolidated Edison Company of New York, Inc. 31-01 20th Avenue

Long Island City, New York 11105-2048

Prepared by:

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Revisions to Final Approved Site Management Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

MARCH 2026

CERTIFICATION STATEMENT

I, Margaret A. Carrillo-Sheridan, certify that I am currently a New York State (NYS) registered professional engineer as in defined in 6 NYCRR Part 375 and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and Green Remediation (DER-31).

Margaret A. Carrillo-Sheridan, PE

_____DATE

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New Rochelle

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SITE MANAGEMENT PLAN

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List of Acronyms

ASP	Analytical Services Protocol
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
BMP	Best Management Practice
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CAMP	Community Air Monitoring Plan
C/D	Construction and Demolition
CFR	Code of Federal Regulation
CLP	Contract Laboratory Program
COC	Certificate of Completion
CO2	Carbon Dioxide
CP	Commissioner Policy
DER	Division of Environmental Remediation
DUSR	Data Usability Summary Report
EC	Engineering Control
ECL	Environmental Conservation Law
ELAP	Environmental Laboratory Approval Program
ERP	Environmental Restoration Program
EWP	Excavation Work Plan
GHG	Greenhouse Gas
GWE&T	Groundwater Extraction and Treatment
HASP	Health and Safety Plan
IC	Institutional Control
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYCRR	New York Codes, Rules and Regulations
O&M	Operation and Maintenance
OM&M	Operation, Maintenance and Monitoring
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
P.E. or PE	Professional Engineer
PFAS	Per- and Polyfluoroalkyl Substances
PID	Photoionization Detector
PRP	Potentially Responsible Party
PRR	Periodic Review Report
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QEP	Qualified Environmental Professional
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study

ROD	Record of Decision
RP	Remedial Party
RSO	Remedial System Optimization
SAC	State Assistance Contract
SCG	Standards, Criteria and Guidelines
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SOP	Standard Operating Procedures
SOW	Statement of Work
SPDES	State Pollutant Discharge Elimination System
SSD	Sub-slab Depressurization
SVE	Soil Vapor Extraction
SVI	Soil Vapor Intrusion
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leachate Procedure
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VCP	Voluntary Cleanup Program

ES EXECUTIVE SUMMARY

The following provides a brief summary of the controls implemented for the Site, as well as the inspections, monitoring, maintenance, and reporting activities required by this Site Management Plan:

Site Identification:	Site No. 360173 Cedar Street former MGP Site New Rochelle, State Superfund Project, New Rochelle, Westchester County, New York

Institutional Controls:	1. The non-roadway property may be used for restricted residential use.
	2. All ECs must be inspected at a frequency and in a manner defined in the SMP.
	3. Use of groundwater underlying the non-roadway property is prohibited without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) or County Department of Health.
	4. The remedial party or site owner must complete and submit to the Department of Health a periodic certification of institutional and engineering controls in accordance with Part 375-1.8(h)(3).
	5. State, local, and municipal and utility owners who may be affected by the roadway portion of the Site will be notified by the remedial party of remaining contamination.
Engineering Controls:	1. Cover system.
	2. Coal tar recovery (if recoverable quantities are identified).

Inspections:	Frequency
1. Cover inspection	Annually
Monitoring:	
1. Groundwater Monitoring Wells - Inspection	Annually
2. Groundwater Monitoring Wells – Sampling	Tri-annually
Maintenance:	
1. Groundwater Monitoring Wells	As needed
Reporting:	

1. Periodic Review Report	Annually

Further descriptions of the above requirements are provided in detail in the latter sections of this Site Management Plan.

1.0 INTRODUCTION

1.1 General

This Site Management Plan (SMP) is a required element of the remedial program for the Cedar Street former manufactured gas plant (MGP) site, located in New Rochelle, New York (hereinafter referred to as the "Site"). See Figure 1-1. The Site is currently in the New York State (NYS) MGP Program, Site No. 360173, which is administered by New York State Department of Environmental Conservation (NYSDEC).

On August 15, 2002, Consolidated Edison Company of New York, Inc. (Con Edison) entered into a multi-site Voluntary Cleanup Agreement with the NYSDEC, Index No. D2-0003-02-08, to implement activities to address in whole or in part environmental contamination associated with its former MGP operations, including at the Site. As part of NYSDEC's statewide effort to terminate the Voluntary Cleanup Program, Con Edison subsequently entered into a multi-site Order on Consent, Index No. CO 0-20180516-519, on July 23, 2018, with the NYSDEC to remediate its MGP sites, including the Site. A figure showing the Site location and boundaries of this Site is provided in Figure 1-2. The boundaries of the Site are more fully described in the metes and bounds site description that is part of the Environmental Easement provided in Appendix A.

After completion of the remedial work, some contamination was left at this site, which is hereafter referred to as "remaining contamination". Institutional and Engineering Controls (ICs and ECs) have been incorporated into the site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Westchester County Clerk, requires compliance with this SMP and all ECs and ICs placed on the site.

This SMP was prepared to manage remaining contamination at the site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. This plan has been approved by the NYSDEC, and compliance with this plan is required by the

grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the Environmental Easement, which is grounds for revocation of the Certificate of Completion (COC); and
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6 NYCRR Part 375 and the Order on Consent (Index # Index No. CO 0-20180516-519; Site #360173) for the Site, and thereby subject to applicable penalties.

All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State. A list of contacts for persons involved with the site is provided in Appendix B of this SMP.

This SMP was prepared by Anchor QEA Engineering, PLLC, on behalf of Con Edison, in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated May 2010, and the guidelines provided by the NYSDEC. This SMP addresses the means for implementing the ICs and/or ECs that are required by the Environmental Easement for the site.

1.2 Revisions and Alterations

Revisions and alterations to this plan will be proposed in writing to the NYSDEC's project manager. The NYSDEC can also make changes to the SMP or request revisions from the remedial party. Revisions will be necessary upon, but not limited to, the following occurring: a change in media monitoring requirements, upgrades to or shutdown of a remedial system, post-remedial removal of contaminated sediment or soil, or other significant change to the site conditions. All approved alterations must conform with Article 145 Section 7209 of

the Education Law regarding the application of professional seals and alterations. For example, any changes to as-built drawings must be stamped by a New York State Professional Engineer. In accordance with the Environmental Easement for the site, the NYSDEC project manager will provide a notice of any approved changes to the SMP and append these notices to the SMP that is retained in its files.

1.3 Notifications

Notifications will be submitted by the property owner to the NYSDEC, as needed, in accordance with NYSDEC's DER – 10 for the following reasons:

1. 60-day advance notice of any proposed changes in site use that are required under the terms of the Order on Consent, 6 NYCRR Part 375 and/or Environmental Conservation Law.
2. 7-day advance notice of any field activity associated with the remedial program.
3. 15-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan. If the ground-intrusive activity qualifies as a change of use as defined in 6 NYCRR Part 375, the above-mentioned 60-day advance notice is also required.
4. Notice within 48 hours of any damage or defect to the foundation, structures or EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.
5. Notice within 48 hours of any non-routine maintenance activities.
6. Verbal notice by noon of the following day of any emergency, such as a fire; flood; or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
7. Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days describing and documenting actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the site or the responsibility for implementing this SMP will include the following notifications:

8. At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser/Remedial Party has been provided with a copy of the Order on Consent, and all approved work plans and reports, including this SMP.
9. Within 15 days after the transfer of all or part of the site, the new owner's name, contact representative, and contact information will be confirmed in writing to the NYSDEC.

Table 1-1 on the following page includes contact information for the above notifications. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix B.

Table 1-1: Notifications*

Name	Contact Information	Required Notification**
NYSDEC Project Manager: Caroline Jalanti, PE	518-402-9650 caroline.jalanti@dec.ny.gov	All Notifications
NYSDEC Project Manager's Supervisor: Kerry Maloney, PG	518-402-9629 kerry.maloney@ny/dec.gov	All Notifications
NYSDEC Site Control: Kelly Lewandowski	518-402-9569 kelly.lewandowski@dec.ny.gov	Notifications 1 and 8
NYSDOH Project Manager: Renata Ockerby	518-402-7860 renata.ockerby@health.ny.gov	Notifications 4, 6, and 7

* Note: Notifications are subject to change and will be updated as necessary.

** Note: Numbers in this column reference the numbered bullets in the notification list in this section.

2.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

2.1 Site Location and Description

The Site is located in New Rochelle, Westchester County, New York and is identified as City Tax Block 247 and Lot 15 on the New Rochelle, New York Tax Map, (see Figure 1-2). The non-property portion of the Site consists of the adjacent area within Cedar Street, a public right-of-way, to the west. The Site is an approximately 3-acre area and is bounded by Spring Street to the north, Radisson Plaza to the south, River Street to the east, and an office building across Cedar Street to the west (see Figure 1-2 – Site Layout Map). The boundaries of the Site are more fully described in Appendix A – Environmental Easement. The owner(s) of the site parcel(s) at the time of issuance of this SMP is:

Donnybrook Realty Corporation
1055 East Jericho Turnpike
Huntington, New York 11743

The operator(s) of the Site parcel(s) at the time of issuance of this SMP is:

N.R. Automotive, Inc. d/b/a New Rochelle Toyota
47 Cedar Street
New Rochelle, New York 10801

2.2 Physical Setting

2.2.1 Land Use

The Site consists of the following: an active car dealership that includes a three-story, 24,000 square foot building comprising a show room, office space, and an attached one-story automotive service area situated slightly below grade; a smaller currently unoccupied, detached building associated with the car dealership; a paved parking lot for vehicle inventory and

maintenance activities; and perimeter landscaped areas around the parking area, sidewalks, and a public roadway cover the balance of the site. The Site is zoned DO-4: mixed use including commercial and residential and is currently utilized for commercial uses. Site occupant is a car dealership.

The properties adjoining the Site and, in the neighborhood surrounding the Site is primarily zoned commercial, public utility, and two-family residential properties. Interstate Highway I-95 is less than 0.25 miles north of the Site. The property immediately south of the Site and across Radisson Plaza is a hotel/office building; the property immediately north of the Site is a grocery store; the properties immediately east of the Site include a retail marine electronics shop and service center; and the property to the west of the Site include an office building. A residential neighborhood is approximately 300 feet east of the Site, across River Street.

2.2.2 Geology

Information concerning Site geology was obtained from prior investigation reports (referenced below in Section 2.3) and observations made during the installation of soil borings and monitoring wells by Anchor QEA in 2025. A geologic cross section is shown in Figure 2-1. Site specific boring logs are provided in Appendix C.

Historic fill materials are present at the ground surface or immediately beneath a thin layer of topsoil, concrete, or asphalt. The historic fill unit is generally 5- to 13-feet-thick but increases within former gas holder foundations, where the depth of historic fill reaches a maximum depth of 25 feet before ground surface. The historic fill unit consists of sand, gravel, rock, and brick fragments, and other anthropogenic materials.

Glacial deposits comprised of stratified layers of sands and silt of varying textures are present beneath the historic fill unit throughout the investigation area, except for within the former gas holders, where fill is mostly underlain by weathered bedrock. This unit of glacial deposits is generally 5- to 15-feet-thick, with a maximum thickness of approximately 20 feet just southeast of the former north gas holder location. A laterally

isolated sand and gravel unit was identified near the former south gas holder overlying a thin layer of silt and clay immediately above bedrock. These units were less than 8-feet-thick, laterally discontinuous, and only observed near the former south gas holder.

Weathered schist bedrock was either directly identified from sample recovery beneath the overburden or was interpreted based on sampling refusal at depths between 7 feet and 28 feet below ground surface (ft-bgs). The weathered bedrock is decomposed schist containing micas, hornblende, quartz, and feldspars. Fractures were observed within the bedrock unit from near horizontal orientation to very high angle orientations. Based on regional geology, the fracture network is likely complex and characteristic of the Hartland Formation.

An estimated top of bedrock (top of rock) elevation contour map is provided in Figure 2-2. The bedrock surface interpretation is based on drilling refusal depths and sample recovery from soil borings advanced across the Site. As shown in Figure 2-2, the bedrock surface generally slopes downward from west to east and exhibits localized variability associated with former MGP structures and deeper overburden accumulation in the eastern portion of the Site.

2.2.3 Hydrogeology

The primary hydrogeologic unit identified beneath the Site is the upper glacial aquifer, which is hydraulically connected to the underlying bedrock aquifer. Groundwater within the overburden occurs under unconfined conditions, and groundwater within the bedrock does not appear to represent a confined condition to the depths investigated. Groundwater in the New Rochelle Metropolitan area is not used for potable purposes. The NYSDEC groundwater classification for the Site area is GA (aesthetic – fresh waters) (NYSDEC 1998).

Groundwater was encountered at depths ranging from approximately 4.5 to 14.5 ft bgs, depending on monitoring well location and seasonal fluctuations. Two complete rounds of groundwater level measurements were obtained during the remedial

investigation (RI; performed by URS Corporation), and groundwater elevations were generally consistent between events. Monitoring well and piezometer locations are depicted in Figure 2-3. Monitoring well construction details and installation logs are provided in Appendix C. A groundwater contour map based on the April 22 to 23, 2014 groundwater monitoring event is presented in Figure 2-4 and data are included in Appendix C.

Groundwater flow within the upper glacial aquifer is generally to the east to northeast. Localized variations in flow direction are influenced by a north-south trending bedrock ridge in the northeast portion of the Site, where groundwater mounding has been observed. Saturated overburden thickness across most of the Site is approximately 10 feet but decreases to 0 feet in the northeast corner where the bedrock surface rises above the water table. A retaining wall along the perimeter of the Toyota Dealership property (Spring Street and River Street) may locally influence groundwater flow; however, the depth and extent of influence are unknown. Drainage pipes observed at the base of the wall may function to relieve hydraulic pressure on the upgradient side.

Horizontal hydraulic gradients within the overburden aquifer calculated from potentiometric surface data ranged from 0.013 ft/ft to 0.061 ft/ft during the April 2014 monitoring event. Groundwater flow directions and gradients were similar during the July 2014 monitoring event.

Groundwater within the bedrock aquifer primarily flows through secondary porosity features such as fractures, joints, and faults. The Hartland Formation has little to no primary porosity, and groundwater flow is likely controlled by fracture distribution. A groundwater divide trending generally north and south is present beneath the Site between the former north and south gas holders (Figure 2-2). Bedrock groundwater flows toward the west of the divide and toward the east/east-southeast of the divide.

2.3 Investigation and Remedial History

The following narrative provides a remedial history timeline and a brief summary of the available project records to document key investigative and remedial milestones for the Site. Full titles for each of the reports referenced below are provided in Section 8.0 – References.

The information presented in this section is based on information presented in the RI Report (URS, 2017). Prior investigations have been conducted both on behalf of the Site owner and Con Edison and have been previously detailed within the following documents:

- *A Phase 1 Survey and Phase 1 Environmental Site Assessment* conducted by Grosser Consulting (performed prior to 1992)
- *Groundwater Investigation* conducted by AKRF for Tristar Properties of New Rochelle, New York (AKRF, 1993)
- Historic*al Investigation Report - Former Cedar Street Works MGP Site* prepared by The RETEC Group, Inc. for Con Edison (RETEC, 2003)
- *Site Characterization Report* conducted by Parsons Corporation for Con Edison (Parsons, 2009)
- *Pre-Design Investigation Report* conducted by Anchor QEA (Anchor QEA, 2025)

Phase I Survey and Phase I Environmental Site Assessment (Grosser)

As summarized in the *RI Report*, Grosser Consulting conducted a Phase I Survey and Phase I Environmental Site Assessment at the Site. Two soil borings (B-1 and B-2) were installed as part of these efforts. A soil sample collected from soil boring B-2 contained detectable levels of benzene, toluene, ethylbenzene and xylenes (BTEX). In addition, total petroleum hydrocarbons, xylene and ethylbenzene were detected in a groundwater sample collected from soil boring B-2.

Historical Investigation (RETEC)

The *Historical Investigation Report* presented a summary of past site operations starting with the former MGP operational history, which indicated that the New Rochelle Gas Light Company acquired the Site in 1863 and the start of gas production occurred between 1863 and 1868. The MGP operations continued until at least 1903 and were discontinued by 1911 based on Sanborn map reviews. The *Historical Investigation Report* noted that Con Edison sold the property in 1954.

Site Characterization (Parsons)

Site Characterization (SC) activities were performed by Parsons between November 2008 and February 2009. Work completed as part of the SC included: excavation of seven test pits; subsurface drilling and soil sampling at sixteen soil boring locations; and installation six groundwater monitoring wells; groundwater sampling of the newly installed and existing groundwater monitoring wells (seven samples collected); and sub-slab vapor and indoor testing in the on-Site building.

The results of the SC are summarized below in Section 2.5.

Remedial Investigation (URS)

The RI was conducted on and around the Site (i.e., the former MGP property and the downgradient area) between October 28, 2013 through April 24, 2014 and was performed to evaluate the extent of constituents associated with past operations at the Site and potential impacts from adjacent properties. The following investigation activities were conducted:

- Completing 17 soil borings and collecting soil samples for chemical analysis
- Excavating three test pits to identify former MGP structures
- Installing 10 groundwater monitoring wells (5 screened within the overburden and 5 screened within bedrock)
- Collecting groundwater samples for chemical analysis from 17 groundwater monitoring wells (11 existing and new overburden wells and 6 existing and new bedrock wells)
- Gauging of groundwater-level and non-aqueous phase liquid (NAPL) thickness monitoring of the 17 groundwater monitoring wells
- Collecting soil vapor samples from 11 soil borings drilled outside the Toyota Dealership building footprint
- Collecting 10 sub-slab soil vapor samples from beneath the Toyota Dealership building
- Collecting 13 indoor air samples from within the Toyota Dealership building
- Collecting 2 outdoor (ambient) air samples

The results of investigations up to 2017 are summarized or compiled in the RIR (URS, 2017) and are described in section 2.5 along with the results of the 2025 Pre-Design Investigation (PDI) (Anchor QEA, 2025). For more detail on specific topics, refer to the RIR (URS, 2017) or the PDI Report (Anchor QEA 2025).

Pre-Design Investigation (Anchor QEA)

The pre-design investigation (PDI) was conducted between May and July 2025 and consisted of the following activities:

- Inspection of the 17 existing monitoring wells located on-Site. No measurable NAPL was observed accumulating within any monitoring well. Several existing monitoring wells were inspected multiple times during the PDI phase, and no NAPL was observed to accumulate within any of the historical monitoring wells.

- Eight soil borings were advanced to locate and refine previous observations of NAPL within subsurface soils. NAPL observations were limited to three locations, SB-2, SB-3 and SB-4. At SB-2, stained soil was noted from 8 to 10 feet bgs and NAPL-coated soil from 10 to 14 feet bgs and 25 to 28 feet bgs. At SB-3, NAPL-coated soil was present from 12 to 19 feet bgs. At SB-4, stained material and NAPL blebs were encountered from 9 to 15 feet bgs. These observations guided the selection of locations for temporary well installation and NAPL recovery testing despite not containing NAPL-saturated soils or soils potentially containing recoverable NAPL.

- Two temporary monitoring wells (PZ-SB-2 and PZ-SB-3) were installed to assess for potential NAPL accumulation; however, NAPL did not accumulate within either monitoring well during the PDI.

- NAPL recovery tests, consisting of manual bailing, were conducted at PZ-SB-2 and PZ-SB-3 across 4 separate days. A slight sheen was observed at PZ-SB-3 only. NAPL was never observed to accumulate in either of the temporary monitoring wells during the four separate NAPL recovery testing events. Throughout the testing, water levels at both PZ-SB-2 and PZ-SB-3 were found to return to static or near-static water levels between bailing recovery testing intervals within 1 to 2

hours, indicating relatively quick recharge and permeable zones within the shallow aquifer. These observations suggest that the screened intervals were well-suited for capturing mobile-phase NAPL if present. Based on subsurface soil boring observations and the results of recovery testing, no evidence of mobile or recoverable NAPL was recorded during the PDI.

2.4 Remedial Action Objectives

The Remedial Action Objectives (RAOs) for the Site as listed in Decision Document dated November 9, 2020 and published Explanation of Significant Difference (ESD), are as follows:

Groundwater

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

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

Soil Vapor

RAOs for Public Health Protection

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

2.5 Remaining Contamination

This section presents a summary of findings of previous investigations and includes field observations and analytical results by media including surface soil, upper fill soil, lower fill and natural soil, groundwater, and soil gas/indoor air.

Based upon investigations conducted to date, the primary contaminants of concern for the Site are coal tar, tetrachloroethene (PCE), and trichloroethene (TCE). Coal tar is a dark, oily liquid that was produced as a byproduct of MGP operations and leaked from subsurface structures and pipes into the surrounding soils and bedrock. It contains both volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). Specific VOCs of concern are benzene, toluene, ethylbenzene and xylenes (BTEX). Specific SVOCs of concern are polycyclic aromatic hydrocarbons (PAHs). Coal tar belongs to a category of environmental contaminants known as NAPLs. PCE and TCE, both of which are VOCs, are primary contaminants of concern for the Site, but are considered unrelated to MGP operations.

2.5.1 Surface Soil

The majority of the Site is covered with a parking area and by the two auto dealership buildings. Limited areas of surface soil are present on-Site consisting of grass-covered areas adjacent to the sidewalk perimeter surrounding the auto dealership. These grass-covered areas are maintained as lawn and landscaped areas. According to the RI Report, Site surface soil was imported for landscaping after the MGP ceased operation and met the restricted residential Soil Cleanup Objectives (SCOs). Thus, surface soils on site were not sampled during prior investigations as they were not related to historic MGP operations.

2.5.2 Subsurface Soil

Although most soil samples were collected at depths greater than 5 ft-bgs, soil samples collected at shallow depths (i.e., less than 5 ft-bgs) did not contain BTEX at concentrations greater than 6 NYCRR Part 375-6 restricted use commercial SCOs. Certain PAHs (mainly benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene) were detected in shallow subsurface soil samples at concentrations slightly (e.g., within the same order of magnitude) above restricted use residential and commercial SCOs in most samples. The absence of BTEX or indications of NAPL releases in this area coupled with the documentation of historic fill materials encountered during the prior Site investigation activities indicates that the PAHs detected in the shallow subsurface soils are more likely attributed to anthropogenic fill materials rather than MGP operations.

Soil samples collected at depths greater than 5 feet below grade contained the following constituents present at concentrations above the restricted residential use SCOs:

- Benzene was detected in soil samples at concentrations up to 1,600 milligram per kilogram (mg/kg), exceeding the SCO of 4.8 mg/kg;
- Toluene was found in soil samples at concentrations as high as 3,000 mg/kg, exceeding the SCO of 41 mg/kg;
- Total xylene was detected in soil samples at concentrations as high as 3,400 mg/kg, exceeding the SCO of 100 mg/kg.
- Cyanide was detected in only one location at 46 mg/kg, exceeding the restricted residential SCO of 27 mg/kg.

PAHs have been detected in select soil samples at concentrations above the restricted use commercial SCOs at multiple depths across the site, with the highest concentrations of PAHs (greater than 1,000 mg/kg) were found in the following areas:

- Fill within the former north and west gas holders (SB-15 13-15 and 15-17 ft-bgs; SB-03 13 ft-bgs; and SB-23 13.5-14 ft-bgs);
- Fill outside the former north gas holder in SB-18 (3-3.5 ft-bgs)
- In the glacial deposits (sand and silt layer) below the former purifier locations (SB-25 7.2-8.2 ft-bgs and SB-21 9-10 ft-bgs), and the purifier house and former gas holder locations (MW-02 7-9 ft-bgs; SB-07 11-13 ft-bgs; and SB-18 8.5-10 and 15.8-16.8 ft-bgs).

Metals were detected in all samples across the Site; however, concentrations exceeding Restricted Use Commercial SCOs were limited to 11 of 139 soil samples, all but one of which were collected from the historic fill unit. As described in the RIR, metals are common constituents in historic fill materials, and detected concentrations likely reflect the nature of historic fill found across the Site. The one exceedance for a sample collected from the glacial deposits was for nickel at a depth of 21.6 to 22.7 ft-bgs at SB-19 located within Cedar Street near the northwest corner of the Site.

Total cyanide only exceeded restricted use commercial SCOs in SB-17 (4 to 4.5 ft-bgs) which was collected from within a fill layer between the former west and north gas holders. As previously discussed, based on the concentrations of cyanide reported in the RI, cyanide is not considered a COC for this Site.

MGP coal tar in the form of non-aqueous phase liquid (NAPL) was observed in soils and at the top of bedrock in only a few places at the Site, mostly near the northern gas holder, ranging from 8 to 33 ft bgs. The results of the PDI determined that no mobile or recoverable NAPL was present at the Site. A summary of visible impacts from the RI and more recent observations from the PDI are provided in Appendix C.

The investigation results did not indicate any off-Site impacts in soil related to this Site.

Table 4-4 in Appendix C (URS 2017) and Figures 4-4 and 4-5 in Appendix C (URS 2017) summarize the results of all soil samples collected that exceed the Unrestricted Use SCOs and the [residential, restricted residential, commercial or industrial] Use SCOs at the site after completion of remedial action.

2.5.3 Groundwater

Groundwater samples that contained constituents (consisting of BTEX and PAHs) at concentrations above groundwater standards, criteria, or guidance values (SCGs) are limited to three areas of the Site: to the west and east of the northern gas holder (both in overburden [9 to 19 ft bgs] and bedrock [43 ft bgs]), and in the eastern gas holder in overburden (13 to 14 ft bgs). Benzene was found at a maximum concentration of 1,600 microgram per liter (µg/L), exceeding the SCG of 1 µg/L; ethylbenzene as high as 630 µg/L, compared to the SCG of 5 µg/L; xylene as high as 580 µg/L, compared to the SCG of 5 µg/L; naphthalene as high as 4,300 µg/L, compared to the SCG of 10 µg/L; and acenaphthene as high as 460 µg/L, compared to the SCG of 20 µg/L. Other PAHs had smaller exceedances of SCGs in the same limited well locations on-site. Data do not indicate any off-site impacts related to this Site. A summary of groundwater sampling results from the RI are provided in Appendix C.

Table 4-8 in Appendix C (URS 2017and Figures 4-7 and 4-8 in Appendix C (URS 2017) summarize the results of all samples of groundwater that exceed the SCGs after completion of the remedial action.

2.5.4 Soil Vapor, Sub-Slab Vapor, and Indoor Air

No MGP-related contaminants were detected in indoor air or sub-slab soil vapor in the main on-site building. However, tetrachloroethene (PCE) and trichloroethene (TCE) were detected in indoor air of the showroom/office at concentrations up to 6.7 and 2.1 microgram per cubic meter (µg/m^3), and in the indoor air of the service area up to 3.4 and

5.6 µg/m^3, respectively. PCE and TCE were detected in the sub-slab soil vapor in both the showroom and office area up to 360 and 13 µg/m^3 respectively, and in the service area up to 2,800 and 19 µg/m^3, respectively. A summary of sub-slab soil vapor and indoor air results from the RI are provided in Appendix C.

A review of both the sub-slab vapor and indoor air data in both the showroom and office area and in the service area suggests that the detected constituents are likely related to ongoing operations servicing and storing automobiles. Since this contamination is not associated with former MGP operations, actions that include further investigations and/or actions to reduce indoor air-related exposures for the main on-site building have been recommended by NYSDEC to the current property owner.

3.0 INSTITUTIONAL AND ENGINEERING CONTROL PLAN

3.1 General

Since remaining contamination exists at the site, Institutional Controls (ICs) and Engineering Controls (ECs) are required to protect human health and the environment. This IC/EC Plan describes the procedures for the implementation and management of all IC/ECs at the site. The IC/EC Plan is one component of the SMP and is subject to revision by the NYSDEC project manager.

This plan provides:

- A description of all IC/ECs on the site;
- The basic implementation and intended role of each IC/EC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the controls to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of IC/ECs, such as the implementation of the Excavation Work Plan (EWP) (as provided in Appendix D) for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the site; and
- Any other provisions necessary to identify or establish methods for implementing the IC/ECs required by the site remedy, as determined by the NYSDEC project manager.

3.2 Institutional Controls

A series of ICs is required by the Decision Document to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination; and (3) limit the use and development of the Site to restricted residential

uses only. Adherence to these ICs on the site is required by the Environmental Easement and will be implemented under this SMP. ICs identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement. The IC boundary is shown in Figure 3-1. These ICs are as follows:

- The property may be used for: restricted residential use;
- All ECs must be operated and maintained as specified in this SMP;
- All ECs must be inspected at a frequency and in a manner defined in the SMP;
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Westchester County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;
- Groundwater and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP;
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP;
- Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement;
- The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted in Figure 3-1, and any potential impacts that are identified must be monitored or mitigated;
- Vegetable gardens and farming on the Site are prohibited; and

- An evaluation shall be performed to determine the need for further investigation and remediation should large scale redevelopment occur, if any of the existing structures are demolished, or if the subsurface is otherwise made accessible.

Due to the nature of the remaining property to be addressed, a portion of Cedar Street outside of the property tax parcel (a public roadway with no deed) under which former MGP structures existed, the Decision Document recognized that the remedial party (Con Edison) is unable to create an institutional control filed in the real property record nor is an Environmental Notice expected to be readily identified during a search of property records. The Decision Document stated that the remedial party must communicate to affected owners and users of this roadway portion of the Site as part of ongoing obligations and periodically evaluate whether an institutional control has become feasible and report on this evaluation as part of periodic reporting.

3.3 Engineering Controls

3.3.1 Cover

Exposure to remaining contamination at the site is prevented by a cover system placed over the site.

This cover system is comprised of a minimum of a combination of buildings, asphalt paved areas, concrete pads and sidewalks, and landscaped areas where the upper 2 feet of exposed surface soils meet the restricted residential SCOs. Figure 3-1 presents the location of the cover system. The Excavation Work Plan (EWP) provided in Appendix D outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed. Procedures for the inspection of this cover are provided in the Monitoring and Sampling Plan included in Section 4.0 of this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and associated Community Air Monitoring Plan (CAMP) prepared for the site and provided in Appendices E and F, respectively. Any breach of the site's cover system must be overseen by a Professional Engineer (PE) who is licensed and

registered in New York State or a qualified person who directly reports to a PE who is licensed and registered in New York State.

3.3.2 Coal Tar Recovery

Installation and operation of coal tar recovery wells was prescribed as an EC in the Decision Document. Recovery wells would remove potentially mobile coal tar from the subsurface. As described in the PDI Report, mobile and/or recoverable NAPL was not encountered within historic monitoring wells or temporary wells installed as part of the PDI. NAPL saturated soils were not identified in any of the soil borings installed during the PDI.

Monitoring for the presence of recoverable coal tar in existing monitoring wells will continue annually and the results reported as part of periodic review reports. If a recoverable volume of coal tar is found in a Site monitoring well(s), coal tar recovery will begin and a schedule developed. If warranted, coal tar recovery wells will be installed to enhance recovery.

4.0 MONITORING PLAN

4.1 General

This Monitoring Plan describes the measures for evaluating the overall performance and effectiveness of the remedy. This Monitoring and Sampling Plan may only be revised with the approval of the NYSDEC project manager. Details regarding the sampling procedures, data quality usability objectives, analytical methods, etc. for all samples collected as part of site management for the site are included in the Quality Assurance Project Plan provided in Appendix J.

This Monitoring Plan describes the methods to be used for:

- Sampling and analysis of all groundwater;
- Assessing Site monitoring wells for presence of recoverable coal tar;
- Assessing compliance with applicable NYSDEC standards, criteria and guidance (SCGs), particularly groundwater standards; and
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment;

To adequately address these issues, this Monitoring Plan provides information on:

- Sampling locations, protocol and frequency;
- Information on all designed monitoring systems;
- Analytical sampling program requirements;
- Inspection and maintenance requirements for monitoring wells;
- Monitoring well decommissioning procedures; and
- Annual inspection and periodic certification.

Reporting requirements are provided in Section 7.0 of this SMP.

4.2 Site–Wide Inspection

Site-wide inspections will be performed by the remedial party at a minimum of once per year. The remedial party will provide reasonable notice to the Site owner prior to performing a site-wide inspection and the Site owner will be permitted to observe any inspections. These periodic inspections must be conducted when the ground surface is visible (i.e., no snow cover). Site-wide inspections will be performed by a qualified environmental professional as defined in 6 NYCRR Part 375, a Professional Engineer (PE) who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State. Modification to the frequency or duration of the inspections will require approval from the NYSDEC project manager. Site-wide inspections will also be performed after all severe weather conditions that may affect ECs or monitoring devices. During these inspections, an inspection form will be completed as provided in Appendix I – Site Management Forms. The form will compile sufficient information to assess the following:

- Compliance with all ICs, including site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General site conditions at the time of the inspection;
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection; and
- Confirm that site records are up to date.

Inspections of all remedial components installed at the site will be conducted. A comprehensive site-wide inspection will be conducted and documented according to the SMP schedule, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether ECs continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria; and

- If site records are complete and up to date.

Reporting requirements are outlined in Section 7.0 of this plan.

Inspections will also be performed in the event of an emergency. If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs that reduces or has the potential to reduce the effectiveness of ECs in place at the site, verbal notice to the NYSDEC project manager must be given by noon of the following day. In addition, an inspection of the site will be conducted within 5 days of the event to verify the effectiveness of the IC/ECs implemented at the site by a qualified environmental professional, as defined in 6 NYCCR Part 375. Written confirmation must be provided to the NYSDEC project manager within 7 days of the event that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public. The remedial party will submit follow-up status reports to the NYSDEC within 45 days of the event on actions taken to respond to any emergency event requiring ongoing responsive action, describing and documenting actions taken to restore the effectiveness of the ECs.

4.3 Treatment System Monitoring

4.3.1 Remedial System Monitoring

Monitoring of the Site monitoring wells will be performed on a routine basis, as identified in Table 4-1 Remedial System Monitoring Requirements and Schedule (see below). The monitoring of remedial systems must be conducted by a qualified environmental professional as defined in 6 NYCRR Part 375, a Professional Engineer (PE) who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State. Modification to the frequency or sampling requirements will require approval from the NYSDEC project manager. A visual inspection of the complete system will be conducted during each monitoring event. Unscheduled inspections and/or sampling may take place when a suspected failure of the Site monitoring well system has been reported or an emergency occurs that is deemed likely to affect the operation of the system.

Site monitoring well components to be monitored include, but are not limited to, the components included in Table 4-1.

Table 4-1 – Remedial System Monitoring Requirements and Schedule

Remedial System Component	Monitoring Parameter	Monitoring Schedule
Site Monitoring Wells	Coal Tar Presence/Accumulation	Annually
Site Monitoring Wells	Groundwater Sampling	Every 3 Years

A complete list of components to be inspected is provided in the Inspection Checklist, provided in Appendix I – Site Management Forms.

4.4 Post-Remediation Media Monitoring and Sampling

Samples shall be collected from the Site monitoring wells on a routine basis. Sampling locations, required analytical parameters and schedule are provided in Table 4-2 – Remedial System Sampling Requirements and Schedule. Modification to the frequency or sampling requirements will require approval from the NYSDEC project manager.

Table 4-2 – Post Remediation Sampling Requirements and Schedule

Sampling Location	Analytical Parameters				Schedule
	VOCs (EPA Method 624)	TAL Metals (EPA Method 6010B)	PAHs (EPA Method 8270c)	Cyanide (EPA Method 901A)	
Site Monitoring Wells	X	X	X	X	Every 3 Years

Detailed sample collection and analytical procedures and protocols are provided in Appendix G – O&M Plan and Appendix J – Quality Assurance Project Plan.

4.4.1 Monitoring Well Inspection

A monitoring well inspection will be performed annually to assess monitoring wells for the presence of recoverable coal tar. If recoverable coal tar is encountered, then coal tar recovery will be performed, and a coal tar recovery system may be installed. Modification to the frequency will require approval from the NYSDEC project manager.

4.4.2 Groundwater Sampling

Groundwater monitoring will be performed every 3 years to assess the performance of the remedy. Modification to the frequency or sampling requirements will require approval from the NYSDEC project manager.

The network of monitoring wells has been installed to monitor upgradient, on-site and downgradient groundwater conditions at the site. The network of on-site and off-site wells has been designed based on the following criteria:

Table 4-3 summarizes the wells' identification numbers, as well as the purpose, location, depths, diameter and screened intervals of the wells. As part of the groundwater monitoring, 4 upgradient wells, 11 on-site wells, and 4 downgradient wells are sampled to evaluate the effectiveness of the remedial system. The remedial party will measure depth to the water table for each monitoring well in the network before sampling.

Table 4-3 – Monitoring Well Construction Details

Monitoring Well ID	Well Location	Coordinates (Northing/Easting)	Well Diameter (inches)	Elevation (feet above mean sea level)			
				Casing	Surface	Screen Top	Screen Bottom
MW-01	On-Site	759084.6, 691308.4	2	50.90	51.19	42.90	32.90

Monitoring Well ID	Well Location	Coordinates (Northing/Easting)	Well Diameter (inches)	Elevation (feet above mean sea level)			
				Casing	Surface	Screen Top	Screen Bottom
MW-2A	On-Site	758977.1, 691381.2	2	51.95	52.33	47.95	37.95
MW-2B	On-Site	758971.0, 691385.0	4	51.71	52.34	27.71	12.71
MW-3A	On-Site	759096.7, 691444.0	2	49.97	50.32	43.97	33.97
MW-3B	On-Site	759098.4, 691447.0	4	49.37	50.32	23.37	8.37
MW-05	Downgradient	759147.6, 691568.7	2	44.73	45.13	40.73	34.73
MW-06	Downgradient	759091.1, 691623.3	2	42.94	43.16	35.94	25.94
MW-7A	On-Site	759067.3, 691339.8	2	51.30	51.64	42.3	32.3
MW-7B	On-Site	759070.8, 691345.2	2	51.33	51.75	21.33	11.33
MW-8A	Upgradient	759091.8, 691163.8	2	51.39	51.77	46.39	36.39
MW-8B	Upgradient	759092.3, 691158.9	2	51.25	51.69	23.25	13.25
MW-09	Upgradient	759185.3, 691291.9	2	48.83	49.22	43.33	33.33
MW-10	Upgradient	758975.4, 691253.5	2	51.82	52.05	45.82	35.82
MW-11A	On-Site	758926.0, 691544.8	2	45.39	45.75	40.89	32.89
MW-11B	On-Site	758929.5, 691550.4	4	45.09	45.67	19.19	4.19

Monitoring Well ID	Well Location	Coordinates (Northing/Easting)	Well Diameter (inches)	Elevation (feet above mean sea level)			
				Casing	Surface	Screen Top	Screen Bottom
MW-12A	Downgradient	758949.7, 691680.4	2	38.34	38.63	34.34	24.34
MW-12B	Downgradient	758944.8, 691672.6	4	38.32	39.15	12.32	-2.68
PZ-2	On-Site	759079.5, 691398.7	2	50.59	51.02	32.59	22.59
PZ-3	On-Site	759129.6, 691377.0	2	50.37	50.68	40.37	30.37

Monitoring well construction logs are included in Appendix C of this document.

If biofouling or silt accumulation occurs in the on-site and/or off-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The NYSDEC project manager will be notified prior to any repair or decommissioning of any monitoring well for the purpose of replacement, and the repair or decommissioning and replacement process will be documented in the subsequent Periodic Review Report. Well decommissioning without replacement will be done only with the prior approval of the NYSDEC project manager. Well abandonment will be performed in accordance with NYSDEC's guidance entitled "CP-43: Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells that are decommissioned because they have been rendered unusable will be replaced in kind in the nearest available location, unless otherwise approved by the NYSDEC project manager.

The sampling frequency may only be modified with the approval of the NYSDEC project manager. This SMP will be modified to reflect changes in sampling plans approved by the NYSDEC project manager.

Deliverables for the groundwater monitoring program are specified in Section 7.0 – Reporting Requirements.

4.4.3 Monitoring and Sampling Protocol

All sampling activities will be recorded in a field book and associated sampling log as provided in Appendix I – Site Management Forms. Other observations (e.g., groundwater monitoring well integrity) will be noted on the sampling log. The sampling log will serve as the inspection form for the monitoring network. Additional detail regarding monitoring and sampling protocols are provided in the site-specific O&M Plan provided as Appendix G of this document.

5.0 OPERATION AND MAINTENANCE PLAN

5.1 General

The Site remedy does not rely on any mechanical systems, such as groundwater treatment systems, sub-slab depressurization systems, or air sparge/soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP.

A coal tar recovery system is not currently installed at the Site. However, if coal tar is measured at recoverable quantities such that a coal tar recovery system is warranted, an operation and maintenance plan for the system will be developed and addended to this SMP.

6.0 PERIODIC ASSESSMENTS/EVALUATIONS

6.1 Climate Change Vulnerability Assessment

Increases in both the severity and frequency of storms/weather events, an increase in sea level elevations along with accompanying flooding impacts, shifting precipitation patterns and wide temperature fluctuation, resulting from global climactic change and instability, have the potential to significantly impact the performance, effectiveness and protectiveness of a given site and associated remedial systems. Vulnerability assessments provide information so that the site and associated remedial systems are prepared for the impacts of the increasing frequency and intensity of severe storms/weather events and associated flooding.

This section provides a current vulnerability assessment that evaluates the vulnerability of the site and/or engineering controls to severe storms/weather events and associated flooding. This section also identifies vulnerability assessment updates that will be conducted for the site in Periodic Review Reports.

- Flood Plain: Based on review of publicly available climate and hazard mapping tools, including the NOAA Sea Level Rise Viewer and the NYSDEC Environmental Resource Mapper, the Cedar St. former MGP Site is not located within the 100-year floodplain. The Site is situated approximately 55 feet above mean sea level and generally slopes to the southeast, with drainage continuing off site. This topography limits the potential for flooding during extreme precipitation events. The Site is also located outside areas identified in the NYSDEC Environmental Resource Mapper for Base Flood Elevation plus 72 or 75 inches of sea level rise.
- Sea Level Rise: The Cedar Street former MGP Site is located approximately 0.33 miles from the Atlantic coastline. Based on review of the NOAA Sea Level Rise Viewer, the Site is well outside the areas projected to be affected by sea level rise, including the maximum modeled water level of 10 feet, and is not

located within areas susceptible to high tide flooding. As a result, sea level rise is not anticipated to pose a significant risk to the Site.

- Site Drainage and Stormwater Management: The Site generally slopes to the southeast, with stormwater drainage continuing off site. Existing site drainage conditions limit the potential for stormwater ponding or flooding during extreme precipitation events. No adverse stormwater-related impacts are anticipated under future climate conditions.
- Erosion: The Site is covered by an extensive existing site cover. The cover system reduces susceptibility to erosion during severe weather events and limits the potential for mobilization or release of remaining site-related contamination. Based on Site conditions and topography, erosion is not anticipated to be a significant concern under projected climate conditions.
- Landslides: Review of the USGS Landslide Hazard Map indicates that a portion of the southwestern area of the Site is mapped as having potential landslide susceptibility; however, this area is classified within the lowest probability zone. Potential impacts from landslides are expected to be localized, and due to the presence of the existing Site cover, impacts to Site conditions are anticipated to be limited.
- Wildfires: According to the USDA Forest Service Wildfire Risk to Communities database, the City of New Rochelle, New York is characterized as having a low wildfire risk. Wildfires are not anticipated to pose a significant risk to the Site.
- Spill/Contaminant Release: No liquids or regulated materials that pose a potential spill/contaminant release will be mobilized to or stored at the Site as part of the long-term remedy.

6.2 Green Remediation Evaluation

NYSDEC's DER-31 Green Remediation requires that green remediation concepts and techniques be considered during all stages of the remedial program including site management, with the goal of improving the sustainability of the cleanup and summarizing the net environmental benefit of any implemented green technology. This section provides

an environmental footprint analysis of the remedy, as implemented at the time of this SMP. This section of the SMP also provides a summary of green remediation evaluations to be completed for the Site during site management and reported in Periodic Review Reports (PRRs). Environmental footprint calculations were run using SEFA forms, and a summary table of the results are provided in Table 6-1.

- Energy Use and Greenhouse Gas Emissions: Energy consumption and greenhouse gas emissions associated with site management are limited to vehicle travel for inspections and sampling events. No on-site electricity or fuel consumption is required for operation or maintenance of the remedy. The footprint analysis determined that overall energy use and associated emissions are minimal due to the infrequent nature of site visits. Measures such as coordinating inspections and sampling events, utilizing mass transit where practicable, and carpooling for site visits are employed to reduce transportation-related energy use and emissions.
- Solid Waste Generation: Solid waste generated during site management activities is limited to small volumes of routine materials, such as personal protective equipment and sampling supplies. No construction or remediation-related waste is generated during normal site management. Waste is managed in accordance with applicable regulations, and opportunities for reuse or recycling of non-contaminated materials are implemented where feasible. Overall waste generation associated with site management activities is considered minimal. Solid waste generated during site management activities is limited to small volumes of routine materials, such as personal protective equipment and sampling supplies. No construction or remediation-related waste is generated during normal site management. Waste is managed in accordance with applicable regulations, and opportunities for reuse or recycling of non-contaminated materials are implemented where feasible. Overall waste generation associated with site management activities is considered minimal.
- Water Usage: Water usage during site management activities is minimal and limited to occasional decontamination or maintenance-related needs, as applicable. The Site does not include active treatment systems, irrigation

systems, or other routine water-consuming processes. As a result, water usage does not represent a significant component of the Site's environmental footprint.

- Land Use and Ecosystems: The existing Site cover system and associated landscaped areas are stable and require minimal disturbance during routine inspections and maintenance. Site management activities are conducted in a manner that preserves the integrity of the cover system and minimizes impacts to surrounding land and ecosystems. No ongoing habitat disturbance is anticipated as part of routine site management to surrounding land and ecosystems. No ongoing habitat disturbance is anticipated as part of routine site management.

6.2.1 Timing of Green Remediation Evaluations

For major remedial system components, green remediation evaluations and corresponding modifications will be undertaken as part of a formal Remedial System Optimization (RSO), or at any time that the NYSDEC project manager feels appropriate, (e.g., during significant maintenance events or in conjunction with storm recovery activities).

Modifications resulting from green remediation evaluations will be routinely implemented and scheduled to occur during planned/routine operation and maintenance activities after approval from the DER project manager. Reporting of these modifications will be presented in the PRR.

6.2.2 Metrics and Reporting

As discussed in Section 7.0 and as shown in Appendix I – Site Management Forms, information on energy usage, solid waste generation, transportation and shipping, water usage and land use and ecosystems will be recorded to facilitate and document consistent implementation of green remediation during site management and to identify

corresponding benefits. A set of metrics has been developed and will be evaluated over time to ensure that green remediation actions are achieving the desired results.

6.3 Remedial System Optimization

A Remedial System Optimization (RSO) study will be conducted any time that the NYSDEC project manager or the remedial party requests in writing that an in-depth evaluation of the remedy is needed. An RSO may be appropriate if any of the following occur:

- The remedial actions have not met or are not expected to meet RAOs in the time frame estimated in the Decision Document;
- The management and operation of the remedial system is exceeding the estimated costs;
- The remedial system is not performing as expected or as designed;
- Previously unidentified source material may be suspected;
- Plume shift has potentially occurred;
- Site conditions change due to development, change of use, change in groundwater use, etc.;
- There is an anticipated transfer of the site management to another remedial party or agency; and
- A new and applicable remedial technology becomes available.

An RSO will provide a critique of a site's conceptual model, give a summary of past performance, document current cleanup practices, summarize progress made toward the site's cleanup goals, gather additional performance or media specific data and information and provide recommendations for improvements to enhance the ability of the present system to reach RAOs or to provide a basis for changing the remedial strategy.

7.0. REPORTING REQUIREMENTS

7.1 Site Management Reports

All site management inspection, maintenance and monitoring events will be recorded on the appropriate site management forms provided in Appendix I. These forms are subject to NYSDEC revision. All site management inspection, maintenance, and monitoring events will be conducted by a qualified environmental professional as defined in 6 NYCRR Part 375, a Professional Engineer (PE) who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State.

All applicable inspection forms and other records, including media sampling data and system maintenance reports, generated for the site during the reporting period will be provided in electronic format to the NYSDEC in accordance with the requirements of Table 7-1 and summarized in the Periodic Review Report.

Table 7-1: Schedule of Interim Monitoring/Inspection Reports

Task/Report	Reporting Frequency*
Periodic Review Report	Annually, or as otherwise determined by the NYSDEC

* The frequency of events will be conducted as specified until otherwise approved by the NYSDEC project manager.

All interim monitoring/inspections reports will include, at a minimum:

- Date of event or reporting period;
- Name, company, and position of person(s) conducting monitoring/inspection activities;
- Description of the activities performed;

- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet);
- Type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and
- A determination as to whether contaminant conditions have changed since the last reporting event.

Routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting maintenance activities;
- Description of maintenance activities performed;
- Any modifications to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

Non-routine maintenance event reporting forms will include, at a minimum:

- Date of event;

- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Description of non-routine activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

Data will be reported in digital format as determined by the NYSDEC. Currently, data is to be supplied electronically and submitted to the NYSDEC EQuIS™ database in accordance with the requirements found at this link http://www.dec.ny.gov/chemical/62440.html.

7.2 Periodic Review Report

A Periodic Review Report (PRR) will be submitted to the NYSDEC project manager beginning sixteen (16) months after the Certificate of Completion or equivalent document is issued. After submittal of the initial Periodic Review Report, the next PRR shall be submitted annually to the NYSDEC project manager or at another frequency as may be required by the NYSDEC project manager. In the event that the site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the site described in Appendix A - Environmental Easement. The report will be prepared in accordance with NYSDEC's DER-10 and submitted within 30 days of the end of each certification period. Media sampling results will also be incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site.
- Results of the required annual site inspections, fire inspections and severe condition inspections, if applicable.

- Description of any change of use, import of materials, or excavation that occurred during the certifying period.
- All applicable site management forms and other records generated for the site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted.
- Identification of any wastes generated during the reporting period, along with waste characterization data, manifests, and disposal documentation.
- A summary of any discharge monitoring data and/or information generated during the reporting period, with comments and conclusions.
- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor, etc.), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These tables and figures will include a presentation of past data as part of an evaluation of contaminant concentration trends, including but not limited to:
  - Trend monitoring graphs that present groundwater contaminant levels from before the start of the remedy implementation to the most current sampling data;
  - Trend monitoring graphs depicting system influent analytical data on a per event and cumulative basis;
  - O&M data summary tables;
  - A current plume map for sites with remaining groundwater contamination; and
  - A groundwater elevation contour map for each gauging event.
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted in digital format as determined by the NYSDEC. Currently, data is supplied electronically and submitted to the NYSDEC EQuIS™ database in accordance with the requirements found at this link: http://www.dec.ny.gov/chemical/62440.html.
- A site evaluation, which includes the following:

- The compliance of the remedy with the requirements of the site-specific Remedial Action Work Plan (RAWP), ROD or Decision Document;
- The operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
- Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;
- Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan;
- An update to the climate change vulnerability assessment if site or external conditions have changed since the previous assessment, and recommendations to address vulnerabilities.
- A summary of the Green Remediation evaluation, including a quantitative and qualitative overview of a site's environmental impacts and recommendations to improve the remedy's environmental footprint. The PRR will include the completed Summary of Green Remediation Metrics form provided in Appendix [x].
- An evaluation of trends in contaminant levels in the affected media to determine if the remedy continues to be effective in achieving remedial goals as specified by the RAWP, ROD or Decision Document; and
- The overall performance and effectiveness of the remedy.

7.2.1 Certification of Institutional and Engineering Controls

Following the last inspection of the reporting period, a qualified environmental professional as defined in 6 NYCRR Part 375 or Professional Engineer licensed to practice and registered in New York State will prepare, and include in the Periodic Review Report, the following certification as per the requirements of NYSDEC DER-10:

"*For each institutional or engineering control identified for the site, I certify that all of the following statements are true:*

- *The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;*
- *The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;*
- *Nothing has occurred that would impair the ability of the control to protect the public health and environment;*
- *Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;*
- *Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;*
- *If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;*
- *Use of the site is compliant with the environmental easement;*
- *The engineering control systems are performing as designed and are effective;*
- *To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program (and generally accepted engineering practices); and*
- *The information presented in this report is accurate and complete.*

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as Con Edison's Designated Site Representative and I have been authorized and designated by Con Edison to sign this certification for the site."

"I certify that the New York State Education Department has granted a Certificate of Authorization to provide Professional Engineering services to the firm that prepared this Periodic Review Report."

At the end of each certifying period, as determined by the NYSDEC project manager, the following certification will be provided to the NYSDEC project manager:

"For each institutional control identified for the site, I certify that all of the following statements are true:

- *The institutional control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;*
- *Nothing has occurred that would impair the ability of the control to protect the public health and environment;*
- *Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;*
- *Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;*
- *If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;*
- *Use of the site is compliant with the environmental easement.*
- *The information presented in this report is accurate and complete.*

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as Con Edison's Designated Site Representative and I have been authorized and designated by all site owners to sign this certification] for the site."

The signed certification will be included in the Periodic Review Report.

The Periodic Review Report will be submitted, in electronic format, to the NYSDEC project manager and the NYSDOH project manager. The Periodic Review Report may also need to be submitted in hard-copy format if requested by the NYSDEC project manager.

7.3 Corrective Measures Work Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control or failure to conduct site management activities, a Corrective Measures Work Plan will be submitted to the NYSDEC project manager for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the Corrective Measures Work Plan until it has been approved by the NYSDEC project manager.

7.4 Remedial System Optimization Report

If an RSO is to be performed (see Section 6.3), upon completion of an RSO, an RSO report must be submitted to the NYSDEC project manager for approval. A general outline for the RSO report is provided in Appendix J. The RSO report will document the research/ investigation and data gathering that was conducted, evaluate the results and facts obtained, present a revised conceptual site model and present recommendations. RSO recommendations are to be implemented upon approval from the NYSDEC. Additional work plans, design documents, HASPs etc., may still be required to implement the recommendations, based upon the actions that need to be taken. A final engineering report and update to the SMP may also be required.

The RSO report will be submitted, in electronic format, to the NYSDEC project manager and the NYSDOH project manager.

8.0 REFERENCES

6 NYCRR Part 375, Environmental Remediation Programs. December 14, 2006.

AKRF (AKRF, Inc.), 1993. Groundwater Investigation. April 1993.

Anchor QEA, 2025. Pre-Design Investigation Report. October 2025.

Parsons, 2009. Draft Data Summary for Site Characterization Activities at the Cedar Street Works Site (Site No. V00570). July 2009

RETEC (The RETEC Group, Inc.), 2003. Historical Investigation Report – Former Cedar Street Works MGP Site (Site #V00570). January 20, 2003.

URS, 2017. Remedial Investigation of the Cedar Street Works Former MGP Site. Prepared for Consolidated Edison Co. of New York, Inc., July 2017.

NYSDEC DER-10 – Technical Guidance for Site Investigation and Remediation. New York State Department of Environmental Conservation Program Policy, May 3, 2010.

NYSDEC DER-31 – Green Remediation. New York State Department of Environmental Conservation Program Policy, January 20, 2011.

NYSDEC, 1998. Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. June 1998 (April 2000 addendum).

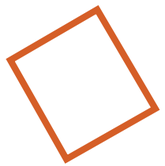
Environmental Footprint Summary

Core Element	Metric		Unit of Measure	Footprint		
				Annual Site Cover and Monitoring Well Inspection	Triennial Groundwater Sampling	Total
Materials & Waste	M&W-1	Refined materials used on-site	Tons	0.0	0.0	0.0
	M&W-2	% of refined materials from recycled or reused material	%	0.0	0.0	0.0
	M&W-3	Unrefined materials used on-site	Tons	0.0	0.0	0.0
	M&W-4	% of unrefined materials from recycled or reused material	%	0.0	0.0	0.0
	M&W-5	On-site hazardous waste disposed of off-site	Tons	0.0	0.0	0.0
	M&W-6	On-site non-hazardous waste disposed of off-site	Tons	0.0	0.0	0.0
	M&W-7	Recycled or reused waste	Tons	0.0	0.0	0.0
	M&W-8	% of total potential waste recycled or reused	%	0.0	0.0	0.0
Water (used on-site)	W-1	Public water use	MG	0.0	0.0	0.0
	W-2	Groundwater use	MG	0.0	0.0	0.0
	W-3	Surface water use	MG	0.0	0.0	0.0
	W-4	Reclaimed water use	MG	0.0	0.0	0.0
	W-5	Storm water use	MG	0.0	0.0	0.0
	W-6	0	MG	0.0	0.0	0.0
	W-7	0	MG	0.0	0.0	0.0
	W-8	Wastewater generated	MG	0.0	0.0	0.0
Energy	E-1	Total energy used (on-site and off-site)	MMBtu	0.8	9.7	11.5
	E-2	Energy voluntarily derived from renewable resources		0.0	0.0	0.0
	E-2A	On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	0.0	0.0	0.0
	E-2B	Voluntary purchase of renewable electricity	MWh	0.0	0.0	0.0
	E-3	Voluntary purchase of RECs	MWh	0.0	0.0	0.0
	E-4	On-site grid electricity use	MWh	0.0	0.0	0.0
Air	A-1	On-site NOx, SOx, and PM emissions	Pounds	0.0	0.0	0.0
	A-2	On-site HAP emissions	Pounds	0.0	0.0	0.0
	A-3	Total NOx, SOx, and PM emissions	Pounds	0.3	75.8	76.1
	A-3A	Total NOx emissions	Pounds	0.2	21.7	21.9
	A-3B	Total SOx emissions	Pounds	0.0	47.0	47.0
	A-3C	Total PM emissions	Pounds	0.0	7.1	7.1
	A-4	Total HAP emissions	Pounds	0.0	5.1	5.1
	A-5	Total greenhouse gas emissions	Tons CO2e*	0.1	0.6	0.7

** Total greenhouse gases emissions (in CO2e) include consideration of CO2, CH4, and N2O (Nitrous oxide) emissions.*
"MMBtu" = millions of Btus
"MG" = millions of gallons
"CO2e" = carbon dioxide equivalents of global warming potential
"MWh" = megawatt hours (i.e., thousands of kilowatt-hours or millions of Watt
"Tons" = short tons (2,000 pounds)

Understanding and Reducing a Project's Environmental Footprint (EPA 542-R-12-002), February 2012

Notes: Environmental footprint summary for both components of Cedar St. Site Management Plan.



LEGEND:

Project Area

NOTE:
1. Map Source: ESRI World Light Gray Canvas Base and World Topographic Map

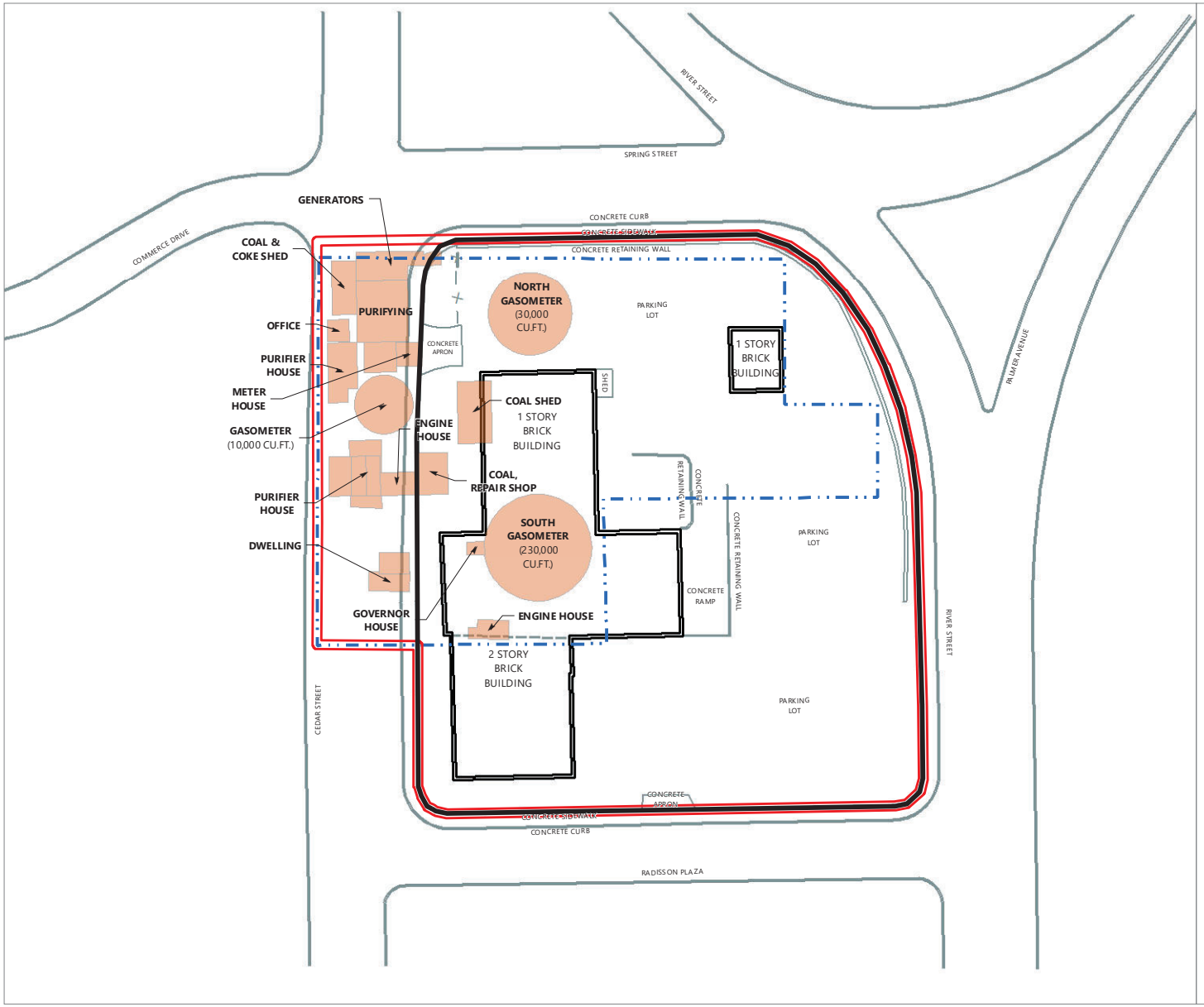
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Figure 1-1
Site Location Map
Site Management Plan for Cedar St. MGP
NYSDEC Site No. 360173, New Rochelle, New York
Consolidated Edison Company of New York, Inc.



LEGEND:

- Site Boundary
- Approximate Limits of Former MGP Site
- Limits of Tax Parcel (Currently Donnybrook Realty Corp Property)
- Property Structure
- Historical MGP Structure

NOTE:

1. Base map information based on a survey provided by Chazen Engineering, Land Surveying & Landscape Architecture, CO, P.C. dated 1/20/2009.
2. Historical MGP structure locations and limits of former MGP are approximate and based on information presented in the *Cedar Street Works Remedial Investigation Report* (URS 2017), *Site Characterization Work Plan for the Former Cedar Street Works Site* (Parsons 2005), and *Atlas of Westchester County, New York* (Hopkins 1929).
3. All locations are approximate.

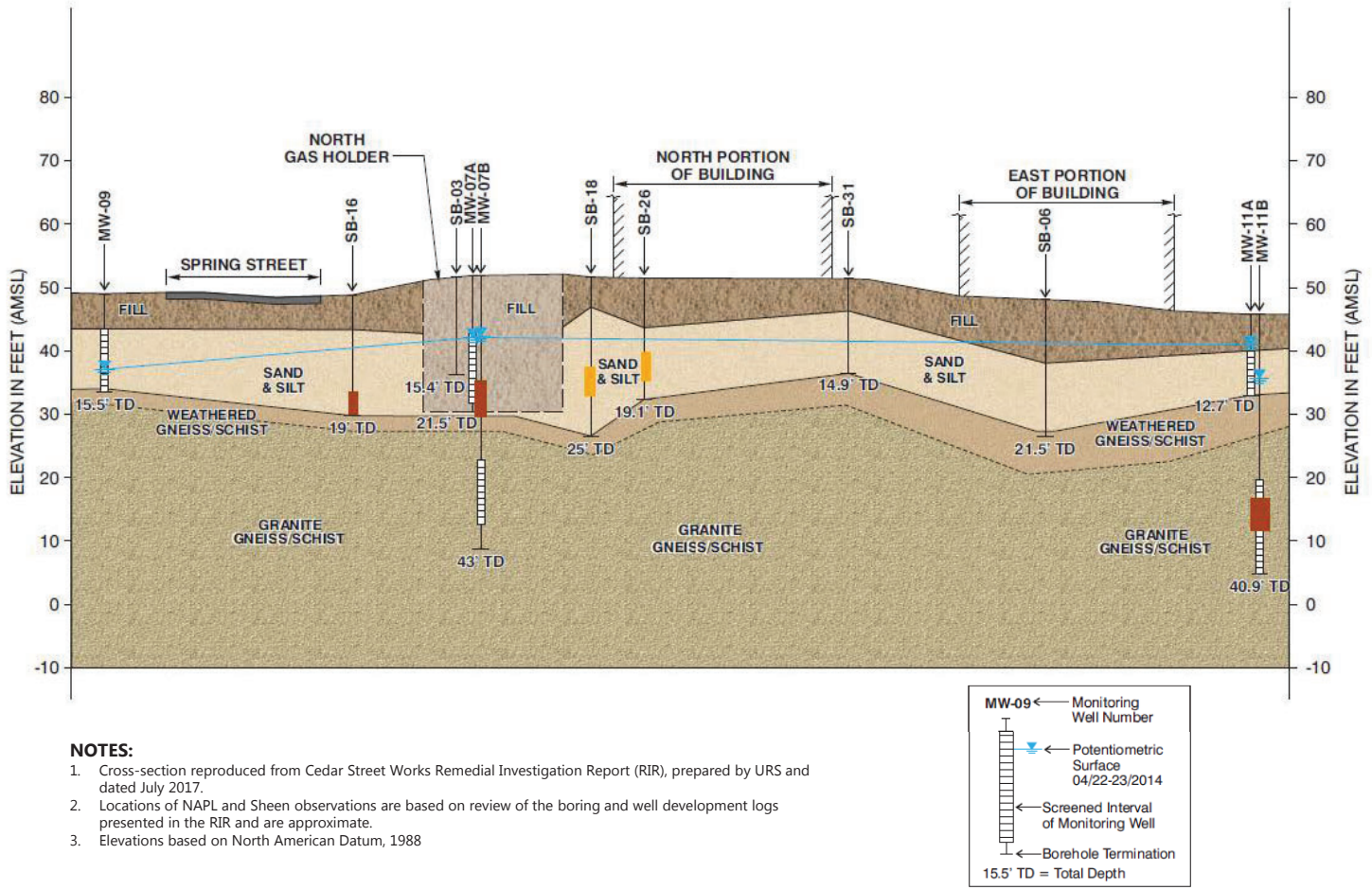
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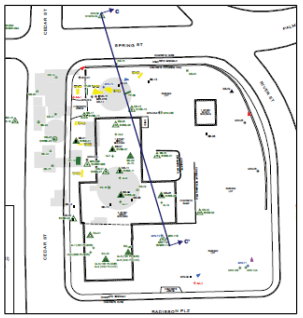
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ANCHOR QEA

Figure 1-2
Site Layout Map
Site Management Plan for Cedar St. MGP
NYSDEC Site No. 360173, New Rochelle, New York
Consolidated Edison Company of New York, Inc.



CROSS-SECTION LOCATION MAP:



LEGEND:

- Fill
- Sand & Sill
- Weathered Gneiss/Schist
- Granite Gneiss/ Schist
- Fill Within Former Holder
- NAPL Observed During Drilling
- Sheen Observed During Drilling

Horizontal Scale: 1" = 40'
Vertical Scale: 1" = 20'
10x Vertical Exaggeration

MW-09 ← Monitoring Well Number
← Potentiometric Surface 04/22-23/2014
← Screened Interval of Monitoring Well
← Borehole Termination
15.5' TD = Total Depth

NOTES:

1. Cross-section reproduced from Cedar Street Works Remedial Investigation Report (RIR), prepared by URS and dated July 2017.
2. Locations of NAPL and Sheen observations are based on review of the boring and well development logs presented in the RIR and are approximate.
3. Elevations based on North American Datum, 1988

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ANCHOR QEA

Figure 2-1
Cross-Section C- C'

Site Management Plan for Cedar St. MGP
NYSDEC Site No. 360173, New Rochelle, New York
Consolidated Edison of New York, Inc.



LEGEND:

- Top of Bedrock Elevation Contour (ft amsl)
- Historical MGP Structure
- Toyota Dealership Structure

Sample Locations

- Monitoring Well (2009)
- Soil Boring
- Bedrock Monitoring Well (RI)
- Overburden Monitoring Well (RI)
- Soil Boring and Rock Core (RI)
- Soil Boring (RI)

NOTES:

1. Base map information based on a survey provided by Chazen Engineering, Land Surveying & Landscape Architecture, CO., P.C. dated 1/20/2009.
2. Historical MGP structure locations are approximate and based on information presented in the *Cedar Street Works Remedial Investigation Report*, prepared by URS and dated July 2017.
3. Elevations based on North American Vertical Datum, 1988.
4. All locations are approximate.
5. RI = Remedial Investigation

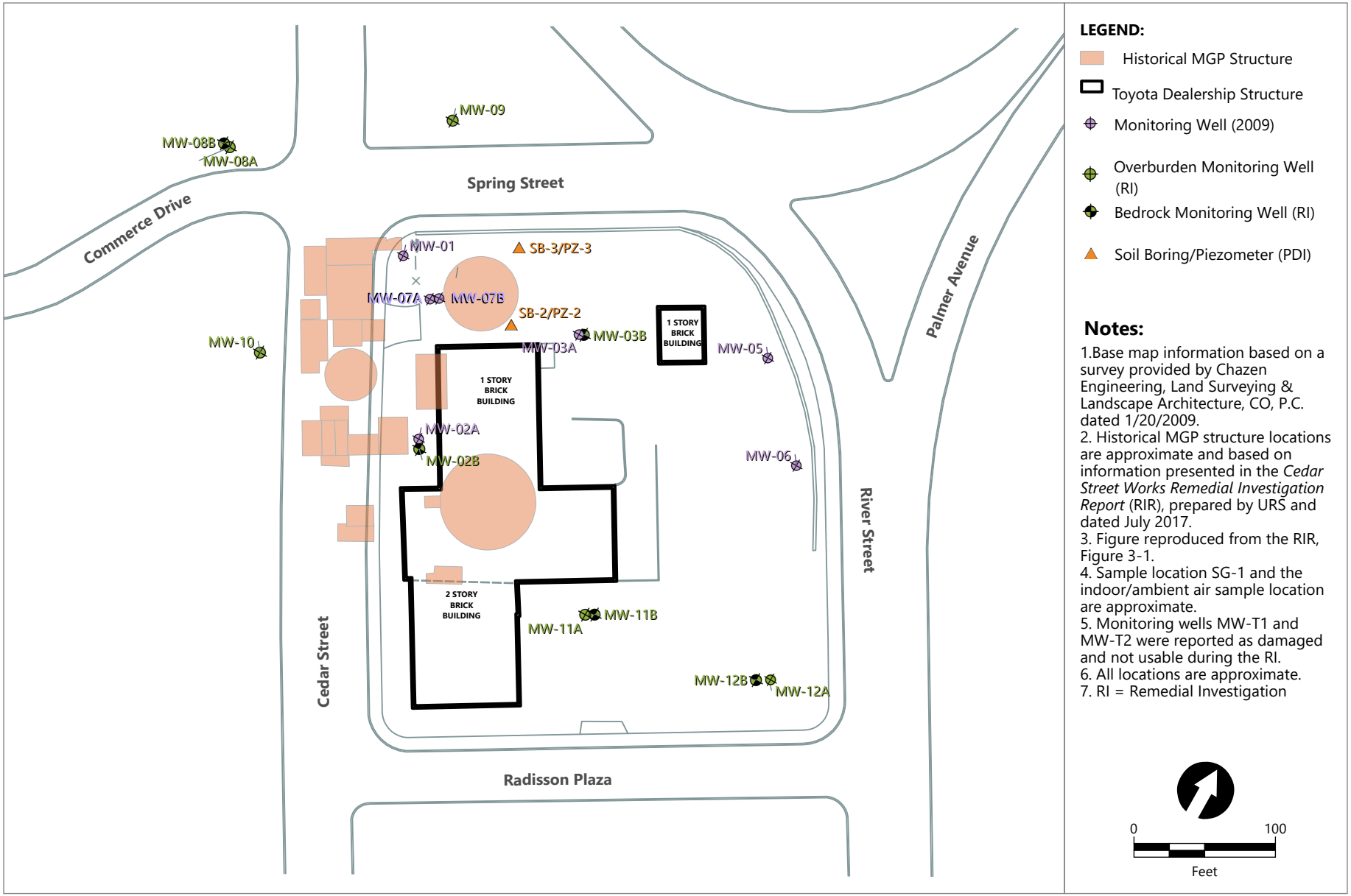
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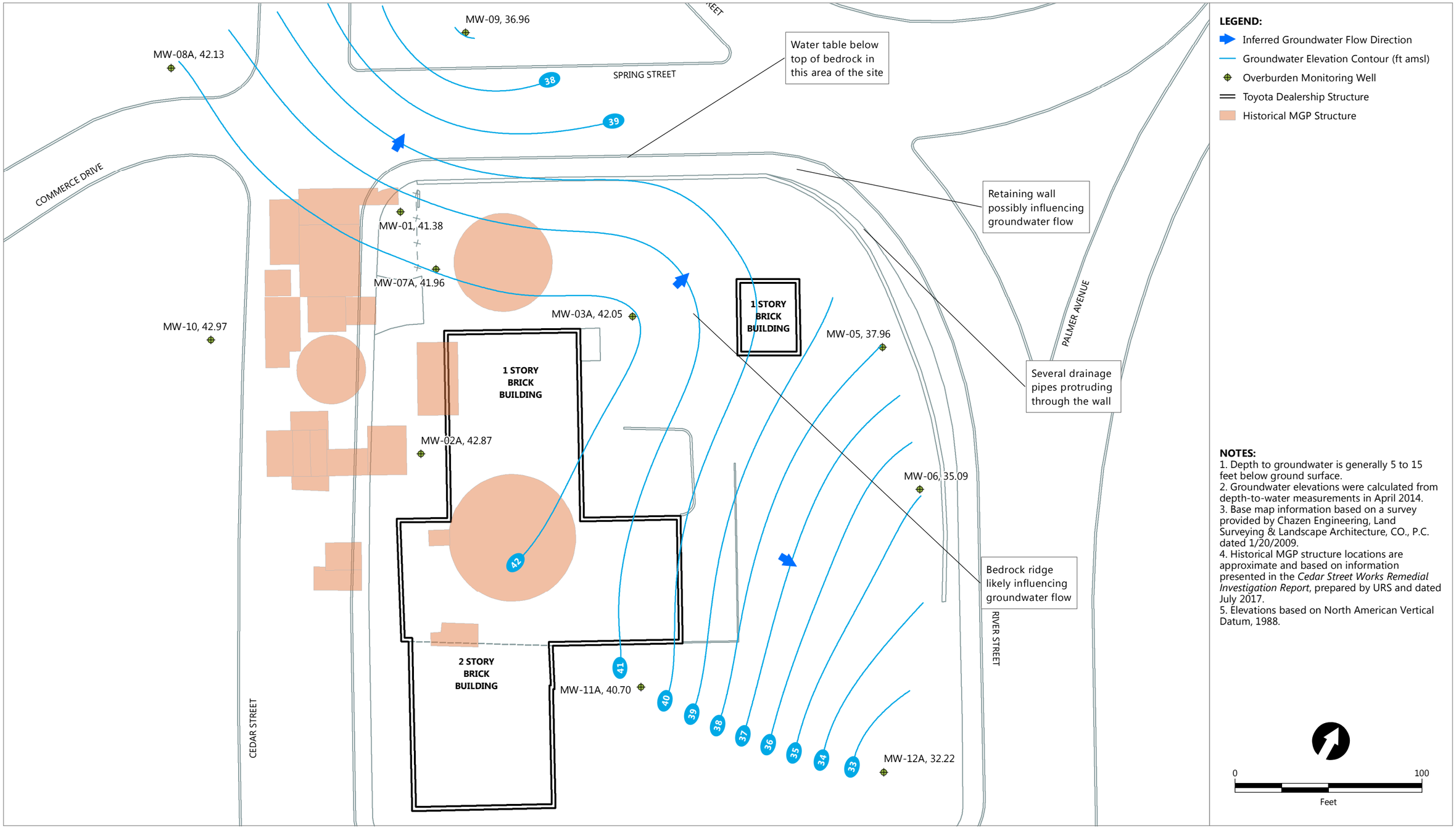
Figure 2-2
Estimated Top of Bedrock Surface
Site Management Plan for Cedar St. MGP
NYSDEC Site No. 360173, New Rochelle, New York
Consolidated Edison Company of New York, Inc.



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ANCHOR QEA

Figure 2-3
Monitoring Well and Piezometer Locations
Site Management Plan for Cedar St. MGP
NYSDEC Site No. 360173, New Rochelle, New York
Consolidated Edison Company of New York, Inc.



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ANCHOR QEA

Figure 2-4
Overburden Groundwater Potentiometric Surface
Site Management Plan for Cedar St. MGP
NYSDEC Site No. 360173, New Rochelle, New York
Consolidated Edison Company of New York, Inc.



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ANCHOR QEA

Figure 3-1
IC Boundary and Site Cover
Site Management Plan for Cedar St. MGP
NYSDEC Site No. 360173, New Rochelle, New York
Consolidated Edison Company of New York, Inc.

APPENDIX A
DEED RESTRICTION INCLUDING METES AND BOUNDS SURVEY

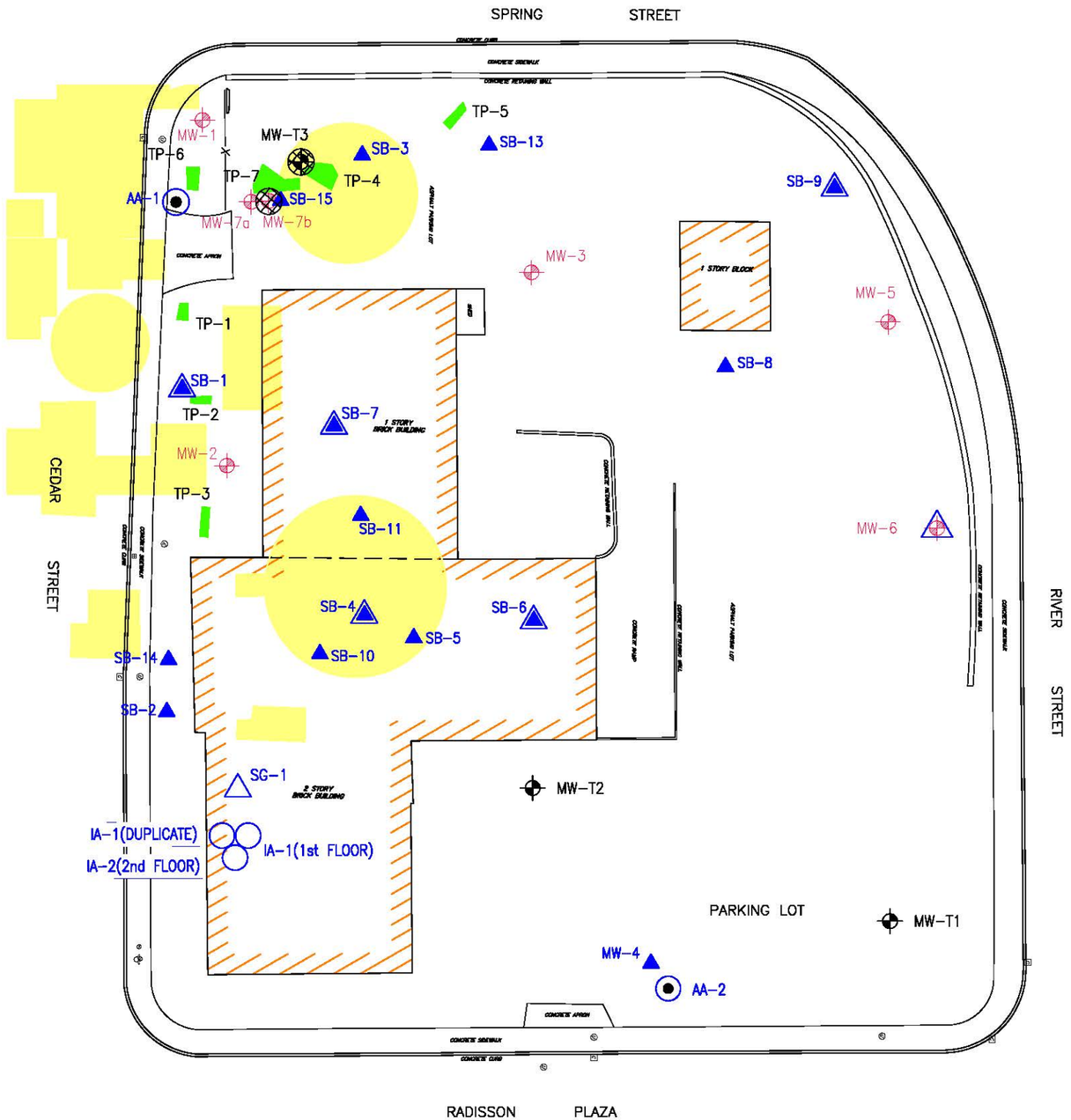
APPENDIX B
LIST OF SITE CONTACTS

Name	Phone/Email Address
Site Owner: James Rigano, Esq.	1-631-921-2988; jrigano@riganollc.com
Site Owner: Don Lia	1-631-423-6777; dtlia@aol.com
Site Owner: Charles V. Martabano, Esq.	1-914-242-6200; cmartabano@terrapincap.com
Remedial Party: Consolidated Edison Company of NY, Inc. Matthew Levison, PE	1-646-385-1691; levinosonm@coned.com
Qualified Environmental Professional: Matthew Cavas, PG	1-518-886-0643; mcavas@anchorqea.com
Remedial Engineer; Margaret Carrillo-Sheridan, PE	1-315-414-2049; mcarrillo-sheridan@anchorqea.com
NYSDEC DER Project Manager: Caroline Jalanti, PE	1-518-402-9543 Caroline.jalanti@dec.ny.gov
NYSDEC DER Project Manager's Supervisor: Steven McCague	1-518-402-9543 Steve.mccague@ny.dec.gov
NYSDEC Site Control: Kelly Lewandowski	518-402-9569; kelly.lewandowski@dec.ny.gov
NYSDOH Project Manager: Renata Ockerby	518-402-7860; renata.ockerby@health.ny.gov

APPENDIX C
SITE DATA SUMMARIES AND MONITORING WELL BORING AND CONSTRUCTION LOGS

Soil Data

- Summary of Soil Analytical Results (Parsons 2009)
- Summary of Soil Analytical Results (URS 2017)



LEGEND:

- SOIL BORING LOCATION
- MONITORING WELL
- HISTORIC MONITORING WELL
- TEST PIT LOCATION
- APPROXIMATE LOCATION OF FORMER MGP STRUCTURES
- SOIL GAS LOCATION
- INDOOR AIR SAMPLING LOCATION
- AMBIENT AIR SAMPLING LOCATION
- NAPL OBSERVED

NOTES:

1. SAMPLE LOCATION SG-1 AS WELL AS THE INDOOR/AMBIENT AIR SAMPLE LOCATIONS ARE APPROXIMATE.

2. HISTORIC MONITORING WELLS MW-T1 AND MW-T2 ARE DAMAGED AND NOT USEABLE.

3. BASE MAP INFORMATION BASED ON A SURVEY PROVIDED BY CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE, CO., P.C. DATED 1/20/09.

4. REFUSAL WAS ENCOUNTERED WITHIN THE TOP 2 FT AT LOCATION MW-4. THEREFORE A MONITORING WELL COULD NOT BE INSTALLED.

50 25 0 50 100

SCALE: 1"=50'

FIGURE 2

CONSOLIDATED EDISON
CEDAR STREET WORKS
NEW ROCHELLE, NY

SAMPLE LOCATION MAP

PARSONS
290 ELWOOD DAVIS ROAD, SUITE 312, LIVERPOOL, N.Y. 13088, PHONE: 315-451-9560

FILE NAME: P:\CONED\442098 - CEDAR STREET\CAD\442098-SK001.DWG
PLOT DATE: 4/16/2009 4:14 PM PLOTTED BY: WINTERS, CHRIS

Table 1
Sample Summary
Cedar Street

Location	Sample ID	Depth (bgs)	TCL VOCs	TCL SVOCs	TAL Metals	Cyanide	Hydrocarbon Fingerprint	Available Cyanide	Dissolved Metals
SOIL SAMPLES									
MW-1	MW-1 (9-11)	9-11'	X	X	X	X			
	MW-1 (17-19)	17-19'	X	X	X	X			
	MW-1 (17-19)*	17-19'	X	X	X	X			
MW-2	MW-2 (7-9)	7-9'	X	X	X	X			
	MW-2 (13-15)	13-15'	X	X	X	X			
MW-3	MW-3 (14-14.5)	14-14.5'	X	X	X	X			
	MW-3 (16)	16'	X	X	X	X			
MW-5	MW-5 (2-3)	2-3'	X	X	X	X			
	MW-5 (11-13)	11-13'	X	X	X	X			
	MW-5 (13-15)	13-15'	X	X	X	X			
MW-6	MW-6 (15-17)	15-17'	X	X	X	X			
	MW-6 (17-19)	17-19'	X	X	X	X			
MW-7a	MW-7a (17-19)	17-19'	X	X	X	X			
	MW-7a (21-23)	21-23'	X	X	X	X			
SB-1	SB-1 (9-11)	9-11'	X	X	X	X			
	SB-1(11-13)	11-13'	X	X	X	X			
SB-2	SB-2 (9-11)	9-11'	X	X	X	X			
	SB-2 (23-25)	23-25'	X	X	X	X			
SB-3	SB-3 (11-13)	11-13'	X	X	X	X			
	SB-3 (13)	13'	X	X	X	X	X		
SB-4	SB-4 (13-15)	13-15'	X	X	X	X	X		
	SB-4 (21-23)	21-23'	X	X	X	X			
	SB-4 (23-25)	23-25'	X	X	X	X			
SB-5	SB-5 (19-21)	19-21'	X	X	X	X			
	SB-5 (21-23)	21-23'	X	X	X	X	X		
SB-6	SB-6 (11-13)	11-13'	X	X	X	X			
	SB-6 (19-21)	19-21'	X	X	X	X			
SB-7	SB-7 (11-13)	11-13'	X	X	X	X			
	SB-7 (15-17)	15-17'	X	X	X	X			
SB-9	SB-9 (7-9)	7-9'	X	X	X	X			
SB-10	SB-10 (19-21)	19-21'	X	X	X	X			
SB-11	SB-11 (17-19)	17-19'	X	X	X	X			
	SB-11 (19-21)	19-21'	X	X	X	X			
SB-12	SB-12 (11-13)	11-13'	X	X	X	X			
	SB-12 (17-19)	17-19'	X	X	X	X	X		
SB-13	SB-13 (11-13)	11-13'	X	X	X	X			
	SB-13 (13-15)	13-15'	X	X	X	X	X		
SB-14	SB-14 (9-11)	9-11'	X	X	X	X			
	SB-14 (23-25)	23-25'	X	X	X	X			
SB-15	SB-15 (13-15)	13-15'	X	X	X	X			
	SB-15 (15-17)	15-17'	X	X	X	X			
TP-1	TP-1 (2-3)	2-3'	X	X	X	X			
	TP-1 (6)	6'	X	X	X	X			
TP-2	TP-2 (2-3)	2-3'	X	X	X	X			
	TP-2 (3-4)	3-4'	X	X	X	X			
	TP-2 (10.5)	10.5'	X	X	X	X			
TP-3	TP-3 (1-3)	1-3'	X	X	X	X			
	TP-3 (3)	3'	X	X	X	X			
TP-4	TP-4 (5.7)	5.7'	X	X	X	X			
	TP-4 (7.5)	7.5'	X	X	X	X			
TP-5	TP-5 (2.4)	2.4'	X	X	X	X			
	TP-5 (12.5)	12.5'	X	X	X	X			
	TP-5 (12.5)*	12.5'	X	X	X	X			
TP-6	TP-6 (2.5-3.5)	2.5-3.5'	X	X	X	X			
	TP-6 (6-7)BP	6-7'	X	X	X	X			
	TP-6 (9.5)	9.5'	X	X	X	X			
TP-7	TP-7 (7-9)IH	7-9'	X	X	X	X			
	TP-7 (9)IH	9'	X	X	X	X			
	TP-7 (9)OH	9'	X	X	X	X			

Table 2
Validated Subsurface Soil Analytical Data
Detected Compound Summary
Ceder Street

Consolidated Edison Cedar Street Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID: Lab Sample Id: Depth: Source: SDG: Matrix: Sampled: Validated:	MW-1 (9-11) Z5873-02 9-11' Chemtech Z5873 SOIL 12/15/2008 3/21/2009	MW-1(17-19) Z5873-03 17-19' Chemtech Z5873 SOIL 12/15/2008 3/21/2009	Dup of MW-1(17-19) MW-100(17-19) Z5873-04 17-19' Chemtech Z5873 SOIL 12/15/2008 3/21/2009	MW-2 (7-9) Z5873-07 7-9' Chemtech Z5873 SOIL 12/15/2008 3/21/2009	MW-2(13-15) Z5873-08 13-15' Chemtech Z5873 SOIL 12/15/2008 3/21/2009	MW-3(14-14.5) Z5873-05 14-14.5' Chemtech Z5873 SOIL 12/15/2008 3/21/2009	MW-3(16) Z5873-06 16' Chemtech Z5873 SOIL 12/15/2008 3/21/2009	MW- 5(2-3) Z5721-04 2-3' Chemtech Z5721 SOIL 12/5/2008 3/20/2009	MW-5(11-13) Z5843-01 11-13' Chemtech Z5843 SOIL 12/12/2008 3/21/2009	MW-5(13-15) Z5843-02 13-15' Chemtech Z5843 SOIL 12/12/2008 3/21/2009	MW-6(15-17) Z5843-06 15-17' Chemtech Z5843 SOIL 12/12/2008 3/21/2009	MW-6(17-19) Z5843-07 17-19' Chemtech Z5843 SOIL 12/12/2008 3/21/2009
CAS NO.	COMPOUND		UNITS:												
	VOLATILES														
67-64-1	Acetone	0.05	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.12 J	ND	ND
71-43-2	Benzene	0.06	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
110-82-7	Cyclohexane	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
100-41-4	Ethyl Benzene	1	mg/Kg	ND	ND	ND	ND	0.22	ND	ND	ND	ND	0.0057 J	ND	0.022 J
98-82-8	Isopropylbenzene	NS	mg/Kg	ND	ND	ND	ND	0.063	ND	ND	ND	0.3	0.024 J	ND	0.06
108-87-2	Methylcyclohexane	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	0.089	ND	ND	0.018 J
100-42-5	Styrene	NS	mg/Kg	ND	ND	ND	ND	0.017 J	ND	ND	ND	ND	ND	ND	ND
108-88-3	Toluene	0.7	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	0.016 J	ND	ND	0.011 J
136777-61-2	m/p-Xylenes	0.26	mg/Kg	ND	ND	ND	ND	0.23 J	ND	ND	ND	ND	0.018 J	ND	0.032 J
1330-20-7	o-Xylene	0.26	mg/Kg	ND	ND	ND	ND	0.37	ND	ND	ND	ND	0.013 J	ND	ND
	Total VOCs	NS	mg/Kg	ND	ND	ND	ND	0.9	ND	ND	ND	0.405	0.1807	ND	0.143
	SEMIVOLATILES														
98-86-2	Acetophenone	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
100-52-7	Benzaldehyde	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
92-52-4	1,1-Biphenyl	NS	mg/Kg	ND	ND	ND	2.7 J	0.86 J	ND	ND	4 J	ND	ND	0.056 J	0.52
111-44-4	bis(2-Chloroethyl)ether	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
117-81-7	Bis(2-ethylhexyl)phthalate	NS	mg/Kg	0.04 J	0.16 J	0.22 J	ND	ND	ND	ND	ND	1.4 J	2.1 J	0.28 J	ND
86-74-8	Carbazole	NS	mg/Kg	ND	ND	ND	18 J	2.1 J	ND	ND	ND	ND	ND	ND	ND
132-64-9	Dibenzofuran	NS	mg/Kg	ND	ND	ND	44	5.4 J	ND	ND	1.5 J	ND	ND	ND	ND
105-67-9	2,4-Dimethylphenol	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
121-14-2	2,4-Dinitrotoluene	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
87-86-5	3+4-Methylphenols	0.33	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
621-64-7	2-Nitroaniline	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
98-95-3	Nitrobenzene	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PAHs														
83-32-9	Acenaphthene	20	mg/Kg	ND	ND	ND	13 J	1.4 J	ND	ND	11	0.44 J	ND	ND	0.098 J
208-96-8	Acenaphthylene	100	mg/Kg	ND	ND	ND	45	4.9 J	ND	ND	12	ND	0.38 J	ND	ND
120-12-7	Anthracene	100	mg/Kg	ND	ND	ND	100	12	ND	ND	12	0.43 J	0.53 J	ND	ND
120-12-7	Benzo(a)anthracene	1	mg/Kg	ND	ND	ND	160	13	ND	ND	16	0.78 J	1.6 J	0.04 J	ND
50-32-8	Benzo(a)pyrene	1	mg/Kg	ND	ND	ND	95	9.3	ND	ND	19 J	R	0.67 J	ND	ND
205-99-2	Benzo(b)fluoranthene	1	mg/Kg	0.039 J	ND	ND	150	14	ND	1.1 J	25 J	R	1.5 J	ND	ND
191-24-2	Benzo(g,h,i)perylene	100	mg/Kg	ND	ND	ND	54	3 J	ND	ND	9.4 J	R	R	ND	ND
207-08-9	Benzo(k)fluoranthene	0.8	mg/Kg	ND	ND	ND	48	5.2 J	ND	ND	6.8 J	R	0.55 J	ND	ND
218-01-9	Chrysene	1	mg/Kg	ND	ND	ND	130	12	ND	ND	16 J	0.76 J	1.3 J	0.11 J	ND
53-70-3	Dibenz(a,h)anthracene	0.33	mg/Kg	ND	ND	ND	15 J	1.1 J	ND	ND	ND	R	R	ND	ND
206-44-0	Fluoranthene	100	mg/Kg	ND	ND	ND	310	29	ND	1.3 J	55	1.9 J	3.4 J	0.07 J	ND
86-73-7	Fluorene	30	mg/Kg	ND	ND	ND	85	9.5	ND	ND	10	0.6 J	0.47 J	0.071 J	0.17 J
193-39-5	Indeno(1,2,3-cd)pyrene	0.5	mg/Kg	ND	ND	ND	43	2.3 J	ND	ND	4.4 J	ND	ND	ND	ND
91-57-6	2-Methylnaphthalene	NS	mg/Kg	ND	ND	ND	21 J	3.7 J	ND	1.1 J	2.1 J	9	5.4	3.2	6.1
91-20-3	Naphthalene	12	mg/Kg	ND	ND	ND	15 J	4.5 J	ND	ND	5.5 J	ND	0.52 J	0.72	2
85-01-8	Phenanthrene	100	mg/Kg	ND	ND	0.048 J	350	34	ND	0.8 J	49	2.3 J	3.2 J	0.13 J	0.34 J
129-00-0	Pyrene	100	mg/Kg	ND	ND	ND	280	25	ND	1.6 J	60 J	2.9 J	4.1 J	0.15 J	ND
	Total PAHs	NS	mg/Kg	0.039	ND	0.048	1914	183.9	ND	5.9	313.2	19.11	23.62	4.491	8.708
	Total SVOCs	NS	mg/Kg	0.079	0.16	0.268	1978.7	192.26	ND	5.9	318.7	20.51	25.72	4.827	9.228

Notes:
(1) 6NYCRR Part 375 Environmental Remediation Programs (December 14, 2006)
(2) -- indicates no cleanup objective or background level is available.
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(5) R indicates result was rejected based on validation.
(6) Shaded values exceed 6NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives.

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Detected Compound Summary
Ceder Street

Consolidated Edison Cedar Street Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID: Lab Sample Id: Depth: Source: SDG: Matrix: Sampled: Validated: UNITS:	MW-1 (9-11) Z5873-02 9-11' Chemtech Z5873 SOIL 12/15/2008 3/21/2009	MW-1(17-19) Z5873-03 17-19' Chemtech Z5873 SOIL 12/15/2008 3/21/2009	Dup of MW-1(17-19) MW-100(17-19) Z5873-04 17-19' Chemtech Z5873 SOIL 12/15/2008 3/21/2009	MW-2 (7-9) Z5873-07 7-9' Chemtech Z5873 SOIL 12/15/2008 3/21/2009	MW-2(13-15) Z5873-08 13-15' Chemtech Z5873 SOIL 12/15/2008 3/21/2009	MW-3(14-14.5) Z5873-05 14-14.5' Chemtech Z5873 SOIL 12/15/2008 3/21/2009	MW-3(16) Z5873-06 16' Chemtech Z5873 SOIL 12/15/2008 3/21/2009	MW- 5(2-3) Z5721-04 2-3' Chemtech Z5721 SOIL 12/5/2008 3/20/2009	MW-5(11-13) Z5843-01 11-13' Chemtech Z5843 SOIL 12/12/2008 3/21/2009	MW-5(13-15) Z5843-02 13-15' Chemtech Z5843 SOIL 12/12/2008 3/21/2009	MW-6(15-17) Z5843-06 15-17' Chemtech Z5843 SOIL 12/12/2008 3/21/2009	MW-6(17-19) Z5843-07 17-19' Chemtech Z5843 SOIL 12/12/2008 3/21/2009
CAS NO.	COMPOUND														
	INORGANICS														
7429-90-5	Aluminum	NS	mg/Kg	20900	9930	8840	12800	11800	22200	8770	8930	16200	14500	13100	18500
7440-36-0	Antimony	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	1.34 J	1.19 J	ND	1.38 J
7440-38-2	Arsenic	13	mg/Kg	ND	ND	ND	1.06	ND	ND	0.963	4.59	1.8	1.64	1.06	1.64
7440-39-3	Barium	350	mg/Kg	249	95.5	83.5	66.8	108	305	103	111	116	138	138	191
7440-41-7	Beryllium	7.2	mg/Kg	0.46	0.23	0.229	0.39	0.245	0.39	0.232	0.29	0.339	0.264	0.209 J	0.122 J
7440-43-9	Cadmium	2.5	mg/Kg	ND	ND	ND	ND	ND	ND	ND	0.545	2.07	2.05	1.82	2.77
7440-70-2	Calcium	NS	mg/Kg	5280	ND	ND	3150	ND	6220	47100	18600	1790	3640	1770	1490
7440-47-3	Chromium	NS	mg/Kg	71.2	27.5	25.4	22.4	27.5	46.5	33	97.1	63.3	50.7	35	41.4
7440-48-4	Cobalt	NS	mg/Kg	11.3	9.26	8.52	7.97	10.6	22.4	6.93	8.24	12.3	13.3	12.2	19.9
7440-50-8	Copper	50	mg/Kg	57.9	28	28.2	22.7	36.2	43.9	36.9	88.9	21.1	24.8	31.1	14.8
7439-89-6	Iron	NS	mg/Kg	34800	18000	17600	17800	19900	39600	15800	22100	23600	23600	22000	33400
7439-92-1	Lead	63	mg/Kg	5.28	8.64	4.24	88.8	19.8	10.8	40.3	99.4	16.7	24.9	5.88	2.98
7439-95-4	Magnesium	NS	mg/Kg	12900	3970	3480	3260	4250	13800	30500	5990	5540	5680	5410	9270
7439-96-5	Manganese	1600	mg/Kg	423	390	366	455	267	628	261	308	420	612	422	521
7439-97-6	Mercury	0.18	mg/Kg	0.009	ND	ND	0.044	0.03	0.151	0.259	0.456	0.187	0.074	ND	ND
7440-02-0	Nickel	30	mg/Kg	14.8	19.4	17.7	16.1	19.7	44	22.7	58.7	29.9	33.3	24	32.3
7440-09-7	Potassium	NS	mg/Kg	7680	4180	3690	1360	4770	15800	4670	3180	5740	6580	6020	13100
7782-49-2	Selenium	3.9	mg/Kg	1.1	ND	ND	0.918	1	1.25	0.688	1.05	1.08	0.803	ND	0.748 J
7440-22-4	Silver	2	mg/Kg	3.64	1.89	1.78	1.94	2.1	4.18	1.69	3.66	2.35	2.81	2.21	3.4
7440-23-5	Sodium	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	198	169	196	118	157
7440-28-0	Thallium	NS	mg/Kg	2.96	0.747	ND	ND	1.06	3.35	0.816	ND	1.29 J	1.2 J	0.903 J	2.32
7440-62-2	Vanadium	NS	mg/Kg	67.9	30.8	30.2	31.9	34.5	64.5	27	30.4	43.2	40	36.2	57.5
7440-66-6	Zinc	109	mg/Kg	67.6	32.8	28.6	34.9	40.3	89.6	53	143	51.7	66.4	45	71.1
57-12-5	Cyanide	27	mg/Kg	ND	ND	ND	1.24	ND	ND	ND	1.29	ND	ND	ND	ND

Notes:
(1) 6NYCRR Part 375 Environmental Remediation Programs (December 14, 2006)
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Detected Compound Summary
Ceder Street

Consolidated Edison Cedar Street Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID: Lab Sample Id: Depth: Source: SDG: Matrix: Sampled: Validated: UNITS:	MW-7A(17-19) A1051-02 17-19' Chemtech A1051 SOIL 1/7/2009 3/24/2009	MW-7A(21-23) A1051-03 21-23' Chemtech A1051 SOIL 1/7/2009 3/24/2009	SB- 1 (9-11) Z5893-03 9-11' Chemtech Z5893 SOIL 12/16/2008 3/22/2009	SB- 1(11-13) Z5893-04 11-13' Chemtech Z5893 SOIL 12/16/2008 3/22/2009	SB- 2 (9-11) Z5893-05 9-11' Chemtech Z5893 SOIL 12/16/2008 3/22/2009	SB- 2(23-25) Z5893-06 23-25' Chemtech Z5893 SOIL 12/16/2008 3/22/2009	SB- 3(11-13) Z5924-04 11-13' Chemtech Z5924 SOIL 12/17/2008 3/22/2009	SB- 3(13) Z5924-05 13' Chemtech Z5924 SOIL 12/17/2008 3/22/2009	SB- 4(13-15) Z5959-04 13-15' Chemtech Z5959 SOIL 12/21/2008 3/24/2009	SB- 4(21-23) Z5959-05 21-23' Chemtech Z5959 SOIL 12/21/2008 3/24/2009	SB- 4(23-25) Z5959-06 23-25' Chemtech Z5959 SOIL 12/21/2008 3/24/2009	SB- 5(19-21) A1013-05 19-21' Chemtech A1013 SOIL 1/4/2009 3/24/2009
CAS NO.	COMPOUND														
	VOLATILES														
67-64-1	Acetone	0.05	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
71-43-2	Benzene	0.06	mg/Kg	0.17 J	0.0071 J	ND	ND	ND	ND	2.8 J	1600	0.056	2.5	0.24	0.052
110-82-7	Cyclohexane	NS	mg/Kg	0.7 J	ND	ND	ND	ND	ND	0.26	30	ND	ND	ND	ND
100-41-4	Ethyl Benzene	1	mg/Kg	5.4	0.02 J	ND	ND	ND	ND	9.4 J	3500	ND	11	0.11	ND
98-82-8	Isopropylbenzene	NS	mg/Kg	0.6 J	0.0078 J	ND	ND	ND	ND	1.2 J	54 J	ND	0.87	0.016 J	ND
108-87-2	Methylcyclohexane	NS	mg/Kg	3.7	ND	ND	ND	ND	ND	0.62	170 J	ND	0.094	ND	ND
100-42-5	Styrene	NS	mg/Kg	ND	ND	ND	ND	ND	ND	0.16	1500	ND	0.015 J	ND	ND
108-88-3	Toluene	0.7	mg/Kg	0.35 J	ND	ND	ND	ND	ND	2 J	3000	ND	2.6	0.099	ND
136777-61-2	m/p-Xylenes	0.26	mg/Kg	6.4	0.03 J	ND	ND	ND	ND	6 J	2400	0.019 J	13	0.2	ND
1330-20-7	o-Xylene	0.26	mg/Kg	4.5	0.02 J	ND	ND	ND	ND	3.4 J	1000	ND	5.3	0.085	ND
	Total VOCs	NS	mg/Kg	21.82	0.0849	ND	ND	ND	ND	25.84	13254	0.075	35.379	0.75	0.052
	SEMIVOLATILES														
98-86-2	Acetophenone	NS	mg/Kg	ND	ND	ND	ND	ND	ND	0.014 J	ND	ND	ND	ND	ND
100-52-7	Benzaldehyde	NS	mg/Kg	ND	ND	ND	ND	ND	ND	0.014 J	ND	ND	ND	ND	ND
92-52-4	1,1-Biphenyl	NS	mg/Kg	1.7 J	ND	ND	ND	ND	ND	0.68	65	ND	ND	1.1 J	ND
111-44-4	bis(2-Chloroethyl)ether	NS	mg/Kg	ND	ND	ND	ND	ND	ND	0.01 J	ND	ND	ND	ND	ND
117-81-7	Bis(2-ethylhexyl)phthalate	NS	mg/Kg	ND	ND	0.047 J	0.044 J	0.1 J	0.54	0.026 J	ND	ND	ND	ND	ND
86-74-8	Carbazole	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8 J	3.9 J	ND
132-64-9	Dibenzofuran	NS	mg/Kg	ND	ND	ND	ND	ND	ND	0.013 J	1.1 J	ND	3.7 J	6 J	ND
105-67-9	2,4-Dimethylphenol	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
121-14-2	2,4-Dinitrotoluene	NS	mg/Kg	ND	ND	ND	ND	ND	ND	0.028 J	ND	ND	ND	ND	ND
87-86-5	3+4-Methylphenols	0.33	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
621-64-7	2-Nitroaniline	NS	mg/Kg	ND	ND	ND	ND	ND	ND	0.034 J	ND	ND	ND	ND	ND
98-95-3	Nitrobenzene	NS	mg/Kg	ND	ND	ND	ND	ND	ND	0.02 J	ND	ND	ND	ND	ND
	PAHs														
83-32-9	Acenaphthene	20	mg/Kg	2 J	0.72 J	ND	ND	ND	ND	1.6	18	ND	4.3 J	6.6 J	ND
208-96-8	Acenaphthylene	100	mg/Kg	1.6 J	2.3 J	ND	ND	ND	ND	1.1	170	ND	ND	ND	ND
120-12-7	Anthracene	100	mg/Kg	1.1 J	0.93 J	ND	0.085 J	ND	ND	0.36 J	30 J	ND	6 J	9.5	ND
120-12-7	Benzo(a)anthracene	1	mg/Kg	1.6 J	3.2 J	ND	0.14 J	ND	ND	0.26 J	15 J	ND	7.2 J	10	1 J
50-32-8	Benzo(a)pyrene	1	mg/Kg	1.9 J	4	ND	0.081 J	ND	ND	R	11 J	ND	5.4 J	8 J	ND
205-99-2	Benzo(b)fluoranthene	1	mg/Kg	1.9 J	4	ND	0.1 J	ND	ND	R	6.3 J	ND	8.6	12	0.94 J
191-24-2	Benzo(g,h,i)perylene	100	mg/Kg	1.6 J	3.5 J	ND	0.044 J	ND	ND	R	8.5 J	ND	2.8 J	4.6 J	ND
207-08-9	Benzo(k)fluoranthene	0.8	mg/Kg	0.71 J	1.7 J	ND	0.049 J	ND	ND	R	2.3 J	ND	2.8 J	3.7 J	ND
218-01-9	Chrysene	1	mg/Kg	1.5 J	3.1 J	ND	0.1 J	ND	ND	0.13 J	7.4 J	ND	6.2 J	8.7	ND
53-70-3	Dibenz(a,h)anthracene	0.33	mg/Kg	ND	0.5 J	ND	ND	ND	ND	R	R	ND	ND	0.82 J	ND
206-44-0	Fluoranthene	100	mg/Kg	3.1 J	6.5	ND	0.26 J	ND	0.05 J	0.32 J	46 J	ND	19	27	2.1 J
86-73-7	Fluorene	30	mg/Kg	1.5 J	0.78 J	ND	0.045 J	ND	ND	0.39	35	ND	5.6 J	9.1	ND
193-39-5	Indeno(1,2,3-cd)pyrene	0.5	mg/Kg	1.1 J	2.5 J	ND	0.041 J	ND	ND	ND	1.7 J	ND	2.1 J	3 J	ND
91-57-6	2-Methylnaphthalene	NS	mg/Kg	4.1 J	0.7 J	ND	ND	ND	ND	1.6	110	ND	3.1 J	4.3 J	ND
91-20-3	Naphthalene	12	mg/Kg	16	0.89 J	ND	ND	ND	ND	11	5700	6.5 J	11	18	4.2 J
85-01-8	Phenanthrene	100	mg/Kg	5.4	5.3	ND	0.19 J	ND	0.043 J	2	91	ND	25	38	1.8 J
129-00-0	Pyrene	100	mg/Kg	4	9	ND	0.22 J	ND	0.045 J	0.96 J	65	ND	16	23	1.8 J
	Total PAHs	NS	mg/Kg	49.11	49.62	ND	1.355	ND	0.138	19.72	6317.2	6.5	125.1	186.32	11.84
	Total SVOCs	NS	mg/Kg	50.81	49.62	0.047	1.399	0.1	0.678	20.559	6383.3	6.5	130.6	197.32	11.84

Notes:
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Table 2
Validated Subsurface Soil Analytical Data
Detected Compound Summary
Ceder Street

Consolidated Edison Cedar Street Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID: Lab Sample Id: Depth: Source: SDG: Matrix: Sampled: Validated: UNITS:	MW-7A(17-19) A1051-02 17-19' Chemtech A1051 SOIL 1/7/2009 3/24/2009	MW-7A(21-23) A1051-03 21-23' Chemtech A1051 SOIL 1/7/2009 3/24/2009	SB- 1 (9-11) Z5893-03 9-11' Chemtech Z5893 SOIL 12/16/2008 3/22/2009	SB- 1(11-13) Z5893-04 11-13' Chemtech Z5893 SOIL 12/16/2008 3/22/2009	SB- 2 (9-11) Z5893-05 9-11' Chemtech Z5893 SOIL 12/16/2008 3/22/2009	SB- 2(23-25) Z5893-06 23-25' Chemtech Z5893 SOIL 12/16/2008 3/22/2009	SB- 3(11-13) Z5924-04 11-13' Chemtech Z5924 SOIL 12/17/2008 3/22/2009	SB- 3(13) Z5924-05 13' Chemtech Z5924 SOIL 12/17/2008 3/22/2009	SB- 4(13-15) Z5959-04 13-15' Chemtech Z5959 SOIL 12/21/2008 3/24/2009	SB- 4(21-23) Z5959-05 21-23' Chemtech Z5959 SOIL 12/21/2008 3/24/2009	SB- 4(23-25) Z5959-06 23-25' Chemtech Z5959 SOIL 12/21/2008 3/24/2009	SB- 5(19-21) A1013-05 19-21' Chemtech A1013 SOIL 1/4/2009 3/24/2009
CAS NO.	COMPOUND															
	INORGANICS															
7429-90-5	Aluminum	NS	mg/Kg	7830	11700	14500	12300	11600	7960	14100	19100	2480 J	5120 J	5590 J	10500
7440-36-0	Antimony	NS	mg/Kg	ND	1.1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7440-38-2	Arsenic	13	mg/Kg	3.39	5.03	1.11	ND	2.1	ND	ND	1.62	0.626 J	1.52	0.839	1.11
7440-39-3	Barium	350	mg/Kg	74.8	180	106	112	58.9	77.9	174	237	39.2 J	41.1 J	86.5 J	81.2
7440-41-7	Beryllium	7.2	mg/Kg	0.11 J	0.118 J	0.329	0.228	0.38	0.158	0.184 J	0.356	0.057 J	0.146 J	0.097 J	0.146 J
7440-43-9	Cadmium	2.5	mg/Kg	0.252	0.439	1.1	0.955	1.06	0.773	ND	ND	0.215 J	0.306	0.51	ND
7440-70-2	Calcium	NS	mg/Kg	5260	7750	ND	ND	ND	ND	627	2090	4010 J	17000 J	6410 J	4400
7440-47-3	Chromium	NS	mg/Kg	31.1	69.3	33.5	33.5	29.1	22.4	51.5	40.9	8.12 J	6.34 J	13.7 J	17.7
7440-48-4	Cobalt	NS	mg/Kg	7.49	13.2	11.9	11.7	8.17	8.13	10.9	14.6	3.25	3.5	5.82	9.81
7440-50-8	Copper	50	mg/Kg	26.5	47.9	22.5	15.3	18.1	25.3	31.9	58.3	57.5	8.41	30.7	29.8
7439-89-6	Iron	NS	mg/Kg	18300	24600	20000	18500	21500	15500	23100	30200	5120 J	9020 J	11500 J	29300
7439-92-1	Lead	63	mg/Kg	8.84	17	5.6	4.59	7.65	7.32	3.16	193	17.7	18.9	47.8	12.5
7439-95-4	Magnesium	NS	mg/Kg	3680	6480	4890	5250	3400	3530	7750	9570	2110 J	17300 J	3830 J	4480
7439-96-5	Manganese	1600	mg/Kg	169	346	502	316	232	265	401	531	89.1 J	638 J	195 J	312
7439-97-6	Mercury	0.18	mg/Kg	0.049	ND	ND	ND	ND	ND	ND	0.142	0.072	0.019	0.052	0.192
7440-02-0	Nickel	30	mg/Kg	24	52.8	22.6	24.8	13.1	15.4	19.8	23.5	3.92	7.02	8.72	13.8
7440-09-7	Potassium	NS	mg/Kg	3120	7850	3840	5050	1690	4030	11100	12400	1020	1240	2610	4220
7782-49-2	Selenium	3.9	mg/Kg	ND	ND	ND	ND	ND	ND	0.9	2.1	ND	ND	ND	1.72
7440-22-4	Silver	2	mg/Kg	3.3	4.38	3.61	3.37	3.97	2.75	2.49	3.25	0.329 J	0.423	0.681	4.5
7440-23-5	Sodium	NS	mg/Kg	ND	ND	ND	ND	ND	ND	156	287	115	164	169	222
7440-28-0	Thallium	NS	mg/Kg	ND	ND	ND	ND	ND	ND	1.98	2.4	ND	ND	ND	1.24 J
7440-62-2	Vanadium	NS	mg/Kg	24.9	34.5	33.9	31.8	41.2	26.3	47.7	63.4	8.8	11.3	18.8	28.1
7440-66-6	Zinc	109	mg/Kg	38.7	68.3	40.8	38.9	36.7	35.2	50.7	125	107 J	19.7 J	103 J	55.5
57-12-5	Cyanide	27	mg/Kg	ND	1.48	ND	ND	ND	ND	ND	ND	ND	26	ND	ND

Notes:
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Ceder Street

Consolidated Edison Cedar Street Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID: Lab Sample Id: Depth: Source: SDG: Matrix: Sampled: Validated: UNITS:	SB- 5(21-23) A1013-06 21-23' Chemtech A1013 SOIL 1/4/2009 3/24/2009	SB- 6(11-13) A1013-07 11-13' Chemtech A1013 SOIL 1/4/2009 3/24/2009	SB- 6(19-21) A1013-08 19-21' Chemtech A1013 SOIL 1/4/2009 3/24/2009	SB- 7(11-13) A1013-02 11-13' Chemtech A1013 SOIL 1/4/2009 3/24/2009	SB- 7(15-17) A1013-04 15-17' Chemtech A1013 SOIL 1/4/2009 3/24/2009	SB- 9 (7-9) Z5893-02 7-9' Chemtech Z5893 SOIL 12/16/2008 3/22/2009	SB-10(19-21) A1013-03 19-21' Chemtech A1013 SOIL 1/4/2009 3/24/2009	SB-11(17-19) Z5959-02 17-19' Chemtech Z5959 SOIL 12/21/2008 3/24/2009	SB-11(19-21) Z5959-03 19-21' Chemtech Z5959 SOIL 12/21/2008 3/24/2009	SB-12(11-13) Z5931-03 11-13' Chemtech Z5931 SOIL 12/18/2008 3/23/2009	SB-12(17-19) Z5931-04 17-19' Chemtech Z5931 SOIL 12/18/2008 3/23/2009	SB-13(11-13) Z5893-07 11-13' Chemtech Z5893 SOIL 12/16/2008 3/22/2009
CAS NO.	COMPOUND														
	VOLATILES														
67-64-1	Acetone	0.05	mg/Kg	ND	ND	ND	ND	ND	0.22	ND	ND	ND	ND	ND	0.11 J
71-43-2	Benzene	0.06	mg/Kg	0.082	0.46 J	ND	6.1	ND	ND	0.34	0.28	0.088	ND	0.2 J	ND
110-82-7	Cyclohexane	NS	mg/Kg	ND	2.8	ND	ND	ND	ND	ND	ND	ND	0.2	ND	ND
100-41-4	Ethyl Benzene	1	mg/Kg	0.021 J	46	0.057	44	0.48 J	ND	0.033	0.26	0.14	0.64	67	ND
98-82-8	Isopropylbenzene	NS	mg/Kg	ND	11 J	0.037	2.4 J	ND	ND	0.032	0.028 J	0.012 J	1.6	14 J	ND
108-87-2	Methylcyclohexane	NS	mg/Kg	ND	35	0.025 J	0.56 J	ND	ND	0.049	ND	ND	1.9	24	ND
100-42-5	Styrene	NS	mg/Kg	ND	0.45 J	ND	9.1	ND	ND	ND	ND	ND	ND	ND	ND
108-88-3	Toluene	0.7	mg/Kg	0.012 J	1	ND	44	0.23 J	ND	ND	0.012 J	0.047	0.024 J	1.1	ND
136777-61-2	m/p-Xylenes	0.26	mg/Kg	0.023 J	18	0.043 J	120	1.2 J	ND	0.034 J	0.12	0.09	0.018 J	12 J	ND
1330-20-7	o-Xylene	0.26	mg/Kg	0.016 J	15	0.046	49	0.59 J	ND	0.038	0.12	0.055	0.32	33	ND
	Total VOCs	NS	mg/Kg	0.154	129.71	0.208	275.16	2.5	0.22	0.526	0.82	0.432	4.702	151.3	0.11
	SEMIVOLATILES														
98-86-2	Acetophenone	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
100-52-7	Benzaldehyde	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
92-52-4	1,1-Biphenyl	NS	mg/Kg	ND	25	2.1	18	1.2 J	ND	0.12 J	ND	0.24 J	8.1	7	1.5 J
111-44-4	bis(2-Chloroethyl)ether	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
117-81-7	Bis(2-ethylhexyl)phthalate	NS	mg/Kg	ND	ND	0.12 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
86-74-8	Carbazole	NS	mg/Kg	ND	3.7 J	0.3 J	23	2.1	ND	0.18 J	0.2 J	0.37 J	ND	0.21 J	ND
132-64-9	Dibenzofuran	NS	mg/Kg	ND	9.7	0.66	61	4.5	ND	0.4	0.52 J	0.73 J	0.34 J	0.54 J	ND
105-67-9	2,4-Dimethylphenol	NS	mg/Kg	ND	ND	ND	3.3 J	ND	ND	ND	ND	ND	ND	ND	ND
121-14-2	2,4-Dinitrotoluene	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
87-86-5	3+4-Methylphenols	0.33	mg/Kg	ND	ND	ND	0.96 J	ND	ND	ND	ND	ND	ND	ND	ND
621-64-7	2-Nitroaniline	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
98-95-3	Nitrobenzene	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PAHs														
83-32-9	Acenaphthene	20	mg/Kg	0.35 J	97	8.2	46	3.2	ND	0.35 J	0.49 J	0.72 J	25	15	2.2
208-96-8	Acenaphthylene	100	mg/Kg	ND	7.7	0.61	40	5.3	ND	0.32 J	ND	ND	3.6	1.1	0.87 J
120-12-7	Anthracene	100	mg/Kg	0.26 J	42	4.5	67	7.5	0.99 J	0.43	0.59 J	1.1 J	7	4.5	1 J
120-12-7	Benzo(a)anthracene	1	mg/Kg	0.39 J	32	2.7	66	15	3.2 J	0.41	0.3 J	1.1 J	5.3	4.3	0.6 J
50-32-8	Benzo(a)pyrene	1	mg/Kg	0.26 J	28	2.2	43	11	3 J	0.28 J	0.21 J	0.8 J	4.3	3.2	0.52 J
205-99-2	Benzo(b)fluoranthene	1	mg/Kg	0.4 J	30	2.5	60	15	3.7 J	0.39	0.3 J	1.2 J	3.8	3.6	0.42 J
191-24-2	Benzo(g,h,i)perylene	100	mg/Kg	0.23 J	22	1.5	29	7.7	1.9 J	0.16 J	ND	0.37 J	2.2	1.4	0.4 J
207-08-9	Benzo(k)fluoranthene	0.8	mg/Kg	ND	7.7	0.72	19	5.9	1.6 J	0.12 J	ND	0.39 J	1.2 J	0.9	ND
218-01-9	Chrysene	1	mg/Kg	0.33 J	24	2.2	49	11	3.1 J	0.31 J	0.3 J	1 J	4.8	3.7	0.53 J
53-70-3	Dibenz(a,h)anthracene	0.33	mg/Kg	ND	3.1 J	0.19 J	7.8 J	1.8 J	ND	0.049 J	ND	ND	0.55 J	0.39 J	ND
206-44-0	Fluoranthene	100	mg/Kg	0.79 J	90	7.4	150	34	6.5 J	0.89	1.2 J	3	9.7	8.6	1.8 J
86-73-7	Fluorene	30	mg/Kg	0.29 J	51	4.1	83	7.3	ND	0.55	0.68 J	1.1 J	9.6	6.6	1.4 J
193-39-5	Indeno(1,2,3-cd)pyrene	0.5	mg/Kg	ND	13	0.79	28	5.9	1.5 J	0.14 J	ND	0.35 J	2 J	1.4	0.25 J
91-57-6	2-Methylnaphthalene	NS	mg/Kg	ND	41	3.3	97	6	ND	0.76	0.37 J	0.77 J	0.25 J	7.8	2.9
91-20-3	Naphthalene	12	mg/Kg	0.75 J	110	8.7	410	23	ND	3	0.95 J	3.8	0.55 J	67	9.3
85-01-8	Phenanthrene	100	mg/Kg	0.86 J	190	16	210	19	3.4 J	1.3	2.6	4.6	28	18	4.6
129-00-0	Pyrene	100	mg/Kg	0.78 J	110	9.4	120	27	5.6 J	0.74	0.94 J	2.7	15	11	2.4
	Total PAHs	NS	mg/Kg	5.69	898.5	75.01	1524.8	205.6	34.49	10.199	8.93	23	122.85	158.49	29.19
	Total SVOCs	NS	mg/Kg	5.69	936.9	78.19	1631.06	213.4	34.49	10.899	9.65	24.34	131.29	166.24	30.69

Notes:
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CAS NO.	COMPOUND														
	INORGANICS														
7429-90-5	Aluminum	NS	mg/Kg	9820	11600	9140	10500	7700	8360	9650	5140 J	4460 J	14100	6830	12800
7440-36-0	Antimony	NS	mg/Kg	ND	ND	ND	ND	ND	1.28	ND	ND	ND	ND	ND	ND
7440-38-2	Arsenic	13	mg/Kg	0.614 J	1.1	ND	1.97	0.731 J	28.1	0.838	ND	ND	ND	ND	1.98
7440-39-3	Barium	350	mg/Kg	97.8	104	110	79.1	69.1	141	82.8	44.3 J	43.9 J	77.9	71.9	60.5
7440-41-7	Beryllium	7.2	mg/Kg	0.131 J	0.452	0.091 J	0.281	0.139 J	0.203	0.247	0.126 J	0.068 J	0.449	0.188 J	0.354
7440-43-9	Cadmium	2.5	mg/Kg	ND	ND	ND	ND	ND	1.76	ND	0.264	0.206 J	ND	ND	1.36
7440-70-2	Calcium	NS	mg/Kg	10200	2810	1380	2650	1730	6180	4540	1780 J	4030 J	1340	1090	ND
7440-47-3	Chromium	NS	mg/Kg	21.3	20	23.4	16.9	19.6	23.6	20.6	12 J	9.08 J	31.2	18.4	23.9
7440-48-4	Cobalt	NS	mg/Kg	10.7	8.73	8.75	7.89	7.07	8.62	7.75	5.15	4.05	29.5	7.25	10.9
7440-50-8	Copper	50	mg/Kg	32	16.3	17.2	23.4	21.9	41.5	28	11.4	8.41	33.9	22	19.8
7439-89-6	Iron	NS	mg/Kg	19200	14300	16200	21400	13200	18500	17300	8900 J	7440 J	20100	12200	26900
7439-92-1	Lead	63	mg/Kg	24.7	14	4.43	10.2	5.25	313	51.3	5.86	8.1	7.87	2.19	6.29
7439-95-4	Magnesium	NS	mg/Kg	7630	2640	4280	2460	3110	4560	3280	2090 J	2350 J	4260	2680	3460
7439-96-5	Manganese	1600	mg/Kg	299	301	261	229	151	247	301	231 J	183 J	175	139	258
7439-97-6	Mercury	0.18	mg/Kg	0.525	0.224	ND	0.05	0.013	0.394	0.062	0.073	0.034	0.021	ND	ND
7440-02-0	Nickel	30	mg/Kg	15.7	11.3	15.8	13.9	13.4	17.1	13.4	7.63	6.74	41.2	16.4	15.2
7440-09-7	Potassium	NS	mg/Kg	5640	826	6010	2130	2600	3010	2730	1800	1800	1940	3250	2310
7782-49-2	Selenium	3.9	mg/Kg	0.698 J	1.22	0.995	1.81	0.941	ND	1.08	ND	ND	0.934	0.8	ND
7440-22-4	Silver	2	mg/Kg	2.87	2.2	2.47	3.08	2.01	3.47	2.67	0.487	0.418	2.12	1.32	4.84
7440-23-5	Sodium	NS	mg/Kg	266	215	199	217	167	ND	359	95.8	123	120	107	ND
7440-28-0	Thallium	NS	mg/Kg	1.19 J	ND	1.55	0.809 J	ND	ND	ND	ND	ND	0.828 J	ND	ND
7440-62-2	Vanadium	NS	mg/Kg	27.2	27.6	29.2	22.4	22.4	27.9	25.7	14.9	11.6	40.1	22.7	34.2
7440-66-6	Zinc	109	mg/Kg	69.4	45	35.8	62.8	29.2	209	62.4	18.7 J	19.6 J	37.2	30.5	35.6
57-12-5	Cyanide	27	mg/Kg	4.4	2.55	ND	1.07	0.978	ND	ND	ND	ND	ND	ND	ND

Notes:
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Detected Compound Summary
Ceder Street

Consolidated Edison Cedar Street Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID: Lab Sample Id: Depth: Source: SDG: Matrix: Sampled: Validated: UNITS:	SB-13(13-15) Z5893-08 13-15' Chemtech Z5893 SOIL 12/16/2008 3/22/2009	SB-14 (9-11) Z5924-02 9-11' Chemtech Z5924 SOIL 12/17/2008 3/22/2009	SB-14(23-25) Z5924-03 23-25' Chemtech Z5924 SOIL 12/17/2008 3/22/2009	SB-15(13-15) A1110-01 13-15' Chemtech A1110 SOIL 1/12/2009 3/25/2009	SB-15(15-17) A1110-02 15-17' Chemtech A1110 SOIL 1/12/2009 3/25/2009	TP-1 (2-3) Z5708-02 2-3' Chemtech Z5708 SOIL 12/4/2008 3/20/2009	TP-1 (6) Z5708-01 6' Chemtech Z5708 SOIL 12/4/2008 3/20/2009	TP-2 (2-3) Z5721-02 2-3' Chemtech Z5721 SOIL 12/5/2008 3/20/2009	TP-2 (3-4) Z5721-03 3-4' Chemtech Z5721 SOIL 12/5/2008 3/20/2009	TP-2(10-5) Z5721-01 10.5' Chemtech Z5721 SOIL 12/5/2008 3/20/2009	TP-3 (1-3) Z5770-02 1-3' Chemtech Z5770 SOIL 12/9/2008 3/21/2009	TP-3 (3) Z5770-01 3' Chemtech Z5770 SOIL 12/9/2008 3/21/2009
CAS NO.	COMPOUND														
	VOLATILES														
67-64-1	Acetone	0.05	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
71-43-2	Benzene	0.06	mg/Kg	0.023 J	ND	ND	750	1300	ND	ND	ND	ND	ND	ND	ND
110-82-7	Cyclohexane	NS	mg/Kg	0.48	ND	ND	11 J	31 J	ND	ND	ND	ND	ND	ND	ND
100-41-4	Ethyl Benzene	1	mg/Kg	3	ND	ND	1200	2700	ND	ND	ND	ND	ND	ND	ND
98-82-8	Isopropylbenzene	NS	mg/Kg	0.35	ND	ND	28	33	ND	ND	ND	ND	ND	ND	ND
108-87-2	Methylcyclohexane	NS	mg/Kg	0.86	ND	ND	40	54	ND	ND	ND	ND	ND	ND	ND
100-42-5	Styrene	NS	mg/Kg	ND	ND	ND	80	210	ND	ND	ND	ND	ND	ND	ND
108-88-3	Toluene	0.7	mg/Kg	0.015 J	ND	ND	920	1800	0.038	ND	0.014 J	ND	ND	ND	ND
136777-61-2	m/p-Xylenes	0.26	mg/Kg	1.7	ND	ND	630	1300	ND	ND	ND	ND	ND	ND	ND
1330-20-7	o-Xylene	0.26	mg/Kg	0.83 J	ND	ND	330	670	ND	ND	ND	ND	ND	ND	ND
	Total VOCs	NS	mg/Kg	7.258	ND	ND	3989	8098	0.038	ND	0.014	ND	ND	ND	ND
	SEMIVOLATILES														
98-86-2	Acetophenone	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
100-52-7	Benzaldehyde	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
92-52-4	1,1-Biphenyl	NS	mg/Kg	2.9	ND	ND	140	270	ND	ND	ND	ND	ND	ND	ND
111-44-4	bis(2-Chloroethyl)ether	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
117-81-7	Bis(2-ethylhexyl)phthalate	NS	mg/Kg	ND	0.046 J	0.039 J	ND	ND	ND	ND	ND	0.085 J	ND	ND	ND
86-74-8	Carbazole	NS	mg/Kg	ND	ND	ND	ND	ND	2.1 J	0.14 J	1.2 J	0.058 J	ND	ND	ND
132-64-9	Dibenzofuran	NS	mg/Kg	ND	ND	ND	6.5 J	12 J	1.4 J	0.11 J	1 J	ND	ND	ND	ND
105-67-9	2,4-Dimethylphenol	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
121-14-2	2,4-Dinitrotoluene	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
87-86-5	3+4-Methylphenols	0.33	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	0.054 J	ND	ND	ND
621-64-7	2-Nitroaniline	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
98-95-3	Nitrobenzene	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PAHs														
83-32-9	Acenaphthene	20	mg/Kg	1.6 J	ND	ND	130	410	ND	0.049 J	ND	ND	ND	ND	ND
208-96-8	Acenaphthylene	100	mg/Kg	6.2	ND	ND	260	460	14	0.71	9.6	0.42	ND	1.8 J	1 J
120-12-7	Anthracene	100	mg/Kg	3.4	ND	ND	82	150	13	0.73	9.4	0.22 J	ND	0.86 J	ND
120-12-7	Benzo(a)anthracene	1	mg/Kg	2	ND	ND	57	110	84	2.8	54	2.6	ND	6.7 J	6 J
50-32-8	Benzo(a)pyrene	1	mg/Kg	2.7	ND	ND	44	94	71	2.2	49	3 J	ND	9.3	8.5
205-99-2	Benzo(b)fluoranthene	1	mg/Kg	1.9	ND	ND	37 J	92	110	2.6	69	2.9	ND	12	11
191-24-2	Benzo(g,h,i)perylene	100	mg/Kg	2.3	ND	ND	18 J	40 J	40	1.2 J	20 J	0.74 J	ND	8.8	7.6
207-08-9	Benzo(k)fluoranthene	0.8	mg/Kg	0.79 J	ND	ND	13 J	18 J	56 J	1.6 J	30 J	1.7 J	ND	3.7 J	3.6 J
218-01-9	Chrysene	1	mg/Kg	2	ND	ND	55	110	62 J	2.3 J	56 J	2.3 J	ND	6.7 J	5.8 J
53-70-3	Dibenz(a,h)anthracene	0.33	mg/Kg	ND	ND	ND	ND	6.7 J	4.6 J	0.17 J	3.5 J	0.13 J	ND	1.1 J	1.1 J
206-44-0	Fluoranthene	100	mg/Kg	8.5	ND	ND	110	210	99	2.8	55	2.9	ND	13	10
86-73-7	Fluorene	30	mg/Kg	3.6	ND	ND	120	220	2.1 J	0.19 J	0.94 J	ND	ND	ND	ND
193-39-5	Indeno(1,2,3-cd)pyrene	0.5	mg/Kg	1.3 J	ND	ND	13 J	27 J	13	0.75	11	0.43	ND	6.5 J	5.8 J
91-57-6	2-Methylnaphthalene	NS	mg/Kg	2.4	ND	ND	520	1000	0.89 J	0.04 J	0.89 J	0.041 J	ND	ND	ND
91-20-3	Naphthalene	12	mg/Kg	15	0.16 J	ND	9000	8100	3.5 J	0.11 J	4.1 J	0.14 J	ND	ND	ND
85-01-8	Phenanthrene	100	mg/Kg	15	ND	ND	290	580	29	2.8	14	0.38	ND	4.6 J	3.7 J
129-00-0	Pyrene	100	mg/Kg	11	ND	ND	150	270	120 J	3 J	66 J	2.9 J	ND	14	11
	Total PAHs	NS	mg/Kg	79.69	0.16	ND	10899	11897.7	722.09	24.049	452.43	20.801	ND	89.06	75.1
	Total SVOCs	NS	mg/Kg	82.59	0.206	0.039	11045.5	12179.7	725.59	24.299	454.63	20.998	ND	89.06	75.1

Notes:
(1) 6NYCRR Part 375 Environmental Remediation Programs (December 14, 2006)
(2) -- indicates no cleanup objective or background level is available.
(3) ND indicates compound was not detected.
(4) J indicates an estimated concentration.
(5) R indicates result was rejected based on validation.
(6) Shaded values exceed 6NYCRR Part 375 Unrestricted Use Soil Cleanup Object

Table 2
Validated Subsurface Soil Analytical Data
Detected Compound Summary
Ceder Street

Consolidated Edison Cedar Street Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID: Lab Sample Id: Depth: Source: SDG: Matrix: Sampled: Validated: UNITS:	SB-13(13-15) Z5893-08 13-15' Chemtech Z5893 SOIL 12/16/2008 3/22/2009	SB-14 (9-11) Z5924-02 9-11' Chemtech Z5924 SOIL 12/17/2008 3/22/2009	SB-14(23-25) Z5924-03 23-25' Chemtech Z5924 SOIL 12/17/2008 3/22/2009	SB-15(13-15) A1110-01 13-15' Chemtech A1110 SOIL 1/12/2009 3/25/2009	SB-15(15-17) A1110-02 15-17' Chemtech A1110 SOIL 1/12/2009 3/25/2009	TP-1 (2-3) Z5708-02 2-3' Chemtech Z5708 SOIL 12/4/2008 3/20/2009	TP-1 (6) Z5708-01 6' Chemtech Z5708 SOIL 12/4/2008 3/20/2009	TP-2 (2-3) Z5721-02 2-3' Chemtech Z5721 SOIL 12/5/2008 3/20/2009	TP-2 (3-4) Z5721-03 3-4' Chemtech Z5721 SOIL 12/5/2008 3/20/2009	TP-2(10-5) Z5721-01 10.5' Chemtech Z5721 SOIL 12/5/2008 3/20/2009	TP-3 (1-3) Z5770-02 1-3' Chemtech Z5770 SOIL 12/9/2008 3/21/2009	TP-3 (3) Z5770-01 3' Chemtech Z5770 SOIL 12/9/2008 3/21/2009
CAS NO.	COMPOUND														
	INORGANICS														
7429-90-5	Aluminum	NS	mg/Kg	12700	11500	23800	3900	4900	3790	10600	7590	10200	12800	3270	3460
7440-36-0	Antimony	NS	mg/Kg	ND	ND	ND	ND	3.34	ND	ND	ND	ND	ND	1 J	1.16 J
7440-38-2	Arsenic	13	mg/Kg	1.01	ND	ND	14.7	31.6	4.5	2.9	4.09	ND	ND	3.26	3.09
7440-39-3	Barium	350	mg/Kg	90.4	73.6	336	272	352	93.8	60.6	78	86	60.2	70	82.9
7440-41-7	Beryllium	7.2	mg/Kg	0.289	0.348	0.302	0.24 J	0.118 J	0.227 J	0.431	0.285	0.317	0.414	0.172 J	0.169 J
7440-43-9	Cadmium	2.5	mg/Kg	1.13	ND	ND	1.57	1.39	0.301	0.227 J	0.244	0.312	0.117 J	0.646	0.545
7440-70-2	Calcium	NS	mg/Kg	ND	1620	421	11100	9640	9050	1790	6670	2090	978	7890	9390
7440-47-3	Chromium	NS	mg/Kg	44.7	27.5	54.1	10.1	11.3	9.43	25.3	21.7	29	24.8	12.5	7.55
7440-48-4	Cobalt	NS	mg/Kg	14.1	7.63	23.9	7.69	12.7	5.75	10.7	7	9.43	7.96	4.27	4.56
7440-50-8	Copper	50	mg/Kg	16	32.5	32.8	196	129	37.9	20.2	26.2	31.1	20.7	59	45.8
7439-89-6	Iron	NS	mg/Kg	21800	19600	43200	17600	38900	11300	20000	17100	18200	18100	8980	8390
7439-92-1	Lead	63	mg/Kg	5	17.5	3.16	624	6400	284	16.7	121	39.9	5.61	244	259
7439-95-4	Magnesium	NS	mg/Kg	4980	3840	11300	3630	2000	1400	2870	3160	3860	3670	1630	1710
7439-96-5	Manganese	1600	mg/Kg	297	327	874	136	252	139	233	253	383	234	155	169
7439-97-6	Mercury	0.18	mg/Kg	ND	0.116	ND	1.4	1.2	4.4	0.109	0.257	0.292	0.017	10.6	1.8
7440-02-0	Nickel	30	mg/Kg	28.6	18.2	40	7.78	20	11.6	16.6	18.8	23.7	14.5	12.1	8.85
7440-09-7	Potassium	NS	mg/Kg	3990	2370	17800	499	712	806	1270	2310	3300	2420	976	883
7782-49-2	Selenium	3.9	mg/Kg	ND	0.858	0.886	1.52	2.3	0.825	0.65 J	0.671 J	0.625 J	0.821	ND	ND
7440-22-4	Silver	2	mg/Kg	3.95	2.07	4.51	3.26	7.27	1.7	3	2.57	2.67	2.63	0.834	0.789
7440-23-5	Sodium	NS	mg/Kg	ND	133	231	434	604	215	81	181	159	107	155	177
7440-28-0	Thallium	NS	mg/Kg	ND	ND	4	ND	ND	ND	ND	ND	ND	ND	ND	ND
7440-62-2	Vanadium	NS	mg/Kg	32.5	33.8	86.7	11.9	14.7	14.4	28.9	21.6	28.9	30.6	12.1	11.8
7440-66-6	Zinc	109	mg/Kg	44.8	43.6	91.7	342	277	90.9	48.8	53.6	48.2	31.8	90.5	63
57-12-5	Cyanide	27	mg/Kg	ND	ND	ND	1.92	2.52	2.35	0.703	2.1	0.925	ND	1.57	4.63

Notes:
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(5) R indicates result was rejected based on validation.
(6) Shaded values exceed 6NYCRR Part 375 Unrestricted Use Soil Cleanup Object

Table 2
Validated Subsurface Soil Analytical Data
Detected Compound Summary
Ceder Street

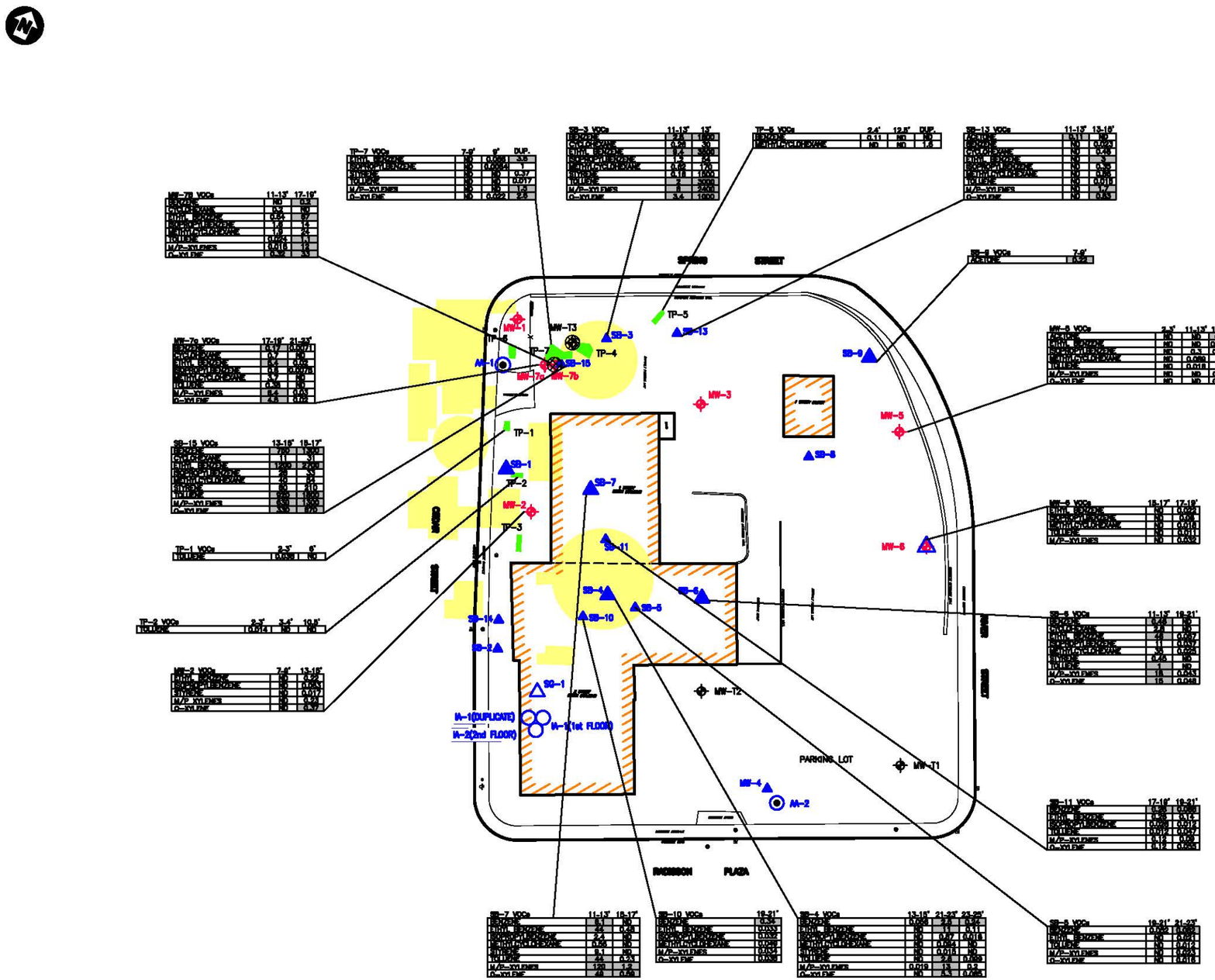
Consolidated Edison Cedar Street Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID: Lab Sample Id: Depth: Source: SDG: Matrix: Sampled: Validated: UNITS:	TP-4 (5.7) Z5634-02 5.7' Chemtech Z5634 SOIL 12/2/2008 3/19/2009	TP-4 (7.5) Z5634-01 7.5' Chemtech Z5634 SOIL 12/2/2008 3/19/2009	TP-5 (2.4) Z5634-03 2.4' Chemtech Z5634 SOIL 12/2/2008 3/19/2009	TP-5(12.5) Z5634-04 12.5' Chemtech Z5634 SOIL 12/2/2008 3/19/2009	Dup of TP-5(12.5) TP-5D(12.5) Z5634-05 12.5' Chemtech Z5634 SOIL 12/2/2008 3/19/2009	TP-6 (2.5-3.5) Z5668-01 2.5-3.5' Chemtech Z5668 SOIL 12/3/2008 3/19/2009	TP-6 (6-7)BP Z5668-04 6-7' Chemtech Z5668 SOIL 12/3/2008 3/19/2009	TP-6 (9.5) Z5668-05 9.5' Chemtech Z5668 SOIL 12/3/2008 3/19/2009	TP-7 (7-9)-IH Z5783-02 7-9' Chemtech Z5783 SOIL 12/10/2008 3/23/2009	TP-7 (9)-IH Z5783-01 9' Chemtech Z5783 SOIL 12/10/2008 3/23/2009	TP-7 (9)-OH Z5783-03 9' Chemtech Z5783 SOIL 12/10/2008 3/23/2009
CAS NO.	COMPOUND													
	VOLATILES													
67-64-1	Acetone	0.05	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
71-43-2	Benzene	0.06	mg/Kg	ND	ND	0.011 J	ND	ND	ND	ND	ND	ND	ND	ND
110-82-7	Cyclohexane	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
100-41-4	Ethyl Benzene	1	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.066	3.6
98-82-8	Isopropylbenzene	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0084 J	1
108-87-2	Methylcyclohexane	NS	mg/Kg	ND	ND	ND	ND	1.6 J	ND	ND	ND	ND	ND	ND
100-42-5	Styrene	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.037
108-88-3	Toluene	0.7	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.017 J
136777-61-2	m/p-Xylenes	0.26	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5
1330-20-7	o-Xylene	0.26	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.022 J	2.6
	Total VOCs	NS	mg/Kg	ND	ND	0.011	ND	1.6	ND	ND	ND	ND	0.0964	8.754
	SEMIVOLATILES													
98-86-2	Acetophenone	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
100-52-7	Benzaldehyde	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
92-52-4	1,1-Biphenyl	NS	mg/Kg	0.073 J	ND	9.3	0.84 J	0.5 J	ND	ND	ND	0.47 J	3.7 J	5.3
111-44-4	bis(2-Chloroethyl)ether	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
117-81-7	Bis(2-ethylhexyl)phthalate	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
86-74-8	Carbazole	NS	mg/Kg	ND	ND	ND	ND	ND	0.91 J	ND	ND	ND	ND	ND
132-64-9	Dibenzofuran	NS	mg/Kg	ND	ND	ND	1.4 J	1 J	ND	ND	ND	ND	ND	ND
105-67-9	2,4-Dimethylphenol	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
121-14-2	2,4-Dinitrotoluene	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
87-86-5	3+4-Methylphenols	0.33	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
621-64-7	2-Nitroaniline	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
98-95-3	Nitrobenzene	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PAHs													
83-32-9	Acenaphthene	20	mg/Kg	0.15 J	0.056 J	3.2 J	8.6	5.8	ND	ND	ND	3.6 J	18	5.7
208-96-8	Acenaphthylene	100	mg/Kg	0.23 J	0.13 J	34	5.3	3.8 J	7.4 J	1.8 J	1.1 J	2.2 J	4.5 J	13
120-12-7	Anthracene	100	mg/Kg	0.089 J	0.042 J	30	6.3	5.2	3.5 J	ND	0.21 J	0.74 J	2.7 J	5.2
120-12-7	Benzo(a)anthracene	1	mg/Kg	0.26 J	0.12 J	26	7	7.6	19	0.61 J	ND	3.1 J	4.9 J	4.4
50-32-8	Benzo(a)pyrene	1	mg/Kg	0.38	0.21 J	33	6.8	6.9	38 J	2.5 J	1.7 J	3.5 J	5.7 J	3.5 J
205-99-2	Benzo(b)fluoranthene	1	mg/Kg	0.44	0.24 J	31	6.4	6.2	54 J	2.5 J	1.5 J	3 J	4.6 J	2.7 J
191-24-2	Benzo(g,h,i)perylene	100	mg/Kg	0.45	0.27 J	34	5.4	5.3	19 J	1.5 J	1 J	2.1 J	4 J	1.9 J
207-08-9	Benzo(k)fluoranthene	0.8	mg/Kg	0.12 J	0.067 J	11	2.4 J	2.6 J	17 J	0.8 J	0.43 J	1.1 J	1.3 J	1.2 J
218-01-9	Chrysene	1	mg/Kg	0.3 J	0.14 J	29	6.9	6.7	20	0.75 J	0.36 J	3.1 J	4.5 J	4.1
53-70-3	Dibenz(a,h)anthracene	0.33	mg/Kg	0.048 J	ND	2.5 J	0.51 J	0.49 J	1.6 J	ND	0.24 J	ND	ND	ND
206-44-0	Fluoranthene	100	mg/Kg	0.69	0.2 J	99	22	21	27	0.41 J	ND	5	7.5 J	8.2
86-73-7	Fluorene	30	mg/Kg	0.065 J	ND	23	7	5.2	1.4 J	ND	ND	0.78 J	3.5 J	7.7
193-39-5	Indeno(1,2,3-cd)pyrene	0.5	mg/Kg	0.32 J	0.19 J	23	3.9	3.9	8.6	1.1 J	0.8 J	1.5 J	2.9 J	1.3 J
91-57-6	2-Methylnaphthalene	NS	mg/Kg	0.1 J	0.045 J	11	ND	ND	0.95 J	ND	0.25 J	1.3 J	12	38
91-20-3	Naphthalene	12	mg/Kg	0.59	0.21 J	41	5.2	2.8 J	1.9 J	ND	ND	6.9	91	130
85-01-8	Phenanthrene	100	mg/Kg	0.6	0.093 J	120	28	26	18	ND	ND	2.6 J	8.4	20
129-00-0	Pyrene	100	mg/Kg	0.89	0.26 J	110	20	22	41	0.96 J	0.21 J	7.4	12	11
	Total PAHs	NS	mg/Kg	5.722	2.273	660.7	141.71	131.49	278.35	12.93	7.8	47.92	187.5	257.9
	Total SVOCs	NS	mg/Kg	5.795	2.273	670	143.95	132.99	279.26	12.93	7.8	48.39	191.2	263.2

Notes:
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Consolidated Edison Cedar Street Validated Soil Analytical Data Detected Compound Summary			Sample ID:	TP-4 (5.7)	TP-4 (7.5)	TP-5 (2.4)	TP-5(12.5)	Dup of TP-5(12.5) TP-5D(12.5)	TP-6 (2.5-3.5)	TP-6 (6-7)BP	TP-6 (9.5)	TP-7 (7-9)-IH	TP-7 (9)-IH	TP-7 (9)-OH
			Lab Sample Id:	Z5634-02	Z5634-01	Z5634-03	Z5634-04	Z5634-05	Z5668-01	Z5668-04	Z5668-05	Z5783-02	Z5783-01	Z5783-03
			Depth:	5.7'	7.5'	2.4'	12.5'	12.5'	2.5-3.5'	6-7'	9.5'	7-9'	9'	9'
			Source:	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech
			SDG:	Z5634	Z5634	Z5634	Z5634	Z5634	Z5668	Z5668	Z5668	Z5783	Z5783	Z5783
			Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Unrestricted Use	Sampled:	12/2/2008	12/2/2008	12/2/2008	12/2/2008	12/2/2008	12/3/2008	12/3/2008	12/3/2008	12/10/2008	12/10/2008	12/10/2008
		Soil Cleanup	Validated:	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/23/2009	3/23/2009	3/23/2009
CAS NO.	COMPOUND	Objectives	UNITS:											
	INORGANICS													
7429-90-5	Aluminum	NS	mg/Kg	10500	10900	7110	9170	9170	6250	12400	14800	ND	11500	10800
7440-36-0	Antimony	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7440-38-2	Arsenic	13	mg/Kg	ND	ND	8.98	0.703 J	ND	7.84	1.76	ND	1.18	1.96	3.59
7440-39-3	Barium	350	mg/Kg	111	125	74.6	48.3	43.4	126	91.1	71	150	134	66.5
7440-41-7	Beryllium	7.2	mg/Kg	0.294	0.277	0.301	0.38	0.408	0.414	0.672	0.485	0.284	0.284	0.48
7440-43-9	Cadmium	2.5	mg/Kg	2.4	2.46	1.62	2.08	2.09	2.15	2.13	2.64	1.19	1.16	1.12
7440-70-2	Calcium	NS	mg/Kg	2180	4090	2050	1120	572	26800	1750	1360	3060	2540	1480
7440-47-3	Chromium	NS	mg/Kg	25.7	33.4	17.2	16.6	16	26.1 J	25.2 J	25 J	25.9	26.1	20.6
7440-48-4	Cobalt	NS	mg/Kg	9.23	9.67	7.2	6.57	7.66	7.62	13.8	5.49	10.8	9.98	8.47
7440-50-8	Copper	50	mg/Kg	44.7	84.3	29.5	13.6	15.7	178 J	3.5 J	8.36 J	27.4	25.8	11.3
7439-89-6	Iron	NS	mg/Kg	17500	18700	12900	17200	17600	15900 J	20300 J	28700 J	21700	19900	20500
7439-92-1	Lead	63	mg/Kg	42.2	20.9	98.5	12.4	9.17	299 J	8.45 J	12.4 J	20.9	19.5	8.2
7439-95-4	Magnesium	NS	mg/Kg	5100	5710	2330	1860	1820	2550	2450	2510	7190	6780	2490
7439-96-5	Manganese	1600	mg/Kg	294	294	251	94.4	115	216 J	3170 J	479 J	397	370	221
7439-97-6	Mercury	0.18	mg/Kg	0.12	0.097	0.11	0.014	0.011 J	4.1	0.023	0.013	0.104	0.093	0.025
7440-02-0	Nickel	30	mg/Kg	33.7	100	21.2	11.6	11.2	215 J	11.6 J	11.1 J	17.1	17.1	13.4
7440-09-7	Potassium	NS	mg/Kg	6160	7680	1210	1150	1150	1180	619	709	8930	8490	1070
7782-49-2	Selenium	3.9	mg/Kg	0.764	0.657 J	1.15	1.28	1.83	0.989	ND	ND	ND	ND	ND
7440-22-4	Silver	2	mg/Kg	3.39	3.52	2.37	3.12	3.21	3.2	4.23	5.41	2	1.85	1.86
7440-23-5	Sodium	NS	mg/Kg	135	132	68.5 J	62 J	ND	188	65.1 J	ND	166	153	74.3 J
7440-28-0	Thallium	NS	mg/Kg	0.9 J	1.04 J	ND	ND	ND	ND	ND	ND	0.907 J	0.777 J	ND
7440-62-2	Vanadium	NS	mg/Kg	32.2	34.4	20.3	20.8	21.6	19.1	33.4	38.9	38.3	37.9	30.1
7440-66-6	Zinc	109	mg/Kg	117	61.6	57.8	28.5	23.8	178 J	30.9 J	25.8 J	58.1	59.8	30.8
57-12-5	Cyanide	27	mg/Kg	ND	ND	1.01	ND	ND	9.52	2.65	1.98	0.992	ND	ND

Notes:
(1) 6NYCRR Part 375 Environmental Remediation Programs (December 14, 2006)
(2) -- indicates no cleanup objective or background level is available.
(3) ND indicates compound was not detected.
(4) J indicates an estimated concentration.
(5) R indicates result was rejected based on validation.
(6) Shaded values exceed 6NYCRR Part 375 Unrestricted Use Soil Cleanup Object



LEGEND:

- SOIL BORING LOCATION
- MONITORING WELL
- HISTORIC MONITORING WELL
- TEST PIT LOCATION
- APPROXIMATE LOCATION OF FORMER MGP STRUCTURES
- SOIL GAS LOCATION
- INDOOR AIR SAMPLING LOCATION
- AMBIENT AIR SAMPLING LOCATION
- NAPL OBSERVED

NOTES:

1. ALL CONCENTRATIONS ARE IN PARTS PER MILLION (ppm).
2. SHADED VALUES EXCEED 6 NYCRR PART 375 UNRESTRICTED SOIL CLEANUP OBJECTIVES.
3. ND = NOT DETECTED
4. VOCs WERE NOT DETECTED IN SUBSURFACE SOIL SAMPLES COLLECTED FROM MW-1, MW-3, SB-1, SB-2, SB-14, TP-3, TP-4 AND TP-6.
5. 6. HISTORIC MONITORING WELLS MW-T1 AND MW-T2 ARE DAMAGED AND NOT USEABLE.
6. REFUSAL WAS ENCOUNTERED WITHIN THE TOP 2 FT AT LOCATION MW-4. THEREFORE A MONITORING WELL COULD NOT BE INSTALLED.

50 25 0 50 100

SCALE: 1"=50'

FIGURE 8

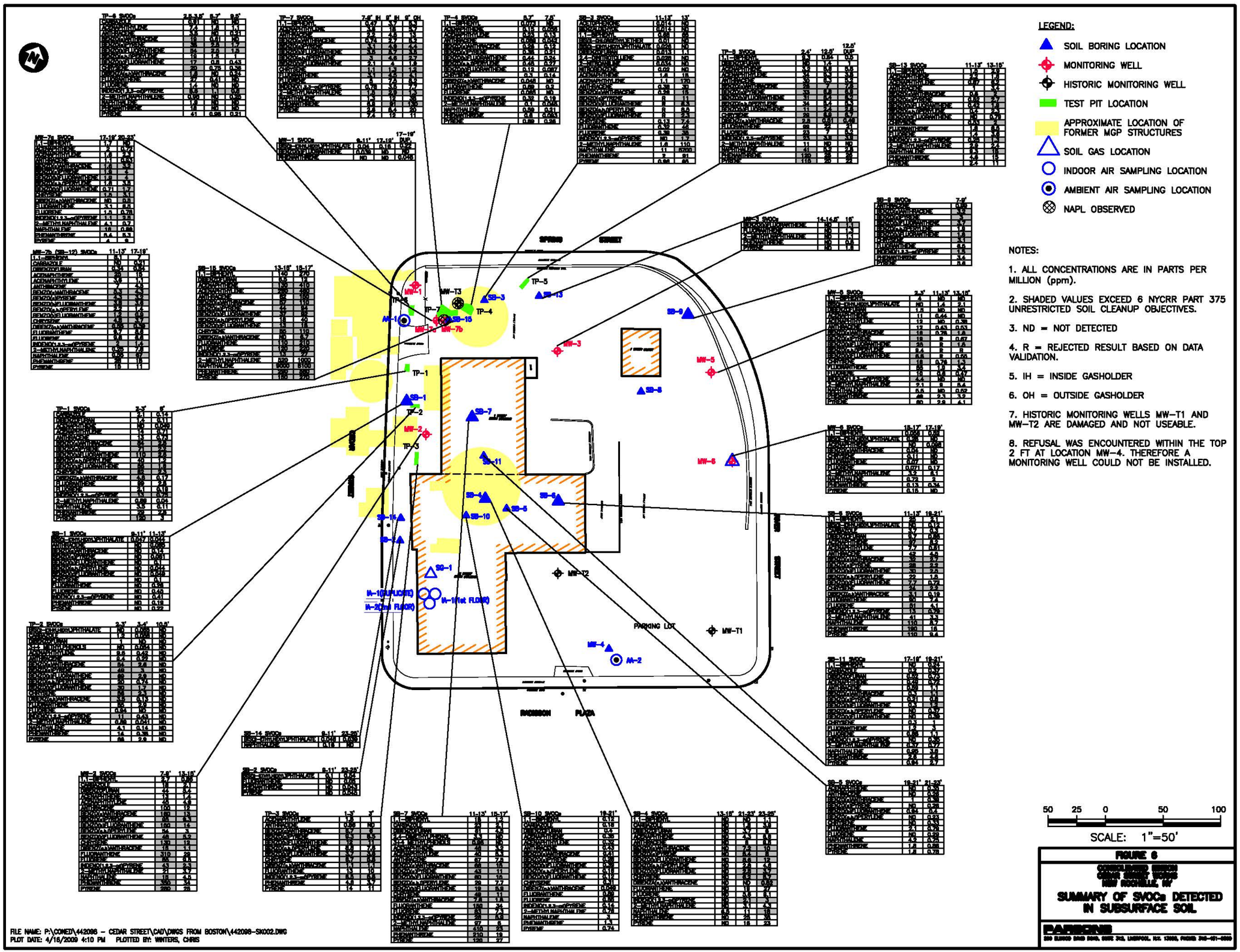
[redacted]
CEDAR STREET WORKS
NEW ROCHELLE, NY

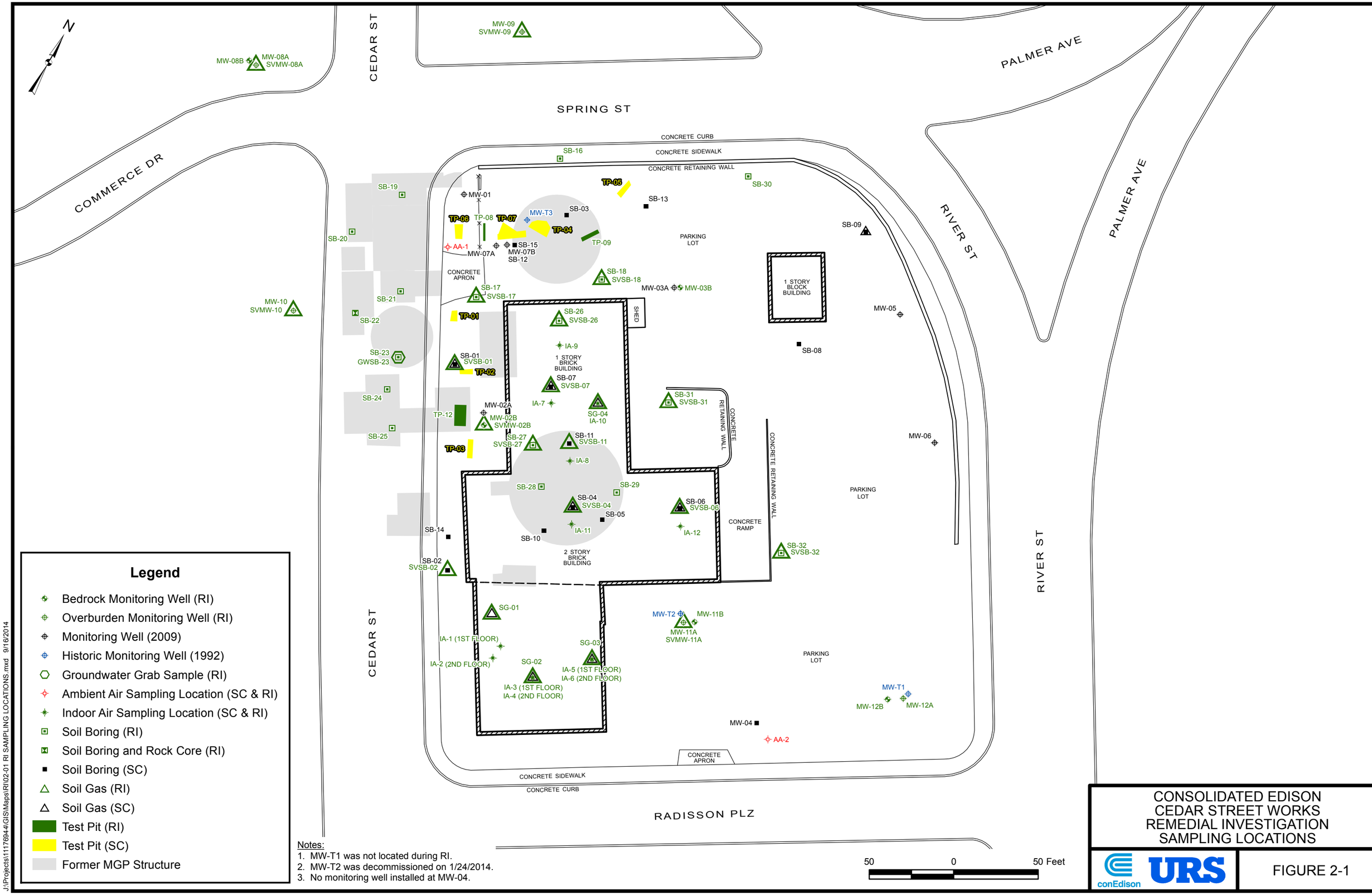
SUMMARY OF VOCs DETECTED IN SUBSURFACE SOIL

PARSONS

[redacted]

FILE NAME: P:\CONED\442098 - CEDAR STREET\CAD\DWGS FROM BOSTON\442098-SK003.DWG
PLOT DATE: 4/16/2009 4:11 PM PLOTTED BY: WINTERS, CHRIS


SPRING STREET
MW-1
MW-T3
TP-5
SB-13
TP-4
SB-3
SB-16
AS-1
MW-7b
TP-7
TP-6
MW-3
SB-9
MW-5
SB-8
TP-1
SB-1
TP-2
MW-2
TP-3
SB-7
SB-11
SB-4
SB-6
SB-5
SB-10
SB-12
SB-14
SB-2
MW-T2
IA-1(DUPLICATE)
IA-1(1st FLOOR)
IA-2(2nd FLOOR)
PARKING LOT
MW-T1
MW-4
IA-2
MW-6
ROBSON
PLACE
1
LEGEND:
SOIL BORING LOCATION
MONITORING WELL
HISTORIC MONITORING WELL
TEST PIT LOCATION
APPROXIMATE LOCATION OF FORMER MGP STRUCTURES
SOIL GAS LOCATION
INDOOR AIR SAMPLING LOCATION
AMBIENT AIR SAMPLING LOCATION
NAPL OBSERVED
NOTES:
1. ALL CONCENTRATIONS ARE IN PARTS PER MILLION (ppm).
2. SHADED VALUES EXCEED 6 NYCRR PART 375 UNRESTRICTED SOIL CLEANUP OBJECTIVES.
3. ND = NOT DETECTED
4. R = REJECTED RESULT BASED ON DATA VALIDATION.
5. IH = INSIDE GASHOLDER
6. OH = OUTSIDE GASHOLDER
7. HISTORIC MONITORING WELLS MW-T1 AND MW-T2 ARE DAMAGED AND NOT USEABLE.
8. REFUSAL WAS ENCOUNTERED WITHIN THE TOP 2 FT AT LOCATION MW-4. THEREFORE A MONITORING WELL COULD NOT BE INSTALLED.
50 25 0 50 100
SCALE: 1"=50'
FIGURE 6
SUMMARY OF SVOCs DETECTED IN SUBSURFACE SOIL
PARSONS
FILE NAME: P:\CONED\442098 - CEDAR STREET\CAD\DWGS FROM BOSTON\442098-SK002.DWG
PLOT DATE: 4/16/2009 4:10 PM PLOTTED BY: WINTERS, CHRIS



Legend

- Bedrock Monitoring Well (RI)
- Overburden Monitoring Well (RI)
- Monitoring Well (2009)
- Historic Monitoring Well (1992)
- Groundwater Grab Sample (RI)
- Ambient Air Sampling Location (SC & RI)
- Indoor Air Sampling Location (SC & RI)
- Soil Boring (RI)
- Soil Boring and Rock Core (RI)
- Soil Boring (SC)
- Soil Gas (RI)
- Soil Gas (SC)
- Test Pit (RI)
- Test Pit (SC)
- Former MGP Structure

Notes:
1. MW-T1 was not located during RI.
2. MW-T2 was decommissioned on 1/24/2014.
3. No monitoring well installed at MW-04.

50 0 50 Feet

CONSOLIDATED EDISON CEDAR STREET WORKS REMEDIAL INVESTIGATION SAMPLING LOCATIONS

conEdison URS

FIGURE 2-1

J:\Projects\11176944\GIS\Maps\RI\02-01 RI SAMPLING LOCATIONS.mxd 9/16/2014

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-01	MW-01	MW-01	MW-02	MW-02
Sample ID					MW-01	MW-01	MW-01 DUP	MW-02	MW-02
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					9.0-11.0	17.0-19.0	17.0-19.0	7.0-9.0	13.0-15.0
Date Sampled					12/15/08	12/15/08	12/15/08	12/15/08	12/15/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)		
Volatile Organic Compounds									
Acetone	MG/KG	0.05	0.05	500					
Benzene	MG/KG	0.06	0.06	44					
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390					0.22
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-					0.063
Methylcyclohexane	MG/KG	-	-	-					
Styrene	MG/KG	300 CP-51	-	-					0.017 J
Toluene	MG/KG	0.7	0.7	500					
Xylene (total)	MG/KG	0.26	1.6	500					0.60 J
Total BTEX	MG/KG	-	-	-	ND	ND	ND	ND	0.82
Total Volatile Organic Compounds	MG/KG	-	-	-	ND	ND	ND	ND	0.9
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-				2.7 J	0.86 J
2,4-Dimethylphenol	MG/KG	-	-	-					
2,4-Dinitrotoluene	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-				21 J	3.7 J
2-Nitroaniline	MG/KG	0.4 CP-51	0.4 CP-51	-					
3&4-Methylphenol (m,p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500				13 J	1.4 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-01	MW-01	MW-01	MW-02	MW-02
Sample ID					MW-01	MW-01	MW-01 DUP	MW-02	MW-02
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					9.0-11.0	17.0-19.0	17.0-19.0	7.0-9.0	13.0-15.0
Date Sampled					12/15/08	12/15/08	12/15/08	12/15/08	12/15/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)		
Semivolatile Organic Compounds									
Acenaphthylene	MG/KG	100	107	500				45	4.9 J
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500				100	12
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6				160	13
Benzo(a)pyrene	MG/KG	1	22	1				95	9.3
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	0.039 J			150	14
Benzo(g,h,i)perylene	MG/KG	100	1000	500				54	3 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56				48	5.2 J
bis(2-Chloroethyl)ether	MG/KG	-	-	-					
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-	0.04 J	0.16 J	0.22 J		
Carbazole	MG/KG	-	-	-				18 J	2.1 J
Chrysene	MG/KG	1	1	56				130	12
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56				15 J	1.1 J
Dibenzofuran	MG/KG	7	210	350				44	5.4 J
Fluoranthene	MG/KG	100	1000	500				310	29
Fluorene	MG/KG	30	386	500				85	9.5
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6				43	2.3 J
Naphthalene	MG/KG	12	12	500				15 J	4.5 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-01	MW-01	MW-01	MW-02	MW-02
Sample ID					MW-01	MW-01	MW-01 DUP	MW-02	MW-02
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					9.0-11.0	17.0-19.0	17.0-19.0	7.0-9.0	13.0-15.0
Date Sampled					12/15/08	12/15/08	12/15/08	12/15/08	12/15/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)		
Semivolatile Organic Compounds									
Nitrobenzene	MG/KG	0.17 CP-51	0.17 CP-51	69 CP-51					
Phenanthrene	MG/KG	100	1000	500			0.048 J	350	34
Pyrene	MG/KG	100	1000	500				280	25
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	0.039	ND	0.048	1,914	183.9
Total Semivolatile Organic Compounds	MG/KG	-	-	-	0.079	0.16	0.268	1,978.7	192.26
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	20,900	9,930	8,840	12,800	11,800
Antimony	MG/KG	12 CP-51	-	-					
Arsenic	MG/KG	13	16	16				1.06	
Barium	MG/KG	350	820	400	249	95.5	83.5	66.8	108
Beryllium	MG/KG	7.2	47	590	0.46	0.23	0.229	0.39	0.245
Cadmium	MG/KG	2.5	7.5	9.3					
Calcium	MG/KG	10000 CP-51	-	-	5,280			3,150	
Chromium	MG/KG	30	NS	1500	71.2	27.5	25.4	22.4	27.5
Cobalt	MG/KG	20 CP-51	-	-	11.3	9.26	8.52	7.97	10.6
Copper	MG/KG	50	1720	270	57.9	28	28.2	22.7	36.2
Iron	MG/KG	2000 CP-51	-	-	34,800	18,000	17,600	17,800	19,900
Lead	MG/KG	63	450	1000	5.28	8.64	4.24	88.8	19.8
Magnesium	MG/KG	-	-	-	12,900	3,970	3,480	3,260	4,250

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-01	MW-01	MW-01	MW-02	MW-02
Sample ID					MW-01	MW-01	MW-01 DUP	MW-02	MW-02
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					9.0-11.0	17.0-19.0	17.0-19.0	7.0-9.0	13.0-15.0
Date Sampled					12/15/08	12/15/08	12/15/08	12/15/08	12/15/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)		
Metals									
Manganese	MG/KG	1600	2000	10000	423	390	366	455	267
Mercury	MG/KG	0.18	0.73	2.8	0.009			0.044	0.03
Nickel	MG/KG	30	130	310	14.8	19.4	17.7	16.1	19.7
Potassium	MG/KG	-	-	-	7,680	4,180	3,690	1,360	4,770
Selenium	MG/KG	3.9	4	1500	1.1			0.918	1
Silver	MG/KG	2	8.3	1500	3.64	1.89	1.78	1.94	2.1
Sodium	MG/KG	-	-	-					
Thallium	MG/KG	5 CP-51	-	-	2.96	0.747			1.06
Vanadium	MG/KG	39 CP-51	-	-	67.9	30.8	30.2	31.9	34.5
Zinc	MG/KG	109	2480	10000	67.6	32.8	28.6	34.9	40.3
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27				1.24	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-03	MW-03	MW-05	MW-05	MW-05
Sample ID					MW-03	MW-03	MW-05	MW-05	MW-05
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					14.0-14.5	16.0-16.0	2.0-3.0	11.0-13.0	13.0-15.0
Date Sampled					12/15/08	12/15/08	12/05/08	12/12/08	12/12/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
Acetone	MG/KG	0.05	0.05	500					0.12 J
Benzene	MG/KG	0.06	0.06	44					
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390					0.0057 J
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-				0.3	0.024 J
Methylcyclohexane	MG/KG	-	-	-				0.089	
Styrene	MG/KG	300 CP-51	-	-					
Toluene	MG/KG	0.7	0.7	500				0.016 J	
Xylene (total)	MG/KG	0.26	1.6	500					0.031 J
Total BTEX	MG/KG	-	-	-	ND	ND	ND	0.016	0.0367
Total Volatile Organic Compounds	MG/KG	-	-	-	ND	ND	ND	0.405	0.1807
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-			4 J		
2,4-Dimethylphenol	MG/KG	-	-	-					
2,4-Dinitrotoluene	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-		1.1 J	2.1 J	9	5.4
2-Nitroaniline	MG/KG	0.4 CP-51	0.4 CP-51	-					
3&4-Methylphenol (m,p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500			11	0.44 J	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-03	MW-03	MW-05	MW-05	MW-05
Sample ID					MW-03	MW-03	MW-05	MW-05	MW-05
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					14.0-14.5	16.0-16.0	2.0-3.0	11.0-13.0	13.0-15.0
Date Sampled					12/15/08	12/15/08	12/05/08	12/12/08	12/12/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acenaphthylene	MG/KG	100	107	500			12		0.38 J
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500			12	0.43 J	0.53 J
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6			16	0.78 J	1.6 J
Benzo(a)pyrene	MG/KG	1	22	1			19 J		0.67 J
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6		1.1 J	25 J		1.5 J
Benzo(g,h,i)perylene	MG/KG	100	1000	500			9.4 J		
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56			6.8 J		0.55 J
bis(2-Chloroethyl)ether	MG/KG	-	-	-					
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-				1.4 J	2.1 J
Carbazole	MG/KG	-	-	-					
Chrysene	MG/KG	1	1	56			16 J	0.76 J	1.3 J
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56					
Dibenzofuran	MG/KG	7	210	350			1.5 J		
Fluoranthene	MG/KG	100	1000	500		1.3 J	55	1.9 J	3.4 J
Fluorene	MG/KG	30	386	500			10	0.6 J	0.47 J
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6			4.4 J		
Naphthalene	MG/KG	12	12	500			5.5 J		0.52 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-03	MW-03	MW-05	MW-05	MW-05
Sample ID					MW-03	MW-03	MW-05	MW-05	MW-05
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					14.0-14.5	16.0-16.0	2.0-3.0	11.0-13.0	13.0-15.0
Date Sampled					12/15/08	12/15/08	12/05/08	12/12/08	12/12/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Nitrobenzene	MG/KG	0.17 CP-51	0.17 CP-51	69 CP-51					
Phenanthrene	MG/KG	100	1000	500		0.8 J	49	2.3 J	3.2 J
Pyrene	MG/KG	100	1000	500		1.6 J	60 J	2.9 J	4.1 J
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	ND	5.9	313.2	19.11	23.62
Total Semivolatile Organic Compounds	MG/KG	-	-	-	ND	5.9	318.7	20.51	25.72
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	22,200	8,770	8,930	16,200	14,500
Antimony	MG/KG	12 CP-51	-	-				1.34 J	1.19 J
Arsenic	MG/KG	13	16	16		0.963	4.59	1.8	1.64
Barium	MG/KG	350	820	400	305	103	111	116	138
Beryllium	MG/KG	7.2	47	590	0.39	0.232	0.29	0.339	0.264
Cadmium	MG/KG	2.5	7.5	9.3			0.545	2.07	2.05
Calcium	MG/KG	10000 CP-51	-	-	6,220	47,100	18,600	1,790	3,640
Chromium	MG/KG	30	NS	1500	46.5	33	97.1	63.3	50.7
Cobalt	MG/KG	20 CP-51	-	-	22.4	6.93	8.24	12.3	13.3
Copper	MG/KG	50	1720	270	43.9	36.9	88.9	21.1	24.8
Iron	MG/KG	2000 CP-51	-	-	39,600	15,800	22,100	23,600	23,600
Lead	MG/KG	63	450	1000	10.8	40.3	99.4	16.7	24.9
Magnesium	MG/KG	-	-	-	13,800	30,500	5,990	5,540	5,680

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-03	MW-03	MW-05	MW-05	MW-05
Sample ID					MW-03	MW-03	MW-05	MW-05	MW-05
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					14.0-14.5	16.0-16.0	2.0-3.0	11.0-13.0	13.0-15.0
Date Sampled					12/15/08	12/15/08	12/05/08	12/12/08	12/12/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Manganese	MG/KG	1600	2000	10000	628	261	308	420	612
Mercury	MG/KG	0.18	0.73	2.8	0.151	0.259	0.456	0.187	0.074
Nickel	MG/KG	30	130	310	44	22.7	58.7	29.9	33.3
Potassium	MG/KG	-	-	-	15,800	4,670	3,180	5,740	6,580
Selenium	MG/KG	3.9	4	1500	1.25	0.688	1.05	1.08	0.803
Silver	MG/KG	2	8.3	1500	4.18	1.69	3.66	2.35	2.81
Sodium	MG/KG	-	-	-			198	169	196
Thallium	MG/KG	5 CP-51	-	-	3.35	0.816		1.29 J	1.2 J
Vanadium	MG/KG	39 CP-51	-	-	64.5	27	30.4	43.2	40
Zinc	MG/KG	109	2480	10000	89.6	53	143	51.7	66.4
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27			1.29		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-06	MW-06	MW-07A	MW-07A	SB-01
Sample ID					MW-06	MW-06	MW-07A	MW-07A	SB-01
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					15.0-17.0	17.0-19.0	17.0-19.0	21.0-23.0	9.0-11.0
Date Sampled					12/12/08	12/12/08	01/07/09	01/07/09	12/16/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
Acetone	MG/KG	0.05	0.05	500					
Benzene	MG/KG	0.06	0.06	44			0.17 J	0.0071 J	
Cyclohexane	MG/KG	-	-	-			0.7 J		
Ethylbenzene	MG/KG	1	1	390		0.022 J	5.4	0.02 J	
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-		0.06	0.6 J	0.0078 J	
Methylcyclohexane	MG/KG	-	-	-		0.018 J	3.7		
Styrene	MG/KG	300 CP-51	-	-					
Toluene	MG/KG	0.7	0.7	500		0.011 J	0.35 J		
Xylene (total)	MG/KG	0.26	1.6	500		0.032 J	10.9	0.05 J	
Total BTEX	MG/KG	-	-	-	ND	0.065	16.82	0.0771	ND
Total Volatile Organic Compounds	MG/KG	-	-	-	ND	0.143	21.82	0.0849	ND
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-	0.056 J	0.52	1.7 J		
2,4-Dimethylphenol	MG/KG	-	-	-					
2,4-Dinitrotoluene	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-	3.2	6.1	4.1 J	0.7 J	
2-Nitroaniline	MG/KG	0.4 CP-51	0.4 CP-51	-					
3&4-Methylphenol (m,p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500		0.098 J	2 J	0.72 J	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-06	MW-06	MW-07A	MW-07A	SB-01
Sample ID					MW-06	MW-06	MW-07A	MW-07A	SB-01
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					15.0-17.0	17.0-19.0	17.0-19.0	21.0-23.0	9.0-11.0
Date Sampled					12/12/08	12/12/08	01/07/09	01/07/09	12/16/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acenaphthylene	MG/KG	100	107	500			1.6 J	2.3 J	
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500			1.1 J	0.93 J	
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6	0.04 J		1.6 J	3.2 J	
Benzo(a)pyrene	MG/KG	1	22	1			1.9 J	4	
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6			1.9 J	4	
Benzo(g,h,i)perylene	MG/KG	100	1000	500			1.6 J	3.5 J	
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56			0.71 J	1.7 J	
bis(2-Chloroethyl)ether	MG/KG	-	-	-					
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-	0.28 J				0.047 J
Carbazole	MG/KG	-	-	-					
Chrysene	MG/KG	1	1	56	0.11 J		1.5 J	3.1 J	
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56				0.5 J	
Dibenzofuran	MG/KG	7	210	350					
Fluoranthene	MG/KG	100	1000	500	0.07 J		3.1 J	6.5	
Fluorene	MG/KG	30	386	500	0.071 J	0.17 J	1.5 J	0.78 J	
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6			1.1 J	2.5 J	
Naphthalene	MG/KG	12	12	500	0.72	2	16	0.89 J	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-06	MW-06	MW-07A	MW-07A	SB-01
Sample ID					MW-06	MW-06	MW-07A	MW-07A	SB-01
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					15.0-17.0	17.0-19.0	17.0-19.0	21.0-23.0	9.0-11.0
Date Sampled					12/12/08	12/12/08	01/07/09	01/07/09	12/16/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Nitrobenzene	MG/KG	0.17 CP-51	0.17 CP-51	69 CP-51					
Phenanthrene	MG/KG	100	1000	500	0.13 J	0.34 J	5.4	5.3	
Pyrene	MG/KG	100	1000	500	0.15 J		4	9	
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	4.491	8.708	49.11	49.62	ND
Total Semivolatile Organic Compounds	MG/KG	-	-	-	4.827	9.228	50.81	49.62	0.047
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	13,100	18,500	7,830	11,700	14,500
Antimony	MG/KG	12 CP-51	-	-		1.38 J		1.1 J	
Arsenic	MG/KG	13	16	16	1.06	1.64	3.39	5.03	1.11
Barium	MG/KG	350	820	400	138	191	74.8	180	106
Beryllium	MG/KG	7.2	47	590	0.209 J	0.122 J	0.11 J	0.118 J	0.329
Cadmium	MG/KG	2.5	7.5	9.3	1.82	2.77	0.252	0.439	1.1
Calcium	MG/KG	10000 CP-51	-	-	1,770	1,490	5,260	7,750	
Chromium	MG/KG	30	NS	1500	35	41.4	31.1	69.3	33.5
Cobalt	MG/KG	20 CP-51	-	-	12.2	19.9	7.49	13.2	11.9
Copper	MG/KG	50	1720	270	31.1	14.8	26.5	47.9	22.5
Iron	MG/KG	2000 CP-51	-	-	22,000	33,400	18,300	24,600	20,000
Lead	MG/KG	63	450	1000	5.88	2.98	8.84	17	5.6
Magnesium	MG/KG	-	-	-	5,410	9,270	3,680	6,480	4,890

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-06	MW-06	MW-07A	MW-07A	SB-01
Sample ID					MW-06	MW-06	MW-07A	MW-07A	SB-01
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					15.0-17.0	17.0-19.0	17.0-19.0	21.0-23.0	9.0-11.0
Date Sampled					12/12/08	12/12/08	01/07/09	01/07/09	12/16/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Manganese	MG/KG	1600	2000	10000	422	521	169	346	502
Mercury	MG/KG	0.18	0.73	2.8			0.049		
Nickel	MG/KG	30	130	310	24	32.3	24	52.8	22.6
Potassium	MG/KG	-	-	-	6,020	13,100	3,120	7,850	3,840
Selenium	MG/KG	3.9	4	1500		0.748 J			
Silver	MG/KG	2	8.3	1500	2.21	3.4	3.3	4.38	3.61
Sodium	MG/KG	-	-	-	118	157			
Thallium	MG/KG	5 CP-51	-	-	0.903 J	2.32			
Vanadium	MG/KG	39 CP-51	-	-	36.2	57.5	24.9	34.5	33.9
Zinc	MG/KG	109	2480	10000	45	71.1	38.7	68.3	40.8
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27				1.48	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-01	SB-02	SB-02	SB-03	SB-03
Sample ID					SB-01	SB-02	SB-02	SB-03	SB-03
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					11.0-13.0	9.0-11.0	23.0-25.0	11.0-13.0	13.0-13.0
Date Sampled					12/16/08	12/16/08	12/16/08	12/17/08	12/17/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
Acetone	MG/KG	0.05	0.05	500					
Benzene	MG/KG	0.06	0.06	44				2.8 J	1,600
Cyclohexane	MG/KG	-	-	-				0.26	30
Ethylbenzene	MG/KG	1	1	390				9.4 J	3,500
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-				1.2 J	54 J
Methylcyclohexane	MG/KG	-	-	-				0.62	170 J
Styrene	MG/KG	300 CP-51	-	-				0.16	1,500
Toluene	MG/KG	0.7	0.7	500				2 J	3,000
Xylene (total)	MG/KG	0.26	1.6	500				9.4 J	3,400
Total BTEX	MG/KG	-	-	-	ND	ND	ND	23.6	11,500
Total Volatile Organic Compounds	MG/KG	-	-	-	ND	ND	ND	25.84	13,254
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-				0.68	65
2,4-Dimethylphenol	MG/KG	-	-	-					
2,4-Dinitrotoluene	MG/KG	-	-	-				0.028 J	
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-				1.6	110
2-Nitroaniline	MG/KG	0.4 CP-51	0.4 CP-51	-				0.034 J	
3&4-Methylphenol (m,p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500				1.6	18

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-01	SB-02	SB-02	SB-03	SB-03
Sample ID					SB-01	SB-02	SB-02	SB-03	SB-03
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					11.0-13.0	9.0-11.0	23.0-25.0	11.0-13.0	13.0-13.0
Date Sampled					12/16/08	12/16/08	12/16/08	12/17/08	12/17/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acenaphthylene	MG/KG	100	107	500				1.1	170
Acetophenone	MG/KG	-	-	-				0.014 J	
Anthracene	MG/KG	100	1000	500	0.085 J			0.36 J	30 J
Benzaldehyde	MG/KG	-	-	-				0.014 J	
Benzo(a)anthracene	MG/KG	1	1	5.6	0.14 J			0.26 J	15 J
Benzo(a)pyrene	MG/KG	1	22	1	0.081 J				11 J
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	0.1 J				6.3 J
Benzo(g,h,i)perylene	MG/KG	100	1000	500	0.044 J				8.5 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	0.049 J				2.3 J
bis(2-Chloroethyl)ether	MG/KG	-	-	-				0.01 J	
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-	0.044 J	0.1 J	0.54	0.026 J	
Carbazole	MG/KG	-	-	-					
Chrysene	MG/KG	1	1	56	0.1 J			0.13 J	7.4 J
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56					
Dibenzofuran	MG/KG	7	210	350				0.013 J	1.1 J
Fluoranthene	MG/KG	100	1000	500	0.26 J		0.05 J	0.32 J	46 J
Fluorene	MG/KG	30	386	500	0.045 J			0.39	35
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	0.041 J				1.7 J
Naphthalene	MG/KG	12	12	500				11	5,700

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-01	SB-02	SB-02	SB-03	SB-03
Sample ID					SB-01	SB-02	SB-02	SB-03	SB-03
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					11.0-13.0	9.0-11.0	23.0-25.0	11.0-13.0	13.0-13.0
Date Sampled					12/16/08	12/16/08	12/16/08	12/17/08	12/17/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Nitrobenzene	MG/KG	0.17 CP-51	0.17 CP-51	69 CP-51				0.02 J	
Phenanthrene	MG/KG	100	1000	500	0.19 J		0.043 J	2	91
Pyrene	MG/KG	100	1000	500	0.22 J		0.045 J	0.96 J	65
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	1.355	ND	0.138	19.72	6,317.2
Total Semivolatile Organic Compounds	MG/KG	-	-	-	1.399	0.1	0.678	20.559	6,383.3
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	12,300	11,600	7,960	14,100	19,100
Antimony	MG/KG	12 CP-51	-	-					
Arsenic	MG/KG	13	16	16		2.1			1.62
Barium	MG/KG	350	820	400	112	58.9	77.9	174	237
Beryllium	MG/KG	7.2	47	590	0.228	0.38	0.158	0.184 J	0.356
Cadmium	MG/KG	2.5	7.5	9.3	0.955	1.06	0.773		
Calcium	MG/KG	10000 CP-51	-	-				627	2,090
Chromium	MG/KG	30	NS	1500	33.5	29.1	22.4	51.5	40.9
Cobalt	MG/KG	20 CP-51	-	-	11.7	8.17	8.13	10.9	14.6
Copper	MG/KG	50	1720	270	15.3	18.1	25.3	31.9	58.3
Iron	MG/KG	2000 CP-51	-	-	18,500	21,500	15,500	23,100	30,200
Lead	MG/KG	63	450	1000	4.59	7.65	7.32	3.16	193
Magnesium	MG/KG	-	-	-	5,250	3,400	3,530	7,750	9,570

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-01	SB-02	SB-02	SB-03	SB-03
Sample ID					SB-01	SB-02	SB-02	SB-03	SB-03
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					11.0-13.0	9.0-11.0	23.0-25.0	11.0-13.0	13.0-13.0
Date Sampled					12/16/08	12/16/08	12/16/08	12/17/08	12/17/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Manganese	MG/KG	1600	2000	10000	316	232	265	401	531
Mercury	MG/KG	0.18	0.73	2.8					0.142
Nickel	MG/KG	30	130	310	24.8	13.1	15.4	19.8	23.5
Potassium	MG/KG	-	-	-	5,050	1,690	4,030	11,100	12,400
Selenium	MG/KG	3.9	4	1500				0.9	2.1
Silver	MG/KG	2	8.3	1500	3.37	3.97	2.75	2.49	3.25
Sodium	MG/KG	-	-	-				156	287
Thallium	MG/KG	5 CP-51	-	-				1.98	2.4
Vanadium	MG/KG	39 CP-51	-	-	31.8	41.2	26.3	47.7	63.4
Zinc	MG/KG	109	2480	10000	38.9	36.7	35.2	50.7	125
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-04	SB-04	SB-04	SB-05	SB-05
Sample ID					SB-04	SB-04	SB-04	SB-05	SB-05
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					13.0-15.0	21.0-23.0	23.0-25.0	19.0-21.0	21.0-23.0
Date Sampled					12/21/08	12/21/08	12/21/08	01/04/09	01/04/09
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
Acetone	MG/KG	0.05	0.05	500					
Benzene	MG/KG	0.06	0.06	44	0.056	2.5	0.24	0.052	0.082
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390		11	0.11		0.021 J
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-		0.87	0.016 J		
Methylcyclohexane	MG/KG	-	-	-		0.094			
Styrene	MG/KG	300 CP-51	-	-		0.015 J			
Toluene	MG/KG	0.7	0.7	500		2.6	0.099		0.012 J
Xylene (total)	MG/KG	0.26	1.6	500	0.019 J	18.3	0.285		0.039 J
Total BTEX	MG/KG	-	-	-	0.075	34.4	0.734	0.052	0.154
Total Volatile Organic Compounds	MG/KG	-	-	-	0.075	35.379	0.75	0.052	0.154
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-			1.1 J		
2,4-Dimethylphenol	MG/KG	-	-	-					
2,4-Dinitrotoluene	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-		3.1 J	4.3 J		
2-Nitroaniline	MG/KG	0.4 CP-51	0.4 CP-51	-					
3&4-Methylphenol (m,p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500		4.3 J	6.6 J		0.35 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-04	SB-04	SB-04	SB-05	SB-05
Sample ID					SB-04	SB-04	SB-04	SB-05	SB-05
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					13.0-15.0	21.0-23.0	23.0-25.0	19.0-21.0	21.0-23.0
Date Sampled					12/21/08	12/21/08	12/21/08	01/04/09	01/04/09
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acenaphthylene	MG/KG	100	107	500					
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500		6 J	9.5		0.26 J
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6		7.2 J	10	1 J	0.39 J
Benzo(a)pyrene	MG/KG	1	22	1		5.4 J	8 J		0.26 J
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6		8.6	12	0.94 J	0.4 J
Benzo(g,h,i)perylene	MG/KG	100	1000	500		2.8 J	4.6 J		0.23 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56		2.8 J	3.7 J		
bis(2-Chloroethyl)ether	MG/KG	-	-	-					
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-					
Carbazole	MG/KG	-	-	-		1.8 J	3.9 J		
Chrysene	MG/KG	1	1	56		6.2 J	8.7		0.33 J
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56			0.82 J		
Dibenzofuran	MG/KG	7	210	350		3.7 J	6 J		
Fluoranthene	MG/KG	100	1000	500		19	27	2.1 J	0.79 J
Fluorene	MG/KG	30	386	500		5.6 J	9.1		0.29 J
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6		2.1 J	3 J		
Naphthalene	MG/KG	12	12	500	6.5 J	11	18	4.2 J	0.75 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-04	SB-04	SB-04	SB-05	SB-05
Sample ID					SB-04	SB-04	SB-04	SB-05	SB-05
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					13.0-15.0	21.0-23.0	23.0-25.0	19.0-21.0	21.0-23.0
Date Sampled					12/21/08	12/21/08	12/21/08	01/04/09	01/04/09
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Nitrobenzene	MG/KG	0.17 CP-51	0.17 CP-51	69 CP-51					
Phenanthrene	MG/KG	100	1000	500		25	38	1.8 J	0.86 J
Pyrene	MG/KG	100	1000	500		16	23	1.8 J	0.78 J
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	6.5	125.1	186.32	11.84	5.69
Total Semivolatile Organic Compounds	MG/KG	-	-	-	6.5	130.6	197.32	11.84	5.69
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	2,480 J	5,120 J	5,590 J	10,500	9,820
Antimony	MG/KG	12 CP-51	-	-					
Arsenic	MG/KG	13	16	16	0.626 J	1.52	0.839	1.11	0.614 J
Barium	MG/KG	350	820	400	39.2 J	41.1 J	86.5 J	81.2	97.8
Beryllium	MG/KG	7.2	47	590	0.057 J	0.146 J	0.097 J	0.146 J	0.131 J
Cadmium	MG/KG	2.5	7.5	9.3	0.215 J	0.306	0.51		
Calcium	MG/KG	10000 CP-51	-	-	4,010 J	17,000 J	6,410 J	4,400	10,200
Chromium	MG/KG	30	NS	1500	8.12 J	6.34 J	13.7 J	17.7	21.3
Cobalt	MG/KG	20 CP-51	-	-	3.25	3.5	5.82	9.81	10.7
Copper	MG/KG	50	1720	270	57.5	8.41	30.7	29.8	32
Iron	MG/KG	2000 CP-51	-	-	5,120 J	9,020 J	11,500 J	29,300	19,200
Lead	MG/KG	63	450	1000	17.7	18.9	47.8	12.5	24.7
Magnesium	MG/KG	-	-	-	2,110 J	17,300 J	3,830 J	4,480	7,630

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-04	SB-04	SB-04	SB-05	SB-05
Sample ID					SB-04	SB-04	SB-04	SB-05	SB-05
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					13.0-15.0	21.0-23.0	23.0-25.0	19.0-21.0	21.0-23.0
Date Sampled					12/21/08	12/21/08	12/21/08	01/04/09	01/04/09
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Manganese	MG/KG	1600	2000	10000	89.1 J	638 J	195 J	312	299
Mercury	MG/KG	0.18	0.73	2.8	0.072	0.019	0.052	0.192	0.525
Nickel	MG/KG	30	130	310	3.92	7.02	8.72	13.8	15.7
Potassium	MG/KG	-	-	-	1,020	1,240	2,610	4,220	5,640
Selenium	MG/KG	3.9	4	1500				1.72	0.698 J
Silver	MG/KG	2	8.3	1500	0.329 J	0.423	0.681	4.5	2.87
Sodium	MG/KG	-	-	-	115	164	169	222	266
Thallium	MG/KG	5 CP-51	-	-				1.24 J	1.19 J
Vanadium	MG/KG	39 CP-51	-	-	8.8	11.3	18.8	28.1	27.2
Zinc	MG/KG	109	2480	10000	107 J	19.7 J	103 J	55.5	69.4
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27		26			4.4

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-06	SB-06	SB-07	SB-07	SB-09
Sample ID					SB-06	SB-06	SB-07	SB-07	SB-09
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					11.0-13.0	19.0-21.0	11.0-13.0	15.0-17.0	7.0-9.0
Date Sampled					01/04/09	01/04/09	01/04/09	01/04/09	12/16/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
Acetone	MG/KG	0.05	0.05	500					0.22
Benzene	MG/KG	0.06	0.06	44	0.46 J		6.1		
Cyclohexane	MG/KG	-	-	-	2.8				
Ethylbenzene	MG/KG	1	1	390	46	0.057	44	0.48 J	
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-	11 J	0.037	2.4 J		
Methylcyclohexane	MG/KG	-	-	-	35	0.025 J	0.56 J		
Styrene	MG/KG	300 CP-51	-	-	0.45 J		9.1		
Toluene	MG/KG	0.7	0.7	500	1		44	0.23 J	
Xylene (total)	MG/KG	0.26	1.6	500	33	0.089 J	169	1.79 J	
Total BTEX	MG/KG	-	-	-	80.46	0.146	263.1	2.5	ND
Total Volatile Organic Compounds	MG/KG	-	-	-	129.71	0.208	275.16	2.5	0.22
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-	25	2.1	18	1.2 J	
2,4-Dimethylphenol	MG/KG	-	-	-			3.3 J		
2,4-Dinitrotoluene	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-	41	3.3	97	6	
2-Nitroaniline	MG/KG	0.4 CP-51	0.4 CP-51	-					
3&4-Methylphenol (m,p-cresol)	MG/KG	0.33	0.33	500			0.96 J		
Acenaphthene	MG/KG	20	98	500	97	8.2	46	3.2	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-06	SB-06	SB-07	SB-07	SB-09
Sample ID					SB-06	SB-06	SB-07	SB-07	SB-09
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					11.0-13.0	19.0-21.0	11.0-13.0	15.0-17.0	7.0-9.0
Date Sampled					01/04/09	01/04/09	01/04/09	01/04/09	12/16/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acenaphthylene	MG/KG	100	107	500	7.7	0.61	40	5.3	
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500	42	4.5	67	7.5	0.99 J
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6	32	2.7	66	15	3.2 J
Benzo(a)pyrene	MG/KG	1	22	1	28	2.2	43	11	3 J
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	30	2.5	60	15	3.7 J
Benzo(g,h,i)perylene	MG/KG	100	1000	500	22	1.5	29	7.7	1.9 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	7.7	0.72	19	5.9	1.6 J
bis(2-Chloroethyl)ether	MG/KG	-	-	-					
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-		0.12 J			
Carbazole	MG/KG	-	-	-	3.7 J	0.3 J	23	2.1	
Chrysene	MG/KG	1	1	56	24	2.2	49	11	3.1 J
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56	3.1 J	0.19 J	7.8 J	1.8 J	
Dibenzofuran	MG/KG	7	210	350	9.7	0.66	61	4.5	
Fluoranthene	MG/KG	100	1000	500	90	7.4	150	34	6.5 J
Fluorene	MG/KG	30	386	500	51	4.1	83	7.3	
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	13	0.79	28	5.9	1.5 J
Naphthalene	MG/KG	12	12	500	110	8.7	410	23	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-06	SB-06	SB-07	SB-07	SB-09
Sample ID					SB-06	SB-06	SB-07	SB-07	SB-09
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					11.0-13.0	19.0-21.0	11.0-13.0	15.0-17.0	7.0-9.0
Date Sampled					01/04/09	01/04/09	01/04/09	01/04/09	12/16/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Nitrobenzene	MG/KG	0.17 CP-51	0.17 CP-51	69 CP-51					
Phenanthrene	MG/KG	100	1000	500	190	16	210	19	3.4 J
Pyrene	MG/KG	100	1000	500	110	9.4	120	27	5.6 J
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	898.5	75.01	1,524.8	205.6	34.49
Total Semivolatile Organic Compounds	MG/KG	-	-	-	936.9	78.19	1,631.06	213.4	34.49
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	11,600	9,140	10,500	7,700	8,360
Antimony	MG/KG	12 CP-51	-	-					1.28
Arsenic	MG/KG	13	16	16	1.1		1.97	0.731 J	28.1
Barium	MG/KG	350	820	400	104	110	79.1	69.1	141
Beryllium	MG/KG	7.2	47	590	0.452	0.091 J	0.281	0.139 J	0.203
Cadmium	MG/KG	2.5	7.5	9.3					1.76
Calcium	MG/KG	10000 CP-51	-	-	2,810	1,380	2,650	1,730	6,180
Chromium	MG/KG	30	NS	1500	20	23.4	16.9	19.6	23.6
Cobalt	MG/KG	20 CP-51	-	-	8.73	8.75	7.89	7.07	8.62
Copper	MG/KG	50	1720	270	16.3	17.2	23.4	21.9	41.5
Iron	MG/KG	2000 CP-51	-	-	14,300	16,200	21,400	13,200	18,500
Lead	MG/KG	63	450	1000	14	4.43	10.2	5.25	313
Magnesium	MG/KG	-	-	-	2,640	4,280	2,460	3,110	4,560

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-06	SB-06	SB-07	SB-07	SB-09
Sample ID					SB-06	SB-06	SB-07	SB-07	SB-09
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					11.0-13.0	19.0-21.0	11.0-13.0	15.0-17.0	7.0-9.0
Date Sampled					01/04/09	01/04/09	01/04/09	01/04/09	12/16/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Manganese	MG/KG	1600	2000	10000	301	261	229	151	247
Mercury	MG/KG	0.18	0.73	2.8	0.224		0.05	0.013	0.394
Nickel	MG/KG	30	130	310	11.3	15.8	13.9	13.4	17.1
Potassium	MG/KG	-	-	-	826	6,010	2,130	2,600	3,010
Selenium	MG/KG	3.9	4	1500	1.22	0.995	1.81	0.941	
Silver	MG/KG	2	8.3	1500	2.2	2.47	3.08	2.01	3.47
Sodium	MG/KG	-	-	-	215	199	217	167	
Thallium	MG/KG	5 CP-51	-	-		1.55	0.809 J		
Vanadium	MG/KG	39 CP-51	-	-	27.6	29.2	22.4	22.4	27.9
Zinc	MG/KG	109	2480	10000	45	35.8	62.8	29.2	209
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27	2.55		1.07	0.978	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-10	SB-11	SB-11	SB-12	SB-12
Sample ID					SB-10	SB-11	SB-11	SB-12	SB-12
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					19.0-21.0	17.0-19.0	19.0-21.0	11.0-13.0	17.0-19.0
Date Sampled					01/04/09	12/21/08	12/21/08	12/18/08	12/18/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
Acetone	MG/KG	0.05	0.05	500					
Benzene	MG/KG	0.06	0.06	44	0.34	0.28	0.088		0.2 J
Cyclohexane	MG/KG	-	-	-				0.2	
Ethylbenzene	MG/KG	1	1	390	0.033	0.26	0.14	0.64	67
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-	0.032	0.028 J	0.012 J	1.6	14 J
Methylcyclohexane	MG/KG	-	-	-	0.049			1.9	24
Styrene	MG/KG	300 CP-51	-	-					
Toluene	MG/KG	0.7	0.7	500		0.012 J	0.047	0.024 J	1.1
Xylene (total)	MG/KG	0.26	1.6	500	0.072 J	0.24	0.145	0.338 J	45 J
Total BTEX	MG/KG	-	-	-	0.445	0.792	0.42	1.002	113.3
Total Volatile Organic Compounds	MG/KG	-	-	-	0.526	0.82	0.432	4.702	151.3
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-	0.12 J		0.24 J	8.1	7
2,4-Dimethylphenol	MG/KG	-	-	-					
2,4-Dinitrotoluene	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-	0.76	0.37 J	0.77 J	0.25 J	7.8
2-Nitroaniline	MG/KG	0.4 CP-51	0.4 CP-51	-					
3&4-Methylphenol (m,p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500	0.35 J	0.49 J	0.72 J	25	15

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-10	SB-11	SB-11	SB-12	SB-12
Sample ID					SB-10	SB-11	SB-11	SB-12	SB-12
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					19.0-21.0	17.0-19.0	19.0-21.0	11.0-13.0	17.0-19.0
Date Sampled					01/04/09	12/21/08	12/21/08	12/18/08	12/18/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acenaphthylene	MG/KG	100	107	500	0.32 J			3.6	1.1
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500	0.43	0.59 J	1.1 J	7	4.5
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6	0.41	0.3 J	1.1 J	5.3	4.3
Benzo(a)pyrene	MG/KG	1	22	1	0.28 J	0.21 J	0.8 J	4.3	3.2
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	0.39	0.3 J	1.2 J	3.8	3.6
Benzo(g,h,i)perylene	MG/KG	100	1000	500	0.16 J		0.37 J	2.2	1.4
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	0.12 J		0.39 J	1.2 J	0.9
bis(2-Chloroethyl)ether	MG/KG	-	-	-					
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-					
Carbazole	MG/KG	-	-	-	0.18 J	0.2 J	0.37 J		0.21 J
Chrysene	MG/KG	1	1	56	0.31 J	0.3 J	1 J	4.8	3.7
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56	0.049 J			0.55 J	0.39 J
Dibenzofuran	MG/KG	7	210	350	0.4	0.52 J	0.73 J	0.34 J	0.54 J
Fluoranthene	MG/KG	100	1000	500	0.89	1.2 J	3	9.7	8.6
Fluorene	MG/KG	30	386	500	0.55	0.68 J	1.1 J	9.6	6.6
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	0.14 J		0.35 J	2 J	1.4
Naphthalene	MG/KG	12	12	500	3	0.95 J	3.8	0.55 J	67

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

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Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-10	SB-11	SB-11	SB-12	SB-12
Sample ID					SB-10	SB-11	SB-11	SB-12	SB-12
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					19.0-21.0	17.0-19.0	19.0-21.0	11.0-13.0	17.0-19.0
Date Sampled					01/04/09	12/21/08	12/21/08	12/18/08	12/18/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Nitrobenzene	MG/KG	0.17 CP-51	0.17 CP-51	69 CP-51					
Phenanthrene	MG/KG	100	1000	500	1.3	2.6	4.6	28	18
Pyrene	MG/KG	100	1000	500	0.74	0.94 J	2.7	15	11
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	10.199	8.93	23	122.85	158.49
Total Semivolatile Organic Compounds	MG/KG	-	-	-	10.899	9.65	24.34	131.29	166.24
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	9,650	5,140 J	4,460 J	14,100	6,830
Antimony	MG/KG	12 CP-51	-	-					
Arsenic	MG/KG	13	16	16	0.838				
Barium	MG/KG	350	820	400	82.8	44.3 J	43.9 J	77.9	71.9
Beryllium	MG/KG	7.2	47	590	0.247	0.126 J	0.068 J	0.449	0.188 J
Cadmium	MG/KG	2.5	7.5	9.3		0.264	0.206 J		
Calcium	MG/KG	10000 CP-51	-	-	4,540	1,780 J	4,030 J	1,340	1,090
Chromium	MG/KG	30	NS	1500	20.6	12 J	9.08 J	31.2	18.4
Cobalt	MG/KG	20 CP-51	-	-	7.75	5.15	4.05	29.5	7.25
Copper	MG/KG	50	1720	270	28	11.4	8.41	33.9	22
Iron	MG/KG	2000 CP-51	-	-	17,300	8,900 J	7,440 J	20,100	12,200
Lead	MG/KG	63	450	1000	51.3	5.86	8.1	7.87	2.19
Magnesium	MG/KG	-	-	-	3,280	2,090 J	2,350 J	4,260	2,680

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-10	SB-11	SB-11	SB-12	SB-12
Sample ID					SB-10	SB-11	SB-11	SB-12	SB-12
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					19.0-21.0	17.0-19.0	19.0-21.0	11.0-13.0	17.0-19.0
Date Sampled					01/04/09	12/21/08	12/21/08	12/18/08	12/18/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Manganese	MG/KG	1600	2000	10000	301	231 J	183 J	175	139
Mercury	MG/KG	0.18	0.73	2.8	0.062	0.073	0.034	0.021	
Nickel	MG/KG	30	130	310	13.4	7.63	6.74	41.2	16.4
Potassium	MG/KG	-	-	-	2,730	1,800	1,800	1,940	3,250
Selenium	MG/KG	3.9	4	1500	1.08			0.934	0.8
Silver	MG/KG	2	8.3	1500	2.67	0.487	0.418	2.12	1.32
Sodium	MG/KG	-	-	-	359	95.8	123	120	107
Thallium	MG/KG	5 CP-51	-	-				0.828 J	
Vanadium	MG/KG	39 CP-51	-	-	25.7	14.9	11.6	40.1	22.7
Zinc	MG/KG	109	2480	10000	62.4	18.7 J	19.6 J	37.2	30.5
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-13	SB-13	SB-14	SB-14	SB-15
Sample ID					SB-13	SB-13	SB-14	SB-14	SB-15
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					11.0-13.0	13.0-15.0	9.0-11.0	23.0-25.0	13.0-15.0
Date Sampled					12/16/08	12/16/08	12/17/08	12/17/08	01/12/09
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
Acetone	MG/KG	0.05	0.05	500	0.11 J				
Benzene	MG/KG	0.06	0.06	44		0.023 J			750
Cyclohexane	MG/KG	-	-	-		0.48			11 J
Ethylbenzene	MG/KG	1	1	390		3			1,200
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-		0.35			28
Methylcyclohexane	MG/KG	-	-	-		0.86			40
Styrene	MG/KG	300 CP-51	-	-					80
Toluene	MG/KG	0.7	0.7	500		0.015 J			920
Xylene (total)	MG/KG	0.26	1.6	500		2.53			960
Total BTEX	MG/KG	-	-	-	ND	5.568	ND	ND	3,830
Total Volatile Organic Compounds	MG/KG	-	-	-	0.11	7.258	ND	ND	3,989
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-	1.5 J	2.9			140
2,4-Dimethylphenol	MG/KG	-	-	-					
2,4-Dinitrotoluene	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-	2.9	2.4			520
2-Nitroaniline	MG/KG	0.4 CP-51	0.4 CP-51	-					
3&4-Methylphenol (m,p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500	2.2	1.6 J			130

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-13	SB-13	SB-14	SB-14	SB-15
Sample ID					SB-13	SB-13	SB-14	SB-14	SB-15
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					11.0-13.0	13.0-15.0	9.0-11.0	23.0-25.0	13.0-15.0
Date Sampled					12/16/08	12/16/08	12/17/08	12/17/08	01/12/09
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acenaphthylene	MG/KG	100	107	500	0.87 J	6.2			260
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500	1 J	3.4			82
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6	0.6 J	2			57
Benzo(a)pyrene	MG/KG	1	22	1	0.52 J	2.7			44
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	0.42 J	1.9			37 J
Benzo(g,h,i)perylene	MG/KG	100	1000	500	0.4 J	2.3			18 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56		0.79 J			13 J
bis(2-Chloroethyl)ether	MG/KG	-	-	-					
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-			0.046 J	0.039 J	
Carbazole	MG/KG	-	-	-					
Chrysene	MG/KG	1	1	56	0.53 J	2			55
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56					
Dibenzofuran	MG/KG	7	210	350					6.5 J
Fluoranthene	MG/KG	100	1000	500	1.8 J	8.5			110
Fluorene	MG/KG	30	386	500	1.4 J	3.6			120
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	0.25 J	1.3 J			13 J
Naphthalene	MG/KG	12	12	500	9.3	15	0.16 J		9,000

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-13	SB-13	SB-14	SB-14	SB-15
Sample ID					SB-13	SB-13	SB-14	SB-14	SB-15
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					11.0-13.0	13.0-15.0	9.0-11.0	23.0-25.0	13.0-15.0
Date Sampled					12/16/08	12/16/08	12/17/08	12/17/08	01/12/09
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Nitrobenzene	MG/KG	0.17 CP-51	0.17 CP-51	69 CP-51					
Phenanthrene	MG/KG	100	1000	500	4.6	15			290
Pyrene	MG/KG	100	1000	500	2.4	11			150
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	29.19	79.69	0.16	ND	10,899
Total Semivolatile Organic Compounds	MG/KG	-	-	-	30.69	82.59	0.206	0.039	11,045.5
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	12,800	12,700	11,500	23,800	3,900
Antimony	MG/KG	12 CP-51	-	-					
Arsenic	MG/KG	13	16	16	1.98	1.01			14.7
Barium	MG/KG	350	820	400	60.5	90.4	73.6	336	272
Beryllium	MG/KG	7.2	47	590	0.354	0.289	0.348	0.302	0.24 J
Cadmium	MG/KG	2.5	7.5	9.3	1.36	1.13			1.57
Calcium	MG/KG	10000 CP-51	-	-			1,620	421	11,100
Chromium	MG/KG	30	NS	1500	23.9	44.7	27.5	54.1	10.1
Cobalt	MG/KG	20 CP-51	-	-	10.9	14.1	7.63	23.9	7.69
Copper	MG/KG	50	1720	270	19.8	16	32.5	32.8	196
Iron	MG/KG	2000 CP-51	-	-	26,900	21,800	19,600	43,200	17,600
Lead	MG/KG	63	450	1000	6.29	5	17.5	3.16	624
Magnesium	MG/KG	-	-	-	3,460	4,980	3,840	11,300	3,630

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-13	SB-13	SB-14	SB-14	SB-15
Sample ID					SB-13	SB-13	SB-14	SB-14	SB-15
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					11.0-13.0	13.0-15.0	9.0-11.0	23.0-25.0	13.0-15.0
Date Sampled					12/16/08	12/16/08	12/17/08	12/17/08	01/12/09
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Manganese	MG/KG	1600	2000	10000	258	297	327	874	136
Mercury	MG/KG	0.18	0.73	2.8			0.116		1.4
Nickel	MG/KG	30	130	310	15.2	28.6	18.2	40	7.78
Potassium	MG/KG	-	-	-	2,310	3,990	2,370	17,800	499
Selenium	MG/KG	3.9	4	1500			0.858	0.886	1.52
Silver	MG/KG	2	8.3	1500	4.84	3.95	2.07	4.51	3.26
Sodium	MG/KG	-	-	-			133	231	434
Thallium	MG/KG	5 CP-51	-	-				4	
Vanadium	MG/KG	39 CP-51	-	-	34.2	32.5	33.8	86.7	11.9
Zinc	MG/KG	109	2480	10000	35.6	44.8	43.6	91.7	342
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27					1.92

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

Advanced Selection: Cedar SC Soil
J:\Projects\11175538.00000\DB\Program\EDMS.mde
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[SITEID] = '04' AND [MATRIX] = 'SO' AND [LOGDATE] < #10/29/2013#

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-15	TP-01	TP-01	TP-02	TP-02
Sample ID					SB-15	TP-01	TP-01	TP-02	TP-02
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					15.0-17.0	2.0-3.0	6.0-6.0	2.0-3.0	3.0-4.0
Date Sampled					01/12/09	12/04/08	12/04/08	12/05/08	12/05/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
Acetone	MG/KG	0.05	0.05	500					
Benzene	MG/KG	0.06	0.06	44	1,300				
Cyclohexane	MG/KG	-	-	-	31 J				
Ethylbenzene	MG/KG	1	1	390	2,700				
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-	33				
Methylcyclohexane	MG/KG	-	-	-	54				
Styrene	MG/KG	300 CP-51	-	-	210				
Toluene	MG/KG	0.7	0.7	500	1,800	0.038		0.014 J	
Xylene (total)	MG/KG	0.26	1.6	500	1,970				
Total BTEX	MG/KG	-	-	-	7,770	0.038	ND	0.014	ND
Total Volatile Organic Compounds	MG/KG	-	-	-	8,098	0.038	ND	0.014	ND
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-	270				
2,4-Dimethylphenol	MG/KG	-	-	-					
2,4-Dinitrotoluene	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-	1,000	0.89 J	0.04 J	0.89 J	0.041 J
2-Nitroaniline	MG/KG	0.4 CP-51	0.4 CP-51	-					
3&4-Methylphenol (m,p-cresol)	MG/KG	0.33	0.33	500					0.054 J
Acenaphthene	MG/KG	20	98	500	410		0.049 J		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-15	TP-01	TP-01	TP-02	TP-02
Sample ID					SB-15	TP-01	TP-01	TP-02	TP-02
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					15.0-17.0	2.0-3.0	6.0-6.0	2.0-3.0	3.0-4.0
Date Sampled					01/12/09	12/04/08	12/04/08	12/05/08	12/05/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acenaphthylene	MG/KG	100	107	500	460	14	0.71	9.6	0.42
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500	150	13	0.73	9.4	0.22 J
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6	110	84	2.8	54	2.6
Benzo(a)pyrene	MG/KG	1	22	1	94	71	2.2	49	3 J
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	92	110	2.6	69	2.9
Benzo(g,h,i)perylene	MG/KG	100	1000	500	40 J	40	1.2 J	20 J	0.74 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	18 J	56 J	1.6 J	30 J	1.7 J
bis(2-Chloroethyl)ether	MG/KG	-	-	-					
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-					0.085 J
Carbazole	MG/KG	-	-	-		2.1 J	0.14 J	1.2 J	0.058 J
Chrysene	MG/KG	1	1	56	110	62 J	2.3 J	56 J	2.3 J
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56	6.7 J	4.6 J	0.17 J	3.5 J	0.13 J
Dibenzofuran	MG/KG	7	210	350	12 J	1.4 J	0.11 J	1 J	
Fluoranthene	MG/KG	100	1000	500	210	99	2.8	55	2.9
Fluorene	MG/KG	30	386	500	220	2.1 J	0.19 J	0.94 J	
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	27 J	13	0.75	11	0.43
Naphthalene	MG/KG	12	12	500	8,100	3.5 J	0.11 J	4.1 J	0.14 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

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Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-15	TP-01	TP-01	TP-02	TP-02
Sample ID					SB-15	TP-01	TP-01	TP-02	TP-02
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					15.0-17.0	2.0-3.0	6.0-6.0	2.0-3.0	3.0-4.0
Date Sampled					01/12/09	12/04/08	12/04/08	12/05/08	12/05/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Nitrobenzene	MG/KG	0.17 CP-51	0.17 CP-51	69 CP-51					
Phenanthrene	MG/KG	100	1000	500	580	29	2.8	14	0.38
Pyrene	MG/KG	100	1000	500	270	120 J	3 J	66 J	2.9 J
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	11,897.7	722.09	24.049	452.43	20.801
Total Semivolatile Organic Compounds	MG/KG	-	-	-	12,179.7	725.59	24.299	454.63	20.998
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	4,900	3,790	10,600	7,590	10,200
Antimony	MG/KG	12 CP-51	-	-	3.34				
Arsenic	MG/KG	13	16	16	31.6	4.5	2.9	4.09	
Barium	MG/KG	350	820	400	352	93.8	60.6	78	86
Beryllium	MG/KG	7.2	47	590	0.118 J	0.227 J	0.431	0.285	0.317
Cadmium	MG/KG	2.5	7.5	9.3	1.39	0.301	0.227 J	0.244	0.312
Calcium	MG/KG	10000 CP-51	-	-	9,640	9,050	1,790	6,670	2,090
Chromium	MG/KG	30	NS	1500	11.3	9.43	25.3	21.7	29
Cobalt	MG/KG	20 CP-51	-	-	12.7	5.75	10.7	7	9.43
Copper	MG/KG	50	1720	270	129	37.9	20.2	26.2	31.1
Iron	MG/KG	2000 CP-51	-	-	38,900	11,300	20,000	17,100	18,200
Lead	MG/KG	63	450	1000	6,400	284	16.7	121	39.9
Magnesium	MG/KG	-	-	-	2,000	1,400	2,870	3,160	3,860

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-15	TP-01	TP-01	TP-02	TP-02
Sample ID					SB-15	TP-01	TP-01	TP-02	TP-02
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					15.0-17.0	2.0-3.0	6.0-6.0	2.0-3.0	3.0-4.0
Date Sampled					01/12/09	12/04/08	12/04/08	12/05/08	12/05/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Manganese	MG/KG	1600	2000	10000	252	139	233	253	383
Mercury	MG/KG	0.18	0.73	2.8	1.2	4.4	0.109	0.257	0.292
Nickel	MG/KG	30	130	310	20	11.6	16.6	18.8	23.7
Potassium	MG/KG	-	-	-	712	806	1,270	2,310	3,300
Selenium	MG/KG	3.9	4	1500	2.3	0.825	0.65 J	0.671 J	0.625 J
Silver	MG/KG	2	8.3	1500	7.27	1.7	3	2.57	2.67
Sodium	MG/KG	-	-	-	604	215	81	181	159
Thallium	MG/KG	5 CP-51	-	-					
Vanadium	MG/KG	39 CP-51	-	-	14.7	14.4	28.9	21.6	28.9
Zinc	MG/KG	109	2480	10000	277	90.9	48.8	53.6	48.2
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27	2.52	2.35	0.703	2.1	0.925

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-02	TP-03	TP-03	TP-04	TP-04
Sample ID					TP-02	TP-03	TP-03	TP-04	TP-04
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					10.5-10.5	1.0-3.0	3.0-3.0	5.7-5.7	7.5-7.5
Date Sampled					12/05/08	12/09/08	12/09/08	12/02/08	12/02/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
Acetone	MG/KG	0.05	0.05	500					
Benzene	MG/KG	0.06	0.06	44					
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390					
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-					
Methylcyclohexane	MG/KG	-	-	-					
Styrene	MG/KG	300 CP-51	-	-					
Toluene	MG/KG	0.7	0.7	500					
Xylene (total)	MG/KG	0.26	1.6	500					
Total BTEX	MG/KG	-	-	-	ND	ND	ND	ND	ND
Total Volatile Organic Compounds	MG/KG	-	-	-	ND	ND	ND	ND	ND
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-				0.073 J	
2,4-Dimethylphenol	MG/KG	-	-	-					
2,4-Dinitrotoluene	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-				0.1 J	0.045 J
2-Nitroaniline	MG/KG	0.4 CP-51	0.4 CP-51	-					
3&4-Methylphenol (m,p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500				0.15 J	0.056 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-02	TP-03	TP-03	TP-04	TP-04
Sample ID					TP-02	TP-03	TP-03	TP-04	TP-04
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					10.5-10.5	1.0-3.0	3.0-3.0	5.7-5.7	7.5-7.5
Date Sampled					12/05/08	12/09/08	12/09/08	12/02/08	12/02/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acenaphthylene	MG/KG	100	107	500		1.8 J	1 J	0.23 J	0.13 J
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500		0.86 J		0.089 J	0.042 J
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6		6.7 J	6 J	0.26 J	0.12 J
Benzo(a)pyrene	MG/KG	1	22	1		9.3	8.5	0.38	0.21 J
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6		12	11	0.44	0.24 J
Benzo(g,h,i)perylene	MG/KG	100	1000	500		8.8	7.6	0.45	0.27 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56		3.7 J	3.6 J	0.12 J	0.067 J
bis(2-Chloroethyl)ether	MG/KG	-	-	-					
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-					
Carbazole	MG/KG	-	-	-					
Chrysene	MG/KG	1	1	56		6.7 J	5.8 J	0.3 J	0.14 J
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56		1.1 J	1.1 J	0.048 J	
Dibenzofuran	MG/KG	7	210	350					
Fluoranthene	MG/KG	100	1000	500		13	10	0.69	0.2 J
Fluorene	MG/KG	30	386	500				0.065 J	
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6		6.5 J	5.8 J	0.32 J	0.19 J
Naphthalene	MG/KG	12	12	500				0.59	0.21 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-02	TP-03	TP-03	TP-04	TP-04
Sample ID					TP-02	TP-03	TP-03	TP-04	TP-04
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					10.5-10.5	1.0-3.0	3.0-3.0	5.7-5.7	7.5-7.5
Date Sampled					12/05/08	12/09/08	12/09/08	12/02/08	12/02/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Nitrobenzene	MG/KG	0.17 CP-51	0.17 CP-51	69 CP-51					
Phenanthrene	MG/KG	100	1000	500		4.6 J	3.7 J	0.6	0.093 J
Pyrene	MG/KG	100	1000	500		14	11	0.89	0.26 J
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	ND	89.06	75.1	5.722	2.273
Total Semivolatile Organic Compounds	MG/KG	-	-	-	ND	89.06	75.1	5.795	2.273
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	12,800	3,270	3,460	10,500	10,900
Antimony	MG/KG	12 CP-51	-	-		1 J	1.16 J		
Arsenic	MG/KG	13	16	16		3.26	3.09		
Barium	MG/KG	350	820	400	60.2	70	82.9	111	125
Beryllium	MG/KG	7.2	47	590	0.414	0.172 J	0.169 J	0.294	0.277
Cadmium	MG/KG	2.5	7.5	9.3	0.117 J	0.646	0.545	2.4	2.46
Calcium	MG/KG	10000 CP-51	-	-	978	7,890	9,390	2,180	4,090
Chromium	MG/KG	30	NS	1500	24.8	12.5	7.55	25.7	33.4
Cobalt	MG/KG	20 CP-51	-	-	7.96	4.27	4.56	9.23	9.67
Copper	MG/KG	50	1720	270	20.7	59	45.8	44.7	84.3
Iron	MG/KG	2000 CP-51	-	-	18,100	8,980	8,390	17,500	18,700
Lead	MG/KG	63	450	1000	5.61	244	259	42.2	20.9
Magnesium	MG/KG	-	-	-	3,670	1,630	1,710	5,100	5,710

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-02	TP-03	TP-03	TP-04	TP-04
Sample ID					TP-02	TP-03	TP-03	TP-04	TP-04
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					10.5-10.5	1.0-3.0	3.0-3.0	5.7-5.7	7.5-7.5
Date Sampled					12/05/08	12/09/08	12/09/08	12/02/08	12/02/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Manganese	MG/KG	1600	2000	10000	234	155	169	294	294
Mercury	MG/KG	0.18	0.73	2.8	0.017	10.6	1.8	0.12	0.097
Nickel	MG/KG	30	130	310	14.5	12.1	8.85	33.7	100
Potassium	MG/KG	-	-	-	2,420	976	883	6,160	7,680
Selenium	MG/KG	3.9	4	1500	0.821			0.764	0.657 J
Silver	MG/KG	2	8.3	1500	2.63	0.834	0.789	3.39	3.52
Sodium	MG/KG	-	-	-	107	155	177	135	132
Thallium	MG/KG	5 CP-51	-	-				0.9 J	1.04 J
Vanadium	MG/KG	39 CP-51	-	-	30.6	12.1	11.8	32.2	34.4
Zinc	MG/KG	109	2480	10000	31.8	90.5	63	117	61.6
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27		1.57	4.63		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-05	TP-05	TP-05	TP-06	TP-06
Sample ID					TP-05	TP-05	TP-05 DUP	TP-06	TP-06
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					2.4-2.4	12.5-12.5	12.5-12.5	2.5-3.5	6.0-7.0
Date Sampled					12/02/08	12/02/08	12/02/08	12/03/08	12/03/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)		
Volatile Organic Compounds									
Acetone	MG/KG	0.05	0.05	500					
Benzene	MG/KG	0.06	0.06	44	0.011 J				
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390					
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-					
Methylcyclohexane	MG/KG	-	-	-			1.6 J		
Styrene	MG/KG	300 CP-51	-	-					
Toluene	MG/KG	0.7	0.7	500					
Xylene (total)	MG/KG	0.26	1.6	500					
Total BTEX	MG/KG	-	-	-	0.011	ND	ND	ND	ND
Total Volatile Organic Compounds	MG/KG	-	-	-	0.011	ND	1.6	ND	ND
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-	9.3	0.84 J	0.5 J		
2,4-Dimethylphenol	MG/KG	-	-	-					
2,4-Dinitrotoluene	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-	11			0.95 J	
2-Nitroaniline	MG/KG	0.4 CP-51	0.4 CP-51	-					
3&4-Methylphenol (m,p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500	3.2 J	8.6	5.8		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-05	TP-05	TP-05	TP-06	TP-06
Sample ID					TP-05	TP-05	TP-05 DUP	TP-06	TP-06
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					2.4-2.4	12.5-12.5	12.5-12.5	2.5-3.5	6.0-7.0
Date Sampled					12/02/08	12/02/08	12/02/08	12/03/08	12/03/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)		
Semivolatile Organic Compounds									
Acenaphthylene	MG/KG	100	107	500	34	5.3	3.8 J	7.4 J	1.8 J
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500	30	6.3	5.2	3.5 J	
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6	26	7	7.6	19	0.61 J
Benzo(a)pyrene	MG/KG	1	22	1	33	6.8	6.9	38 J	2.5 J
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	31	6.4	6.2	54 J	2.5 J
Benzo(g,h,i)perylene	MG/KG	100	1000	500	34	5.4	5.3	19 J	1.5 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	11	2.4 J	2.6 J	17 J	0.8 J
bis(2-Chloroethyl)ether	MG/KG	-	-	-					
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-					
Carbazole	MG/KG	-	-	-				0.91 J	
Chrysene	MG/KG	1	1	56	29	6.9	6.7	20	0.75 J
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56	2.5 J	0.51 J	0.49 J	1.6 J	
Dibenzofuran	MG/KG	7	210	350		1.4 J	1 J		
Fluoranthene	MG/KG	100	1000	500	99	22	21	27	0.41 J
Fluorene	MG/KG	30	386	500	23	7	5.2	1.4 J	
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	23	3.9	3.9	8.6	1.1 J
Naphthalene	MG/KG	12	12	500	41	5.2	2.8 J	1.9 J	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-05	TP-05	TP-05	TP-06	TP-06
Sample ID					TP-05	TP-05	TP-05 DUP	TP-06	TP-06
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					2.4-2.4	12.5-12.5	12.5-12.5	2.5-3.5	6.0-7.0
Date Sampled					12/02/08	12/02/08	12/02/08	12/03/08	12/03/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)		
Semivolatile Organic Compounds									
Nitrobenzene	MG/KG	0.17 CP-51	0.17 CP-51	69 CP-51					
Phenanthrene	MG/KG	100	1000	500	120	28	26	18	
Pyrene	MG/KG	100	1000	500	110	20	22	41	0.96 J
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	660.7	141.71	131.49	278.35	12.93
Total Semivolatile Organic Compounds	MG/KG	-	-	-	670	143.95	132.99	279.26	12.93
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	7,110	9,170	9,170	6,250	12,400
Antimony	MG/KG	12 CP-51	-	-					
Arsenic	MG/KG	13	16	16	8.98	0.703 J		7.84	1.76
Barium	MG/KG	350	820	400	74.6	48.3	43.4	126	91.1
Beryllium	MG/KG	7.2	47	590	0.301	0.38	0.408	0.414	0.672
Cadmium	MG/KG	2.5	7.5	9.3	1.62	2.08	2.09	2.15	2.13
Calcium	MG/KG	10000 CP-51	-	-	2,050	1,120	572	26,800	1,750
Chromium	MG/KG	30	NS	1500	17.2	16.6	16	26.1 J	25.2 J
Cobalt	MG/KG	20 CP-51	-	-	7.2	6.57	7.66	7.62	13.8
Copper	MG/KG	50	1720	270	29.5	13.6	15.7	178 J	3.5 J
Iron	MG/KG	2000 CP-51	-	-	12,900	17,200	17,600	15,900 J	20,300 J
Lead	MG/KG	63	450	1000	98.5	12.4	9.17	299 J	8.45 J
Magnesium	MG/KG	-	-	-	2,330	1,860	1,820	2,550	2,450

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

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Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-05	TP-05	TP-05	TP-06	TP-06
Sample ID					TP-05	TP-05	TP-05 DUP	TP-06	TP-06
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					2.4-2.4	12.5-12.5	12.5-12.5	2.5-3.5	6.0-7.0
Date Sampled					12/02/08	12/02/08	12/02/08	12/03/08	12/03/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			Field Duplicate (1-1)		
Metals									
Manganese	MG/KG	1600	2000	10000	251	94.4	115	216 J	3,170 J
Mercury	MG/KG	0.18	0.73	2.8	0.11	0.014	0.011 J	4.1	0.023
Nickel	MG/KG	30	130	310	21.2	11.6	11.2	215 J	11.6 J
Potassium	MG/KG	-	-	-	1,210	1,150	1,150	1,180	619
Selenium	MG/KG	3.9	4	1500	1.15	1.28	1.83	0.989	
Silver	MG/KG	2	8.3	1500	2.37	3.12	3.21	3.2	4.23
Sodium	MG/KG	-	-	-	68.5 J	62 J		188	65.1 J
Thallium	MG/KG	5 CP-51	-	-					
Vanadium	MG/KG	39 CP-51	-	-	20.3	20.8	21.6	19.1	33.4
Zinc	MG/KG	109	2480	10000	57.8	28.5	23.8	178 J	30.9 J
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27	1.01			9.52	2.65

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-06	TP-07	TP-07	TP-07
Sample ID					TP-06	TP-07 IH	TP-07 IH	TP-07 OH
Matrix					Soil	Soil	Soil	Soil
Depth Interval (ft)					9.5-9.5	7.0-9.0	9.0-9.0	9.0-9.0
Date Sampled					12/03/08	12/10/08	12/10/08	12/10/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				(2-1)
Volatile Organic Compounds								
Acetone	MG/KG	0.05	0.05	500				
Benzene	MG/KG	0.06	0.06	44				
Cyclohexane	MG/KG	-	-	-				
Ethylbenzene	MG/KG	1	1	390			0.066	3.6
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-			0.0084 J	1
Methylcyclohexane	MG/KG	-	-	-				
Styrene	MG/KG	300 CP-51	-	-				0.037
Toluene	MG/KG	0.7	0.7	500				0.017 J
Xylene (total)	MG/KG	0.26	1.6	500			0.022 J	4.1
Total BTEX	MG/KG	-	-	-	ND	ND	0.088	7.717
Total Volatile Organic Compounds	MG/KG	-	-	-	ND	ND	0.0964	8.754
Semivolatile Organic Compounds								
1,1'-Biphenyl	MG/KG	60 CP-51	-	-		0.47 J	3.7 J	5.3
2,4-Dimethylphenol	MG/KG	-	-	-				
2,4-Dinitrotoluene	MG/KG	-	-	-				
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-	0.25 J	1.3 J	12	38
2-Nitroaniline	MG/KG	0.4 CP-51	0.4 CP-51	-				
3&4-Methylphenol (m,p-cresol)	MG/KG	0.33	0.33	500				
Acenaphthene	MG/KG	20	98	500		3.6 J	18	5.7

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

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Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-06	TP-07	TP-07	TP-07
Sample ID					TP-06	TP-07 IH	TP-07 IH	TP-07 OH
Matrix					Soil	Soil	Soil	Soil
Depth Interval (ft)					9.5-9.5	7.0-9.0	9.0-9.0	9.0-9.0
Date Sampled					12/03/08	12/10/08	12/10/08	12/10/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				(2-1)
Semivolatile Organic Compounds								
Acenaphthylene	MG/KG	100	107	500	1.1 J	2.2 J	4.5 J	13
Acetophenone	MG/KG	-	-	-				
Anthracene	MG/KG	100	1000	500	0.21 J	0.74 J	2.7 J	5.2
Benzaldehyde	MG/KG	-	-	-				
Benzo(a)anthracene	MG/KG	1	1	5.6		3.1 J	4.9 J	4.4
Benzo(a)pyrene	MG/KG	1	22	1	1.7 J	3.5 J	5.7 J	3.5 J
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	1.5 J	3 J	4.6 J	2.7 J
Benzo(g,h,i)perylene	MG/KG	100	1000	500	1 J	2.1 J	4 J	1.9 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	0.43 J	1.1 J	1.3 J	1.2 J
bis(2-Chloroethyl)ether	MG/KG	-	-	-				
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-				
Carbazole	MG/KG	-	-	-				
Chrysene	MG/KG	1	1	56	0.36 J	3.1 J	4.5 J	4.1
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56	0.24 J			
Dibenzofuran	MG/KG	7	210	350				
Fluoranthene	MG/KG	100	1000	500		5	7.5 J	8.2
Fluorene	MG/KG	30	386	500		0.78 J	3.5 J	7.7
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	0.8 J	1.5 J	2.9 J	1.3 J
Naphthalene	MG/KG	12	12	500		6.9	91	130

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-06	TP-07	TP-07	TP-07
Sample ID					TP-06	TP-07 IH	TP-07 IH	TP-07 OH
Matrix					Soil	Soil	Soil	Soil
Depth Interval (ft)					9.5-9.5	7.0-9.0	9.0-9.0	9.0-9.0
Date Sampled					12/03/08	12/10/08	12/10/08	12/10/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				(2-1)
Semivolatile Organic Compounds								
Nitrobenzene	MG/KG	0.17 CP-51	0.17 CP-51	69 CP-51				
Phenanthrene	MG/KG	100	1000	500		2.6 J	8.4	20
Pyrene	MG/KG	100	1000	500	0.21 J	7.4	12	11
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	7.8	47.92	187.5	257.9
Total Semivolatile Organic Compounds	MG/KG	-	-	-	7.8	48.39	191.2	263.2
Metals								
Aluminum	MG/KG	10000 CP-51	-	-	14,800		11,500	10,800
Antimony	MG/KG	12 CP-51	-	-				
Arsenic	MG/KG	13	16	16		1.18	1.96	3.59
Barium	MG/KG	350	820	400	71	150	134	66.5
Beryllium	MG/KG	7.2	47	590	0.485	0.284	0.284	0.48
Cadmium	MG/KG	2.5	7.5	9.3	2.64	1.19	1.16	1.12
Calcium	MG/KG	10000 CP-51	-	-	1,360	3,060	2,540	1,480
Chromium	MG/KG	30	NS	1500	25 J	25.9	26.1	20.6
Cobalt	MG/KG	20 CP-51	-	-	5.49	10.8	9.98	8.47
Copper	MG/KG	50	1720	270	8.36 J	27.4	25.8	11.3
Iron	MG/KG	2000 CP-51	-	-	28,700 J	21,700	19,900	20,500
Lead	MG/KG	63	450	1000	12.4 J	20.9	19.5	8.2
Magnesium	MG/KG	-	-	-	2,510	7,190	6,780	2,490

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

Advanced Selection: Cedar SC Soil
J:\Projects\11175538.00000\DB\Program\EDMS.mde
Printed: 9/16/2014 8:05:10 AM
[SITEID] = '04' AND [MATRIX] = 'SO' AND [LOGDATE] < #10/29/2013#

TABLE 4-3
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-06	TP-07	TP-07	TP-07
Sample ID					TP-06	TP-07 IH	TP-07 IH	TP-07 OH
Matrix					Soil	Soil	Soil	Soil
Depth Interval (ft)					9.5-9.5	7.0-9.0	9.0-9.0	9.0-9.0
Date Sampled					12/03/08	12/10/08	12/10/08	12/10/08
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**				(2-1)
Metals								
Manganese	MG/KG	1600	2000	10000	479 J	397	370	221
Mercury	MG/KG	0.18	0.73	2.8	0.013	0.104	0.093	0.025
Nickel	MG/KG	30	130	310	11.1 J	17.1	17.1	13.4
Potassium	MG/KG	-	-	-	709	8,930	8,490	1,070
Selenium	MG/KG	3.9	4	1500				
Silver	MG/KG	2	8.3	1500	5.41	2	1.85	1.86
Sodium	MG/KG	-	-	-		166	153	74.3 J
Thallium	MG/KG	5 CP-51	-	-		0.907 J	0.777 J	
Vanadium	MG/KG	39 CP-51	-	-	38.9	38.3	37.9	30.1
Zinc	MG/KG	109	2480	10000	25.8 J	58.1	59.8	30.8
Miscellaneous Parameters								
Cyanide, Total	MG/KG	27	40	27	1.98	0.992		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-4A
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN SITE CHARACTERIZATION SOIL SAMPLES UNRESTRICTED USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Volatile Organic Compounds										
Acetone	MG/KG	0.05	59	3	0.110	0.220	0.150	3	SB-09	7-9
Benzene	MG/KG	0.06	59	19	0.007	1,600	192.8	14	SB-03	13-13
Cyclohexane	MG/KG	-	59	8	0.200	31.00	9.56	0	SB-15	15-17
Ethylbenzene	MG/KG	1	59	24	0.006	3,500	316.3	11	SB-03	13-13
Isopropylbenzene	MG/KG	2.3 CP-51	59	23	0.008	54.00	6.46	6	SB-03	13-13
Methylcyclohexane	MG/KG	-	59	16	0.018	170.0	20.78	0	SB-03	13-13
Styrene	MG/KG	300 CP-51	59	9	0.015	1,500	200.0	1	SB-03	13-13
Toluene	MG/KG	0.7	59	21	0.011	3,000	274.8	8	SB-03	13-13
Xylene (total)	MG/KG	0.26	59	25	0.019	3,400	265.0	15	SB-03	13-13
Semivolatile Organic Compounds										
1,1'-Biphenyl	MG/KG	60 CP-51	59	28	0.056	270.0	20.46	3	SB-15	15-17
2,4-Dimethylphenol	MG/KG	-	59	1	3.30	3.30	3.30	0	SB-07	11-13
2,4-Dinitrotoluene	MG/KG	-	59	1	0.028	0.028	0.028	0	SB-03	11-13
2-Methylnaphthalene	MG/KG	0.41 CP-51	59	39	0.040	1,000	49.32	32	SB-15	15-17
2-Nitroaniline	MG/KG	0.4 CP-51	59	1	0.034	0.034	0.034	0	SB-03	11-13
3&4-Methylphenol (m,p-cresol)	MG/KG	0.33	59	2	0.054	0.960	0.507	1	SB-07	11-13
Acenaphthene	MG/KG	20	59	34	0.049	410.0	24.84	5	SB-15	15-17

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-4A
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN SITE CHARACTERIZATION SOIL SAMPLES UNRESTRICTED USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Semivolatile Organic Compounds										
Acenaphthylene	MG/KG	100	59	36	0.130	460.0	31.22	3	SB-15	15-17
Acetophenone	MG/KG	-	59	1	0.014	0.014	0.014	0	SB-03	11-13
Anthracene	MG/KG	100	59	42	0.042	150.0	14.84	1	SB-15	15-17
Benzaldehyde	MG/KG	-	59	1	0.014	0.014	0.014	0	SB-03	11-13
Benzo(a)anthracene	MG/KG	1	59	45	0.040	160.0	16.87	33	MW-02	7-9
Benzo(a)pyrene	MG/KG	1	59	42	0.081	95.00	15.17	33	MW-02	7-9
Benzo(b)fluoranthene	MG/KG	1	59	45	0.039	150.0	17.73	36	MW-02	7-9
Benzo(g,h,i)perylene	MG/KG	100	59	40	0.044	54.00	9.20	0	MW-02	7-9
Benzo(k)fluoranthene	MG/KG	0.8	59	39	0.049	56.00	7.07	28	TP-01	2-3
bis(2-Chloroethyl)ether	MG/KG	-	59	1	0.010	0.010	0.010	0	SB-03	11-13
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	59	15	0.026	2.10	0.350	0	MW-05	13-15
Carbazole	MG/KG	-	59	17	0.058	23.00	3.55	0	SB-07	11-13
Chrysene	MG/KG	1	59	45	0.100	130.0	14.79	32	MW-02	7-9
Dibenz(a,h)anthracene	MG/KG	0.33	59	24	0.048	15.00	2.25	18	MW-02	7-9
Dibenzofuran	MG/KG	7	59	23	0.013	61.00	7.11	4	SB-07	11-13
Fluoranthene	MG/KG	100	59	47	0.050	310.0	32.36	4	MW-02	7-9
Fluorene	MG/KG	30	59	39	0.045	220.0	18.44	6	SB-15	15-17

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-4A
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN SITE CHARACTERIZATION SOIL SAMPLES UNRESTRICTED USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Semivolatile Organic Compounds										
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	59	39	0.041	43.00	6.15	32	MW-02	7-9
Naphthalene	MG/KG	12	59	42	0.110	9,000	567.5	14	SB-15	13-15
Nitrobenzene	MG/KG	0.17 CP-51	59	1	0.020	0.020	0.020	0	SB-03	11-13
Phenanthrene	MG/KG	100	59	48	0.043	580.0	47.29	6	SB-15	15-17
Pyrene	MG/KG	100	59	48	0.045	280.0	34.85	7	MW-02	7-9
Metals										
Aluminum	MG/KG	10000 CP-51	59	58	2,480	2.38E+04	1.05E+04	31	SB-14	23-25
Antimony	MG/KG	12 CP-51	59	8	1.00	3.34	1.47	0	SB-15	15-17
Arsenic	MG/KG	13	59	38	0.614	31.60	4.12	3	SB-15	15-17
Barium	MG/KG	350	59	59	39.20	352.0	112.7	1	SB-15	15-17
Beryllium	MG/KG	7.2	59	59	0.057	0.672	0.272	0	TP-06	6-7
Cadmium	MG/KG	2.5	59	39	0.117	2.77	1.18	2	MW-06	17-19
Calcium	MG/KG	10000 CP-51	59	50	421.0	4.71E+04	5,639	6	MW-03	16-16
Chromium	MG/KG	30	59	59	6.34	97.10	28.37	18	MW-05	2-3
Cobalt	MG/KG	20 CP-51	59	59	3.25	29.50	9.83	3	SB-12	11-13
Copper	MG/KG	50	59	59	3.50	196.0	36.81	9	SB-15	13-15
Iron	MG/KG	2000 CP-51	59	59	5,120	4.32E+04	1.97E+04	59	SB-14	23-25

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-4A
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN SITE CHARACTERIZATION SOIL SAMPLES UNRESTRICTED USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Metals										
Lead	MG/KG	63	59	59	2.19	6,400	164.3	12	SB-15	15-17
Magnesium	MG/KG	-	59	59	1,400	3.05E+04	5,152	0	MW-03	16-16
Manganese	MG/KG	1600	59	59	89.10	3,170	359.3	1	TP-06	6-7
Mercury	MG/KG	0.18	59	44	0.009	10.60	0.637	15	TP-03	1-3
Nickel	MG/KG	30	59	59	3.92	215.0	24.30	10	TP-06	2.5-3.5
Potassium	MG/KG	-	59	59	499.0	1.78E+04	4,147	0	SB-14	23-25
Selenium	MG/KG	3.9	59	35	0.625	2.30	1.08	0	SB-15	15-17
Silver	MG/KG	2	59	59	0.329	7.27	2.75	43	SB-15	15-17
Sodium	MG/KG	-	59	41	62.00	604.0	179.0	0	SB-15	15-17
Thallium	MG/KG	5 CP-51	59	21	0.747	4.00	1.54	0	SB-14	23-25
Vanadium	MG/KG	39 CP-51	59	59	8.80	86.70	30.94	10	SB-14	23-25
Zinc	MG/KG	109	59	59	18.70	342.0	67.74	7	SB-15	13-15
Miscellaneous Parameters										
Cyanide, Total	MG/KG	27	59	21	0.703	26.00	3.42	0	SB-04	21-23

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Concentration Exceeds Criteria

Only Detected Results Reported.

Advanced Selection: Cedar SC Soil
J:\Projects\11175538.00000\DB\Program\Stat.mde
Printed: 9/16/2014 10:36:37 AM
WHERE [SITEID] = '04' AND [MATRIX] = 'SO' AND [LOGDATE] < #10/29/2013#;

TABLE 4-4B
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN SITE CHARACTERIZATION SOIL SAMPLES PROTECTION OF GROUNDWATER
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Volatile Organic Compounds										
Acetone	MG/KG	0.05	59	3	0.110	0.220	0.150	3	SB-09	7-9
Benzene	MG/KG	0.06	59	19	0.007	1,600	192.8	14	SB-03	13-13
Cyclohexane	MG/KG	-	59	8	0.200	31.00	9.56	0	SB-15	15-17
Ethylbenzene	MG/KG	1	59	24	0.006	3,500	316.3	11	SB-03	13-13
Isopropylbenzene	MG/KG	2.3 CP-51	59	23	0.008	54.00	6.46	6	SB-03	13-13
Methylcyclohexane	MG/KG	-	59	16	0.018	170.0	20.78	0	SB-03	13-13
Styrene	MG/KG	-	59	9	0.015	1,500	200.0	0	SB-03	13-13
Toluene	MG/KG	0.7	59	21	0.011	3,000	274.8	8	SB-03	13-13
Xylene (total)	MG/KG	1.6	59	25	0.019	3,400	265.0	12	SB-03	13-13
Semivolatile Organic Compounds										
1,1'-Biphenyl	MG/KG	-	59	28	0.056	270.0	20.46	0	SB-15	15-17
2,4-Dimethylphenol	MG/KG	-	59	1	3.30	3.30	3.30	0	SB-07	11-13
2,4-Dinitrotoluene	MG/KG	-	59	1	0.028	0.028	0.028	0	SB-03	11-13
2-Methylnaphthalene	MG/KG	36.4 CP-51	59	39	0.040	1,000	49.32	6	SB-15	15-17
2-Nitroaniline	MG/KG	0.4 CP-51	59	1	0.034	0.034	0.034	0	SB-03	11-13
3&4-Methylphenol (m,p-cresol)	MG/KG	0.33	59	2	0.054	0.960	0.507	1	SB-07	11-13
Acenaphthene	MG/KG	98	59	34	0.049	410.0	24.84	2	SB-15	15-17

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-4B
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN SITE CHARACTERIZATION SOIL SAMPLES PROTECTION OF GROUNDWATER
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Semivolatile Organic Compounds										
Acenaphthylene	MG/KG	107	59	36	0.130	460.0	31.22	3	SB-15	15-17
Acetophenone	MG/KG	-	59	1	0.014	0.014	0.014	0	SB-03	11-13
Anthracene	MG/KG	1000	59	42	0.042	150.0	14.84	0	SB-15	15-17
Benzaldehyde	MG/KG	-	59	1	0.014	0.014	0.014	0	SB-03	11-13
Benzo(a)anthracene	MG/KG	1	59	45	0.040	160.0	16.87	32	MW-02	7-9
Benzo(a)pyrene	MG/KG	22	59	42	0.081	95.00	15.17	9	MW-02	7-9
Benzo(b)fluoranthene	MG/KG	1.7	59	45	0.039	150.0	17.73	31	MW-02	7-9
Benzo(g,h,i)perylene	MG/KG	1000	59	40	0.044	54.00	9.20	0	MW-02	7-9
Benzo(k)fluoranthene	MG/KG	1.7	59	39	0.049	56.00	7.07	21	TP-01	2-3
bis(2-Chloroethyl)ether	MG/KG	-	59	1	0.010	0.010	0.010	0	SB-03	11-13
bis(2-Ethylhexyl)phthalate	MG/KG	435 CP-51	59	15	0.026	2.10	0.350	0	MW-05	13-15
Carbazole	MG/KG	-	59	17	0.058	23.00	3.55	0	SB-07	11-13
Chrysene	MG/KG	1	59	45	0.100	130.0	14.79	32	MW-02	7-9
Dibenz(a,h)anthracene	MG/KG	1000	59	24	0.048	15.00	2.25	0	MW-02	7-9
Dibenzofuran	MG/KG	210	59	23	0.013	61.00	7.11	0	SB-07	11-13
Fluoranthene	MG/KG	1000	59	47	0.050	310.0	32.36	0	MW-02	7-9
Fluorene	MG/KG	386	59	39	0.045	220.0	18.44	0	SB-15	15-17

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-4B
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN SITE CHARACTERIZATION SOIL SAMPLES PROTECTION OF GROUNDWATER
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Semivolatile Organic Compounds										
Indeno(1,2,3-cd)pyrene	MG/KG	8.2	59	39	0.041	43.00	6.15	9	MW-02	7-9
Naphthalene	MG/KG	12	59	42	0.110	9,000	567.5	14	SB-15	13-15
Nitrobenzene	MG/KG	0.17 CP-51	59	1	0.020	0.020	0.020	0	SB-03	11-13
Phenanthrene	MG/KG	1000	59	48	0.043	580.0	47.29	0	SB-15	15-17
Pyrene	MG/KG	1000	59	48	0.045	280.0	34.85	0	MW-02	7-9
Metals										
Aluminum	MG/KG	-	59	58	2,480	2.38E+04	1.05E+04	0	SB-14	23-25
Antimony	MG/KG	-	59	8	1.00	3.34	1.47	0	SB-15	15-17
Arsenic	MG/KG	16	59	38	0.614	31.60	4.12	2	SB-15	15-17
Barium	MG/KG	820	59	59	39.20	352.0	112.7	0	SB-15	15-17
Beryllium	MG/KG	47	59	59	0.057	0.672	0.272	0	TP-06	6-7
Cadmium	MG/KG	7.5	59	39	0.117	2.77	1.18	0	MW-06	17-19
Calcium	MG/KG	-	59	50	421.0	4.71E+04	5,639	0	MW-03	16-16
Chromium	MG/KG	NS	59	59	6.34	97.10	28.37	0	MW-05	2-3
Cobalt	MG/KG	-	59	59	3.25	29.50	9.83	0	SB-12	11-13
Copper	MG/KG	1720	59	59	3.50	196.0	36.81	0	SB-15	13-15
Iron	MG/KG	-	59	59	5,120	4.32E+04	1.97E+04	0	SB-14	23-25

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-4B
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN SITE CHARACTERIZATION SOIL SAMPLES PROTECTION OF GROUNDWATER
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Metals										
Lead	MG/KG	450	59	59	2.19	6,400	164.3	2	SB-15	15-17
Magnesium	MG/KG	-	59	59	1,400	3.05E+04	5,152	0	MW-03	16-16
Manganese	MG/KG	2000	59	59	89.10	3,170	359.3	1	TP-06	6-7
Mercury	MG/KG	0.73	59	44	0.009	10.60	0.637	6	TP-03	1-3
Nickel	MG/KG	130	59	59	3.92	215.0	24.30	1	TP-06	2.5-3.5
Potassium	MG/KG	-	59	59	499.0	1.78E+04	4,147	0	SB-14	23-25
Selenium	MG/KG	4	59	35	0.625	2.30	1.08	0	SB-15	15-17
Silver	MG/KG	8.3	59	59	0.329	7.27	2.75	0	SB-15	15-17
Sodium	MG/KG	-	59	41	62.00	604.0	179.0	0	SB-15	15-17
Thallium	MG/KG	-	59	21	0.747	4.00	1.54	0	SB-14	23-25
Vanadium	MG/KG	-	59	59	8.80	86.70	30.94	0	SB-14	23-25
Zinc	MG/KG	2480	59	59	18.70	342.0	67.74	0	SB-15	13-15
Miscellaneous Parameters										
Cyanide, Total	MG/KG	40	59	21	0.703	26.00	3.42	0	SB-04	21-23

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-4C
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN SITE CHARACTERIZATION SOIL SAMPLES
COMMERCIAL USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Volatile Organic Compounds										
Acetone	MG/KG	500	59	3	0.110	0.220	0.150	0	SB-09	7-9
Benzene	MG/KG	44	59	19	0.007	1,600	192.8	3	SB-03	13-13
Cyclohexane	MG/KG	-	59	8	0.200	31.00	9.56	0	SB-15	15-17
Ethylbenzene	MG/KG	390	59	24	0.006	3,500	316.3	3	SB-03	13-13
Isopropylbenzene	MG/KG	-	59	23	0.008	54.00	6.46	0	SB-03	13-13
Methylcyclohexane	MG/KG	-	59	16	0.018	170.0	20.78	0	SB-03	13-13
Styrene	MG/KG	-	59	9	0.015	1,500	200.0	0	SB-03	13-13
Toluene	MG/KG	500	59	21	0.011	3,000	274.8	3	SB-03	13-13
Xylene (total)	MG/KG	500	59	25	0.019	3,400	265.0	3	SB-03	13-13
Semivolatile Organic Compounds										
1,1'-Biphenyl	MG/KG	-	59	28	0.056	270.0	20.46	0	SB-15	15-17
2,4-Dimethylphenol	MG/KG	-	59	1	3.30	3.30	3.30	0	SB-07	11-13
2,4-Dinitrotoluene	MG/KG	-	59	1	0.028	0.028	0.028	0	SB-03	11-13
2-Methylnaphthalene	MG/KG	-	59	39	0.040	1,000	49.32	0	SB-15	15-17
2-Nitroaniline	MG/KG	-	59	1	0.034	0.034	0.034	0	SB-03	11-13
3&4-Methylphenol (m,p-cresol)	MG/KG	500	59	2	0.054	0.960	0.507	0	SB-07	11-13
Acenaphthene	MG/KG	500	59	34	0.049	410.0	24.84	0	SB-15	15-17

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

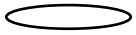
Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-4C
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN SITE CHARACTERIZATION SOIL SAMPLES
COMMERCIAL USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Semivolatile Organic Compounds										
Acenaphthylene	MG/KG	500	59	36	0.130	460.0	31.22	0	SB-15	15-17
Acetophenone	MG/KG	-	59	1	0.014	0.014	0.014	0	SB-03	11-13
Anthracene	MG/KG	500	59	42	0.042	150.0	14.84	0	SB-15	15-17
Benzaldehyde	MG/KG	-	59	1	0.014	0.014	0.014	0	SB-03	11-13
Benzo(a)anthracene	MG/KG	5.6	59	45	0.040	160.0	16.87	19	MW-02	7-9
Benzo(a)pyrene	MG/KG	1	59	42	0.081	95.00	15.17	33	MW-02	7-9
Benzo(b)fluoranthene	MG/KG	5.6	59	45	0.039	150.0	17.73	19	MW-02	7-9
Benzo(g,h,i)perylene	MG/KG	500	59	40	0.044	54.00	9.20	0	MW-02	7-9
Benzo(k)fluoranthene	MG/KG	56	59	39	0.049	56.00	7.07	0	TP-01	2-3
bis(2-Chloroethyl)ether	MG/KG	-	59	1	0.010	0.010	0.010	0	SB-03	11-13
bis(2-Ethylhexyl)phthalate	MG/KG	-	59	15	0.026	2.10	0.350	0	MW-05	13-15
Carbazole	MG/KG	-	59	17	0.058	23.00	3.55	0	SB-07	11-13
Chrysene	MG/KG	56	59	45	0.100	130.0	14.79	3	MW-02	7-9
Dibenz(a,h)anthracene	MG/KG	0.56	59	24	0.048	15.00	2.25	13	MW-02	7-9
Dibenzofuran	MG/KG	350	59	23	0.013	61.00	7.11	0	SB-07	11-13
Fluoranthene	MG/KG	500	59	47	0.050	310.0	32.36	0	MW-02	7-9
Fluorene	MG/KG	500	59	39	0.045	220.0	18.44	0	SB-15	15-17

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.


Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-4C
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN SITE CHARACTERIZATION SOIL SAMPLES
COMMERCIAL USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Semivolatile Organic Compounds										
Indeno(1,2,3-cd)pyrene	MG/KG	5.6	59	39	0.041	43.00	6.15	12	MW-02	7-9
Naphthalene	MG/KG	500	59	42	0.110	9,000	567.5	3	SB-15	13-15
Nitrobenzene	MG/KG	69 CP-51	59	1	0.020	0.020	0.020	0	SB-03	11-13
Phenanthrene	MG/KG	500	59	48	0.043	580.0	47.29	1	SB-15	15-17
Pyrene	MG/KG	500	59	48	0.045	280.0	34.85	0	MW-02	7-9
Metals										
Aluminum	MG/KG	-	59	58	2,480	2.38E+04	1.05E+04	0	SB-14	23-25
Antimony	MG/KG	-	59	8	1.00	3.34	1.47	0	SB-15	15-17
Arsenic	MG/KG	16	59	38	0.614	31.60	4.12	2	SB-15	15-17
Barium	MG/KG	400	59	59	39.20	352.0	112.7	0	SB-15	15-17
Beryllium	MG/KG	590	59	59	0.057	0.672	0.272	0	TP-06	6-7
Cadmium	MG/KG	9.3	59	39	0.117	2.77	1.18	0	MW-06	17-19
Calcium	MG/KG	-	59	50	421.0	4.71E+04	5,639	0	MW-03	16-16
Chromium	MG/KG	1500	59	59	6.34	97.10	28.37	0	MW-05	2-3
Cobalt	MG/KG	-	59	59	3.25	29.50	9.83	0	SB-12	11-13
Copper	MG/KG	270	59	59	3.50	196.0	36.81	0	SB-15	13-15
Iron	MG/KG	-	59	59	5,120	4.32E+04	1.97E+04	0	SB-14	23-25

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-4C
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN SITE CHARACTERIZATION SOIL SAMPLES
COMMERCIAL USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Metals										
Lead	MG/KG	1000	59	59	2.19	6,400	164.3	1	SB-15	15-17
Magnesium	MG/KG	-	59	59	1,400	3.05E+04	5,152	0	MW-03	16-16
Manganese	MG/KG	10000	59	59	89.10	3,170	359.3	0	TP-06	6-7
Mercury	MG/KG	2.8	59	44	0.009	10.60	0.637	3	TP-03	1-3
Nickel	MG/KG	310	59	59	3.92	215.0	24.30	0	TP-06	2.5-3.5
Potassium	MG/KG	-	59	59	499.0	1.78E+04	4,147	0	SB-14	23-25
Selenium	MG/KG	1500	59	35	0.625	2.30	1.08	0	SB-15	15-17
Silver	MG/KG	1500	59	59	0.329	7.27	2.75	0	SB-15	15-17
Sodium	MG/KG	-	59	41	62.00	604.0	179.0	0	SB-15	15-17
Thallium	MG/KG	-	59	21	0.747	4.00	1.54	0	SB-14	23-25
Vanadium	MG/KG	-	59	59	8.80	86.70	30.94	0	SB-14	23-25
Zinc	MG/KG	10000	59	59	18.70	342.0	67.74	0	SB-15	13-15
Miscellaneous Parameters										
Cyanide, Total	MG/KG	27	59	21	0.703	26.00	3.42	0	SB-04	21-23

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-02B	MW-02B	MW-08A	MW-08A	MW-08A
Sample ID					111413-DUP-1	MW-02B (3.5-4)	MW-08A (2.7-2.9)	MW-08A (9.5-10)	MW-08A (15-16)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.5-4.0	3.5-4.0	2.7-2.9	9.5-10.0	15.0-16.0
Date Sampled					11/14/13	11/14/13	10/29/13	10/30/13	10/30/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**	Field Duplicate (1-1)				
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-					
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-					
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190					
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500					
1,2-Dichloroethane	MG/KG	0.02	0.02	30					
1,2-Dichloropropane	MG/KG	700 CP-51	-	-					
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190					
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130					
2-Butanone	MG/KG	0.12	0.12	500					
2-Hexanone	MG/KG	-	-	-					
Acetone	MG/KG	0.05	0.05	500					0.0044 J
Benzene	MG/KG	0.06	0.06	44					
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-					
Chlorobenzene	MG/KG	1.1	1.1	500					
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390					
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-					
Methylcyclohexane	MG/KG	-	-	-					
Methylene chloride	MG/KG	0.05	0.05	500	0.0044 J	0.0021 J	0.0023 J		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

Blank cell or ND - Not detected. D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value. J+ - The reported concntration is an estimated value, with high bias. NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-02B	MW-02B	MW-08A	MW-08A	MW-08A
Sample ID					111413-DUP-1	MW-02B (3.5-4)	MW-08A (2.7-2.9)	MW-08A (9.5-10)	MW-08A (15-16)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.5-4.0	3.5-4.0	2.7-2.9	9.5-10.0	15.0-16.0
Date Sampled					11/14/13	11/14/13	10/29/13	10/30/13	10/30/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**	Field Duplicate (1-1)				
Volatile Organic Compounds									
n-Butylbenzene	MG/KG	12	12	500					
n-Propylbenzene	MG/KG	3.9	3.9	500					
sec-Butylbenzene	MG/KG	11	11	500					
Styrene	MG/KG	300 CP-51	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	150					
Toluene	MG/KG	0.7	0.7	500					
Trichloroethene	MG/KG	0.47	0.47	200					
Xylene (total)	MG/KG	0.26	1.6	500					
Total BTEX	MG/KG	-	-	-	ND	ND	ND	ND	ND
Total Volatile Organic Compounds	MG/KG	-	-	-	0.0044	0.0021	0.0023	ND	0.0044
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-					
2,4-Dimethylphenol	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-	0.52	0.50			
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500					
3,3'-Dichlorobenzidine	MG/KG	-	-	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500	0.12 J				
Acenaphthene	MG/KG	20	98	500	0.20 J				
Acenaphthylene	MG/KG	100	107	500	4.8	3.9			

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

Blank cell or ND - Not detected. D - Result reported from a secondary dilution analysis.

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-02B	MW-02B	MW-08A	MW-08A	MW-08A
Sample ID					111413-DUP-1	MW-02B (3.5-4)	MW-08A (2.7-2.9)	MW-08A (9.5-10)	MW-08A (15-16)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.5-4.0	3.5-4.0	2.7-2.9	9.5-10.0	15.0-16.0
Date Sampled					11/14/13	11/14/13	10/29/13	10/30/13	10/30/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**	Field Duplicate (1-1)				
Semivolatile Organic Compounds									
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500	3.4	2.3	0.10 J		
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6	16 D	11 D	0.29 J		
Benzo(a)pyrene	MG/KG	1	22	1	20 D	15 D	0.31 J		
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	22 D	14 D	0.38		
Benzo(g,h,i)perylene	MG/KG	100	1000	500	17 D	14 D	0.24 J		
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	10 D	5.4	0.19 J		
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-					
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-					
Carbazole	MG/KG	-	-	-	0.44	0.23 J			
Chrysene	MG/KG	1	1	56	17 D	11 D	0.32 J		
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56	6.2	4.4	0.070 J		
Dibenzofuran	MG/KG	7	210	350	0.23 J	0.17 J			
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-					
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-					
Fluoranthene	MG/KG	100	1000	500	27 D	17 D	0.58		
Fluorene	MG/KG	30	386	500	0.79	0.56			
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	15 D	12 D	0.23 J		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-02B	MW-02B	MW-08A	MW-08A	MW-08A
Sample ID					111413-DUP-1	MW-02B (3.5-4)	MW-08A (2.7-2.9)	MW-08A (9.5-10)	MW-08A (15-16)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.5-4.0	3.5-4.0	2.7-2.9	9.5-10.0	15.0-16.0
Date Sampled					11/14/13	11/14/13	10/29/13	10/30/13	10/30/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**	Field Duplicate (1-1)				
Semivolatile Organic Compounds									
Naphthalene	MG/KG	12	12	500	0.39 J	0.42			
Phenanthrene	MG/KG	100	1000	500	9.3 D	5.4	0.33		
Phenol	MG/KG	0.33	0.33	500	0.11 J				
Pyrene	MG/KG	100	1000	500	32 D	23 D	0.54		
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	201.6	139.88	3.58	ND	ND
Total Semivolatile Organic Compounds	MG/KG	-	-	-	202.5	140.28	3.58	ND	ND
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	9,900	10,100	8,810	7,500	15,800
Antimony	MG/KG	12 CP-51	-	-					
Arsenic	MG/KG	13	16	16	4.1	4.0	1.6	1.1	0.88 J
Barium	MG/KG	350	820	400	93.7	100	67.7	66.0	183
Beryllium	MG/KG	7.2	47	590	0.28	0.28	0.24	0.27	0.073 J
Cadmium	MG/KG	2.5	7.5	9.3					
Calcium	MG/KG	10000 CP-51	-	-	45,200 J	16,000 J	2,000	2,540	2,250
Chromium	MG/KG	30	NS	1500	21.6	23.1	16.9	16.0	25.4
Cobalt	MG/KG	20 CP-51	-	-	7.4	9.4	7.1	6.2	9.0
Copper	MG/KG	50	1720	270	33.2	32.4	22.6	20.3	23.6
Iron	MG/KG	2000 CP-51	-	-	16,400	18,300	13,300	14,700	33,100
Lead	MG/KG	63	450	1000	127	118	18.4	3.9	5.1

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

Blank cell or ND - Not detected. D - Result reported from a secondary dilution analysis.

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-02B	MW-02B	MW-08A	MW-08A	MW-08A
Sample ID					111413-DUP-1	MW-02B (3.5-4)	MW-08A (2.7-2.9)	MW-08A (9.5-10)	MW-08A (15-16)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.5-4.0	3.5-4.0	2.7-2.9	9.5-10.0	15.0-16.0
Date Sampled					11/14/13	11/14/13	10/29/13	10/30/13	10/30/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**	Field Duplicate (1-1)				
Metals									
Magnesium	MG/KG	-	-	-	3,550	3,900	3,130	2,390	7,030
Manganese	MG/KG	1600	2000	10000	321	338	386	532	299
Mercury	MG/KG	0.18	0.73	2.8	1.1	0.94	0.17		
Nickel	MG/KG	30	130	310	19.0	22.9	20.6	19.9	17.4
Potassium	MG/KG	-	-	-	3,700	3,780	2,500	2,330	11,400
Selenium	MG/KG	3.9	4	1500	0.89 J	1.1 J			
Silver	MG/KG	2	8.3	1500					
Sodium	MG/KG	-	-	-	148	124	109	128	171
Thallium	MG/KG	5 CP-51	-	-	2.1	1.5	0.91	0.94	2.0
Vanadium	MG/KG	39 CP-51	-	-	24.6	25.3	20.9	21.0	37.3
Zinc	MG/KG	109	2480	10000	51.9	57.1	31.8	21.2	48.5
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-08B	MW-08B	MW-08B	MW-09	MW-09
Sample ID					MW-08B (3-3.2)	MW-08B (9.5-10.5)	MW-08B (15-16)	MW-09 (8.2-8.8)	MW-09 (14.8-15.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.0-3.2	9.5-10.5	15.0-16.0	8.2-8.8	14.8-15.5
Date Sampled					10/29/13	10/30/13	10/30/13	10/30/13	10/30/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-					
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-					
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190					
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500					
1,2-Dichloroethane	MG/KG	0.02	0.02	30					
1,2-Dichloropropane	MG/KG	700 CP-51	-	-					
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190					
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130					
2-Butanone	MG/KG	0.12	0.12	500				0.0043 J	
2-Hexanone	MG/KG	-	-	-					
Acetone	MG/KG	0.05	0.05	500				0.021	
Benzene	MG/KG	0.06	0.06	44					
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-					
Chlorobenzene	MG/KG	1.1	1.1	500					
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390					
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-					
Methylcyclohexane	MG/KG	-	-	-					
Methylene chloride	MG/KG	0.05	0.05	500				0.0020 J	0.0020 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-08B	MW-08B	MW-08B	MW-09	MW-09
Sample ID					MW-08B (3-3.2)	MW-08B (9.5-10.5)	MW-08B (15-16)	MW-09 (8.2-8.8)	MW-09 (14.8-15.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.0-3.2	9.5-10.5	15.0-16.0	8.2-8.8	14.8-15.5
Date Sampled					10/29/13	10/30/13	10/30/13	10/30/13	10/30/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
n-Butylbenzene	MG/KG	12	12	500					
n-Propylbenzene	MG/KG	3.9	3.9	500					
sec-Butylbenzene	MG/KG	11	11	500					
Styrene	MG/KG	300 CP-51	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	150					
Toluene	MG/KG	0.7	0.7	500					
Trichloroethene	MG/KG	0.47	0.47	200					
Xylene (total)	MG/KG	0.26	1.6	500					
Total BTEX	MG/KG	-	-	-	ND	ND	ND	ND	ND
Total Volatile Organic Compounds	MG/KG	-	-	-	ND	ND	ND	0.0273	0.002
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-					
2,4-Dimethylphenol	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-					
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500					
3,3'-Dichlorobenzidine	MG/KG	-	-	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500					
Acenaphthylene	MG/KG	100	107	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-08B	MW-08B	MW-08B	MW-09	MW-09
Sample ID					MW-08B (3-3.2)	MW-08B (9.5-10.5)	MW-08B (15-16)	MW-09 (8.2-8.8)	MW-09 (14.8-15.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.0-3.2	9.5-10.5	15.0-16.0	8.2-8.8	14.8-15.5
Date Sampled					10/29/13	10/30/13	10/30/13	10/30/13	10/30/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500					
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6	0.19 J				
Benzo(a)pyrene	MG/KG	1	22	1	0.22 J				
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	0.25 J				
Benzo(g,h,i)perylene	MG/KG	100	1000	500	0.16 J				
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	0.14 J				
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-					
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-					
Carbazole	MG/KG	-	-	-					
Chrysene	MG/KG	1	1	56	0.22 J				
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56					
Dibenzofuran	MG/KG	7	210	350					
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-		0.071 J			
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-					
Fluoranthene	MG/KG	100	1000	500	0.36				
Fluorene	MG/KG	30	386	500					
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	0.16 J				

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-08B	MW-08B	MW-08B	MW-09	MW-09
Sample ID					MW-08B (3-3.2)	MW-08B (9.5-10.5)	MW-08B (15-16)	MW-09 (8.2-8.8)	MW-09 (14.8-15.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.0-3.2	9.5-10.5	15.0-16.0	8.2-8.8	14.8-15.5
Date Sampled					10/29/13	10/30/13	10/30/13	10/30/13	10/30/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Naphthalene	MG/KG	12	12	500					
Phenanthrene	MG/KG	100	1000	500	0.15 J				
Phenol	MG/KG	0.33	0.33	500					
Pyrene	MG/KG	100	1000	500	0.35				
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	2.2	ND	ND	ND	ND
Total Semivolatile Organic Compounds	MG/KG	-	-	-	2.2	0.071	ND	ND	ND
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	9,380	10,200	11,800	8,230	6,930
Antimony	MG/KG	12 CP-51	-	-					
Arsenic	MG/KG	13	16	16	1.7	0.57 J	0.83	1.0	1.3
Barium	MG/KG	350	820	400	79.4	118	139	76.8	42.5
Beryllium	MG/KG	7.2	47	590	0.29	0.25	0.23	0.22	0.21 J
Cadmium	MG/KG	2.5	7.5	9.3	0.074 J				
Calcium	MG/KG	10000 CP-51	-	-	1,520	3,240	3,150	2,130	1,540
Chromium	MG/KG	30	NS	1500	19.0	28.8	32.5	27.3	36.4
Cobalt	MG/KG	20 CP-51	-	-	7.5	8.0	9.5	7.4	6.5
Copper	MG/KG	50	1720	270	32.9	15.8	22.4	17.1	28.0
Iron	MG/KG	2000 CP-51	-	-	14,100	16,200	18,000	14,500	14,000
Lead	MG/KG	63	450	1000	15.5	4.2	4.7	4.9	3.5

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria (2)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-08B	MW-08B	MW-08B	MW-09	MW-09
Sample ID					MW-08B (3-3.2)	MW-08B (9.5-10.5)	MW-08B (15-16)	MW-09 (8.2-8.8)	MW-09 (14.8-15.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.0-3.2	9.5-10.5	15.0-16.0	8.2-8.8	14.8-15.5
Date Sampled					10/29/13	10/30/13	10/30/13	10/30/13	10/30/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Magnesium	MG/KG	-	-	-	3,100	6,030	6,650	3,840	3,310
Manganese	MG/KG	1600	2000	10000	541	215	251	262	252
Mercury	MG/KG	0.18	0.73	2.8	0.025 J	0.0031 J	0.0024 J	0.020 J	
Nickel	MG/KG	30	130	310	22.6	21.6	24.3	19.5	14.6
Potassium	MG/KG	-	-	-	2,730	6,200	7,280	3,300	2,320
Selenium	MG/KG	3.9	4	1500			0.53 J		
Silver	MG/KG	2	8.3	1500					
Sodium	MG/KG	-	-	-	87.1	104	112	110	88.1
Thallium	MG/KG	5 CP-51	-	-	1.3	1.3	1.5	0.74 J	0.76 J
Vanadium	MG/KG	39 CP-51	-	-	21.0	25.3	31.4	21.2	25.7
Zinc	MG/KG	109	2480	10000	33.9	38.5	45.0	45.4	25.6
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27					

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-10	MW-10	MW-11A	MW-11A	MW-11A
Sample ID					MW-10 (7-8.5)	MW-10 (21-22)	MW-11A (3-3.5)	MW-11A (8.5-9.5)	MW-11A (11.5-12.7)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					7.0-8.5	21.0-22.0	3.0-3.5	8.5-9.5	11.5-12.7
Date Sampled					10/31/13	10/31/13	11/18/13	11/19/13	11/19/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-					
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-					
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190					
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500					
1,2-Dichloroethane	MG/KG	0.02	0.02	30					
1,2-Dichloropropane	MG/KG	700 CP-51	-	-					
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190					
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130					
2-Butanone	MG/KG	0.12	0.12	500			0.0071		
2-Hexanone	MG/KG	-	-	-					
Acetone	MG/KG	0.05	0.05	500	0.0064	0.0039 J	0.029	0.011	
Benzene	MG/KG	0.06	0.06	44					
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-					
Chlorobenzene	MG/KG	1.1	1.1	500					
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390					
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-					
Methylcyclohexane	MG/KG	-	-	-					
Methylene chloride	MG/KG	0.05	0.05	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

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Concentration Exceeds Criteria (2)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-10	MW-10	MW-11A	MW-11A	MW-11A
Sample ID					MW-10 (7-8.5)	MW-10 (21-22)	MW-11A (3-3.5)	MW-11A (8.5-9.5)	MW-11A (11.5-12.7)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					7.0-8.5	21.0-22.0	3.0-3.5	8.5-9.5	11.5-12.7
Date Sampled					10/31/13	10/31/13	11/18/13	11/19/13	11/19/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
n-Butylbenzene	MG/KG	12	12	500					
n-Propylbenzene	MG/KG	3.9	3.9	500					
sec-Butylbenzene	MG/KG	11	11	500					
Styrene	MG/KG	300 CP-51	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	150					
Toluene	MG/KG	0.7	0.7	500					
Trichloroethene	MG/KG	0.47	0.47	200					
Xylene (total)	MG/KG	0.26	1.6	500					
Total BTEX	MG/KG	-	-	-	ND	ND	ND	ND	ND
Total Volatile Organic Compounds	MG/KG	-	-	-	0.0064	0.0039	0.0361	0.011	ND
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-					
2,4-Dimethylphenol	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-					
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500					
3,3'-Dichlorobenzidine	MG/KG	-	-	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500			0.087 J		
Acenaphthylene	MG/KG	100	107	500			0.16 J		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

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CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-10	MW-10	MW-11A	MW-11A	MW-11A
Sample ID					MW-10 (7-8.5)	MW-10 (21-22)	MW-11A (3-3.5)	MW-11A (8.5-9.5)	MW-11A (11.5-12.7)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					7.0-8.5	21.0-22.0	3.0-3.5	8.5-9.5	11.5-12.7
Date Sampled					10/31/13	10/31/13	11/18/13	11/19/13	11/19/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500			0.30 J		
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6			1.4		
Benzo(a)pyrene	MG/KG	1	22	1			1.4		
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6			1.8		
Benzo(g,h,i)perylene	MG/KG	100	1000	500			1.1 J		
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56			0.71		
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-					
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-					
Carbazole	MG/KG	-	-	-			0.088 J		
Chrysene	MG/KG	1	1	56			1.4		
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56			0.17 J		
Dibenzofuran	MG/KG	7	210	350					
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-					
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-					
Fluoranthene	MG/KG	100	1000	500			2.4		
Fluorene	MG/KG	30	386	500			0.13 J		
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6			1.0		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

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CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-10	MW-10	MW-11A	MW-11A	MW-11A
Sample ID					MW-10 (7-8.5)	MW-10 (21-22)	MW-11A (3-3.5)	MW-11A (8.5-9.5)	MW-11A (11.5-12.7)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					7.0-8.5	21.0-22.0	3.0-3.5	8.5-9.5	11.5-12.7
Date Sampled					10/31/13	10/31/13	11/18/13	11/19/13	11/19/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Naphthalene	MG/KG	12	12	500					
Phenanthrene	MG/KG	100	1000	500			1.1		
Phenol	MG/KG	0.33	0.33	500					
Pyrene	MG/KG	100	1000	500			2.7		0.081 J
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	ND	ND	15.857	ND	0.081
Total Semivolatile Organic Compounds	MG/KG	-	-	-	ND	ND	15.945	ND	0.081
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	11,900	4,790	16,600	12,100	6,220
Antimony	MG/KG	12 CP-51	-	-					
Arsenic	MG/KG	13	16	16	1.2	0.94	5.6	2.0	0.67 J
Barium	MG/KG	350	820	400	90.4	45.2	244	58.2	67.4
Beryllium	MG/KG	7.2	47	590	0.38	0.13 J		0.24	
Cadmium	MG/KG	2.5	7.5	9.3			0.74		
Calcium	MG/KG	10000 CP-51	-	-	1,130	3,970	5,150	1,170	1,520
Chromium	MG/KG	30	NS	1500	33.6	12.6	36.1	19.7	15.2
Cobalt	MG/KG	20 CP-51	-	-	6.8	4.9	10.2	7.3	6.5
Copper	MG/KG	50	1720	270	17.5	11.7	60.5	17.2	18.9
Iron	MG/KG	2000 CP-51	-	-	17,000	8,940	23,900	21,200	11,100
Lead	MG/KG	63	450	1000	4.8	2.5	352	8.0	2.8

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

Blank cell or ND - Not detected. D - Result reported from a secondary dilution analysis.

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-10	MW-10	MW-11A	MW-11A	MW-11A
Sample ID					MW-10 (7-8.5)	MW-10 (21-22)	MW-11A (3-3.5)	MW-11A (8.5-9.5)	MW-11A (11.5-12.7)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					7.0-8.5	21.0-22.0	3.0-3.5	8.5-9.5	11.5-12.7
Date Sampled					10/31/13	10/31/13	11/18/13	11/19/13	11/19/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Magnesium	MG/KG	-	-	-	4,240	3,440	5,090	2,610	2,690
Manganese	MG/KG	1600	2000	10000	223	120	343	293	263
Mercury	MG/KG	0.18	0.73	2.8			0.64		
Nickel	MG/KG	30	130	310	22.2	12.4	22.7	11.7	17.6
Potassium	MG/KG	-	-	-	4,030	2,280	3,700	1,460	3,360
Selenium	MG/KG	3.9	4	1500			1.2 J	0.50 J	
Silver	MG/KG	2	8.3	1500			0.13 J		
Sodium	MG/KG	-	-	-	75.0	117	432	85.4	77.5
Thallium	MG/KG	5 CP-51	-	-	1.2	0.22 J	1.1 J	0.88	0.78 J
Vanadium	MG/KG	39 CP-51	-	-	24.3	13.4	36.7	23.4	16.3
Zinc	MG/KG	109	2480	10000	34.7	15.2	330	30.1	22.6
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-12A	MW-12A	MW-12A	MW-12A	MW-12A
Sample ID					MW-12A (2.8-3.2)	SBMW12A (7-8)	SBMW12A (7-10)	SBMW12A (10-11)	SBMW12A (10-12)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					2.8-3.2	7.0-8.0	7.0-10.0	10.0-11.0	10.0-12.0
Date Sampled					11/20/13	01/24/14	01/24/14	01/24/14	01/24/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-			NA		NA
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-			NA		NA
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190			NA		NA
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500			NA		NA
1,2-Dichloroethane	MG/KG	0.02	0.02	30			NA		NA
1,2-Dichloropropane	MG/KG	700 CP-51	-	-			NA		NA
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190			NA		NA
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130			NA		NA
2-Butanone	MG/KG	0.12	0.12	500	0.0052 J		NA		NA
2-Hexanone	MG/KG	-	-	-			NA		NA
Acetone	MG/KG	0.05	0.05	500	0.026		NA		NA
Benzene	MG/KG	0.06	0.06	44			NA		NA
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-			NA		NA
Chlorobenzene	MG/KG	1.1	1.1	500			NA		NA
Cyclohexane	MG/KG	-	-	-			NA		NA
Ethylbenzene	MG/KG	1	1	390			NA		NA
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-			NA		NA
Methylcyclohexane	MG/KG	-	-	-			NA		NA
Methylene chloride	MG/KG	0.05	0.05	500	0.0049 J		NA		NA

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-12A	MW-12A	MW-12A	MW-12A	MW-12A
Sample ID					MW-12A (2.8-3.2)	SBMW12A (7-8)	SBMW12A (7-10)	SBMW12A (10-11)	SBMW12A (10-12)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					2.8-3.2	7.0-8.0	7.0-10.0	10.0-11.0	10.0-12.0
Date Sampled					11/20/13	01/24/14	01/24/14	01/24/14	01/24/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
n-Butylbenzene	MG/KG	12	12	500			NA		NA
n-Propylbenzene	MG/KG	3.9	3.9	500			NA		NA
sec-Butylbenzene	MG/KG	11	11	500			NA		NA
Styrene	MG/KG	300 CP-51	-	-			NA		NA
Tetrachloroethene	MG/KG	1.3	1.3	150			NA		NA
Toluene	MG/KG	0.7	0.7	500			NA		NA
Trichloroethene	MG/KG	0.47	0.47	200			NA		NA
Xylene (total)	MG/KG	0.26	1.6	500			NA		NA
Total BTEX	MG/KG	-	-	-	ND	ND	NA	ND	NA
Total Volatile Organic Compounds	MG/KG	-	-	-	0.0361	ND	NA	ND	NA
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-		NA		NA	
2,4-Dimethylphenol	MG/KG	-	-	-		NA		NA	
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-		NA		NA	
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500		NA		NA	
3,3'-Dichlorobenzidine	MG/KG	-	-	-		NA		NA	
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500		NA		NA	
Acenaphthene	MG/KG	20	98	500		NA		NA	
Acenaphthylene	MG/KG	100	107	500	0.11 J	NA		NA	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-12A	MW-12A	MW-12A	MW-12A	MW-12A
Sample ID					MW-12A (2.8-3.2)	SBMW12A (7-8)	SBMW12A (7-10)	SBMW12A (10-11)	SBMW12A (10-12)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					2.8-3.2	7.0-8.0	7.0-10.0	10.0-11.0	10.0-12.0
Date Sampled					11/20/13	01/24/14	01/24/14	01/24/14	01/24/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acetophenone	MG/KG	-	-	-		NA		NA	
Anthracene	MG/KG	100	1000	500	0.16 J	NA		NA	
Benzaldehyde	MG/KG	-	-	-		NA		NA	
Benzo(a)anthracene	MG/KG	1	1	5.6	0.83	NA		NA	
Benzo(a)pyrene	MG/KG	1	22	1	0.89	NA		NA	
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	1.2	NA		NA	
Benzo(g,h,i)perylene	MG/KG	100	1000	500	0.68 J	NA		NA	
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	0.46	NA		NA	
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-		NA		NA	
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-		NA		NA	
Carbazole	MG/KG	-	-	-		NA		NA	
Chrysene	MG/KG	1	1	56	0.92	NA		NA	
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56	0.14 J	NA		NA	
Dibenzofuran	MG/KG	7	210	350		NA		NA	
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-		NA		NA	
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-		NA	0.12 J	NA	
Fluoranthene	MG/KG	100	1000	500	1.3	NA		NA	
Fluorene	MG/KG	30	386	500		NA		NA	
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	0.70	NA		NA	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-12A	MW-12A	MW-12A	MW-12A	MW-12A
Sample ID					MW-12A (2.8-3.2)	SBMW12A (7-8)	SBMW12A (7-10)	SBMW12A (10-11)	SBMW12A (10-12)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					2.8-3.2	7.0-8.0	7.0-10.0	10.0-11.0	10.0-12.0
Date Sampled					11/20/13	01/24/14	01/24/14	01/24/14	01/24/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Naphthalene	MG/KG	12	12	500		NA		NA	
Phenanthrene	MG/KG	100	1000	500	0.53	NA		NA	
Phenol	MG/KG	0.33	0.33	500		NA		NA	
Pyrene	MG/KG	100	1000	500	1.5	NA		NA	
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	9.42	NA	ND	NA	ND
Total Semivolatile Organic Compounds	MG/KG	-	-	-	9.42	NA	0.12	NA	ND
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	11,500	NA	8,400	NA	14,500
Antimony	MG/KG	12 CP-51	-	-	0.46 J	NA		NA	0.39 J
Arsenic	MG/KG	13	16	16	5.2	NA	1.7	NA	1.2
Barium	MG/KG	350	820	400	119	NA	60.6	NA	155
Beryllium	MG/KG	7.2	47	590		NA		NA	
Cadmium	MG/KG	2.5	7.5	9.3	0.34	NA		NA	
Calcium	MG/KG	10000 CP-51	-	-	13,400	NA	1,420	NA	1,200
Chromium	MG/KG	30	NS	1500	23.8	NA	19.0	NA	31.1
Cobalt	MG/KG	20 CP-51	-	-	7.1	NA	5.4	NA	11.7
Copper	MG/KG	50	1720	270	66.0	NA	33.4	NA	50.2
Iron	MG/KG	2000 CP-51	-	-	17,000	NA	14,400	NA	25,700
Lead	MG/KG	63	450	1000	211	NA	2.9	NA	2.3

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					MW-12A	MW-12A	MW-12A	MW-12A	MW-12A
Sample ID					MW-12A (2.8-3.2)	SBMW12A (7-8)	SBMW12A (7-10)	SBMW12A (10-11)	SBMW12A (10-12)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					2.8-3.2	7.0-8.0	7.0-10.0	10.0-11.0	10.0-12.0
Date Sampled					11/20/13	01/24/14	01/24/14	01/24/14	01/24/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Magnesium	MG/KG	-	-	-	3,270	NA	2,410	NA	6,180
Manganese	MG/KG	1600	2000	10000	349	NA	278	NA	377
Mercury	MG/KG	0.18	0.73	2.8	0.31	NA	0.0049 J	NA	
Nickel	MG/KG	30	130	310	17.9	NA	20.2	NA	24.8
Potassium	MG/KG	-	-	-	2,130	NA	2,350	NA	9,630
Selenium	MG/KG	3.9	4	1500		NA		NA	
Silver	MG/KG	2	8.3	1500		NA		NA	
Sodium	MG/KG	-	-	-	231	NA	157	NA	201
Thallium	MG/KG	5 CP-51	-	-	0.76 J	NA		NA	0.23 J
Vanadium	MG/KG	39 CP-51	-	-	25.4	NA	19.1	NA	39.7
Zinc	MG/KG	109	2480	10000	204	NA	26.4	NA	58.3
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27		NA		NA	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

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Concentration Exceeds Criteria (2)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-01	SB-16	SB-16	SB-16	SB-16
Sample ID					SB-1 (3.5-4)	110113-DUP-1	SB-16 (3.2-3.6)	SB-16 (4.5-5)	SB-16 (9-10)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.5-4.0	3.2-3.6	3.2-3.6	4.5-5.0	9.0-10.0
Date Sampled					11/14/13	11/01/13	11/01/13	11/01/13	11/07/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		Field Duplicate (1-1)			
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-					
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-					
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190					0.029
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500					
1,2-Dichloroethane	MG/KG	0.02	0.02	30					
1,2-Dichloropropane	MG/KG	700 CP-51	-	-					
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190					0.031
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130					
2-Butanone	MG/KG	0.12	0.12	500					0.0066 J
2-Hexanone	MG/KG	-	-	-					
Acetone	MG/KG	0.05	0.05	500		0.015	0.017		0.048
Benzene	MG/KG	0.06	0.06	44					
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-					
Chlorobenzene	MG/KG	1.1	1.1	500					
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390					0.0043 J
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-					0.032
Methylcyclohexane	MG/KG	-	-	-					0.017
Methylene chloride	MG/KG	0.05	0.05	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-01	SB-16	SB-16	SB-16	SB-16
Sample ID					SB-1 (3.5-4)	110113-DUP-1	SB-16 (3.2-3.6)	SB-16 (4.5-5)	SB-16 (9-10)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.5-4.0	3.2-3.6	3.2-3.6	4.5-5.0	9.0-10.0
Date Sampled					11/14/13	11/01/13	11/01/13	11/01/13	11/07/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		Field Duplicate (1-1)			
Volatile Organic Compounds									
n-Butylbenzene	MG/KG	12	12	500					0.033
n-Propylbenzene	MG/KG	3.9	3.9	500					0.041
sec-Butylbenzene	MG/KG	11	11	500					0.019
Styrene	MG/KG	300 CP-51	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	150					
Toluene	MG/KG	0.7	0.7	500					
Trichloroethene	MG/KG	0.47	0.47	200					0.0034 J
Xylene (total)	MG/KG	0.26	1.6	500					0.0036 J
Total BTEX	MG/KG	-	-	-	ND	ND	ND	ND	0.0079
Total Volatile Organic Compounds	MG/KG	-	-	-	ND	0.015	0.017	ND	0.2679
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-					
2,4-Dimethylphenol	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-				2.1	
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500					
3,3'-Dichlorobenzidine	MG/KG	-	-	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500		0.088 J			6.3
Acenaphthylene	MG/KG	100	107	500	0.40		0.12 J	16	2.9

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-01	SB-16	SB-16	SB-16	SB-16
Sample ID					SB-1 (3.5-4)	110113-DUP-1	SB-16 (3.2-3.6)	SB-16 (4.5-5)	SB-16 (9-10)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.5-4.0	3.2-3.6	3.2-3.6	4.5-5.0	9.0-10.0
Date Sampled					11/14/13	11/01/13	11/01/13	11/01/13	11/07/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		Field Duplicate (1-1)			
Semivolatile Organic Compounds									
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500	0.18 J	0.18 J	0.090 J	2.8	6.6 D
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6	0.99	0.55	0.34 J	13	4.9
Benzo(a)pyrene	MG/KG	1	22	1	1.5	0.58	0.44	24	4.0
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	1.6	0.60	0.44	22	2.7
Benzo(g,h,i)perylene	MG/KG	100	1000	500	0.93	0.43	0.39	30 D	2.2
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	0.81	0.42	0.31 J	5.9	1.9
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-					
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-					
Carbazole	MG/KG	-	-	-		0.11 J			
Chrysene	MG/KG	1	1	56	0.99	0.56	0.41	15	4.6
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56	0.22 J	0.11 J	0.094 J	2.7	0.36 J
Dibenzofuran	MG/KG	7	210	350					
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-					
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-					
Fluoranthene	MG/KG	100	1000	500	1.0	1.1	0.62	18	9.6 D
Fluorene	MG/KG	30	386	500		0.082 J		0.98 J	4.0
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	0.95	0.43	0.35 J	19	1.8

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

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CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-01	SB-16	SB-16	SB-16	SB-16
Sample ID					SB-1 (3.5-4)	110113-DUP-1	SB-16 (3.2-3.6)	SB-16 (4.5-5)	SB-16 (9-10)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.5-4.0	3.2-3.6	3.2-3.6	4.5-5.0	9.0-10.0
Date Sampled					11/14/13	11/01/13	11/01/13	11/01/13	11/07/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		Field Duplicate (1-1)			
Semivolatile Organic Compounds									
Naphthalene	MG/KG	12	12	500				0.47 J	
Phenanthrene	MG/KG	100	1000	500	0.27 J	0.75	0.30 J	5.7	22 D
Phenol	MG/KG	0.33	0.33	500					
Pyrene	MG/KG	100	1000	500	1.2	1.1	0.81	31 D	12 D
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	11.04	6.98	4.714	208.65	85.86
Total Semivolatile Organic Compounds	MG/KG	-	-	-	11.04	7.09	4.714	208.65	85.86
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	14,200	7,670	12,000	5,700	39,500
Antimony	MG/KG	12 CP-51	-	-		0.34 J			
Arsenic	MG/KG	13	16	16	2.3	2.6	3.0	2.2	3.3
Barium	MG/KG	350	820	400	102	90.1	82.3	52.6	189
Beryllium	MG/KG	7.2	47	590	0.34	0.27	0.37	0.28	0.73
Cadmium	MG/KG	2.5	7.5	9.3					
Calcium	MG/KG	10000 CP-51	-	-	1,980	7,250 J	30,300 J	2,020	1,780
Chromium	MG/KG	30	NS	1500	32.5	14.3	21.3	10.7	46.0
Cobalt	MG/KG	20 CP-51	-	-	7.8	5.0 J	10.1 J	5.2	9.7
Copper	MG/KG	50	1720	270	24.2	21.6	29.1	19.0	79.0
Iron	MG/KG	2000 CP-51	-	-	19,400	13,300	16,700	8,840	23,900
Lead	MG/KG	63	450	1000	13.9	41.2	49.2	31.4	9.9

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Border Concentration Exceeds Criteria (3)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-01	SB-16	SB-16	SB-16	SB-16
Sample ID					SB-1 (3.5-4)	110113-DUP-1	SB-16 (3.2-3.6)	SB-16 (4.5-5)	SB-16 (9-10)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.5-4.0	3.2-3.6	3.2-3.6	4.5-5.0	9.0-10.0
Date Sampled					11/14/13	11/01/13	11/01/13	11/01/13	11/07/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		Field Duplicate (1-1)			
Metals									
Magnesium	MG/KG	-	-	-	4,550	3,900	3,590	1,430	7,180
Manganese	MG/KG	1600	2000	10000	302	249	315	176	585
Mercury	MG/KG	0.18	0.73	2.8	0.037	0.088	0.25	0.14	0.032 J
Nickel	MG/KG	30	130	310	24.1	10.7	15.3	13.5	38.9
Potassium	MG/KG	-	-	-	3,640	1,650	2,410	1,020	2,240
Selenium	MG/KG	3.9	4	1500	0.90 J	2.6		0.65 J	1.2 J
Silver	MG/KG	2	8.3	1500					
Sodium	MG/KG	-	-	-	92.7	75.8	126	72.6	126
Thallium	MG/KG	5 CP-51	-	-	1.7	0.55 J	0.49 J	0.26 J	2.8
Vanadium	MG/KG	39 CP-51	-	-	30.6	19.1	25.5	13.7	56.6
Zinc	MG/KG	109	2480	10000	40.9	34.8	48.6	61.4	60.2
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

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TABLE 4-5
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CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-16	SB-16	SB-17	SB-17	SB-17
Sample ID					SB-16 (13-14)	SB-16 (18-19)	SB-17 (4-4.5)	SB-17 (10.5-11.5)	SB-17 (12.5-13.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					13.0-14.0	18.0-19.0	4.0-4.5	10.5-11.5	12.5-13.5
Date Sampled					11/07/13	11/07/13	11/20/13	11/22/13	11/22/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-	0.0025 J				
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-	0.0020 J				
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190		3.5 D			0.019
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500		0.37 D			
1,2-Dichloroethane	MG/KG	0.02	0.02	30					
1,2-Dichloropropane	MG/KG	700 CP-51	-	-		0.018 J			
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190		1.1 D			
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130					
2-Butanone	MG/KG	0.12	0.12	500				0.0075	
2-Hexanone	MG/KG	-	-	-					
Acetone	MG/KG	0.05	0.05	500	0.012	0.020 J		0.027	0.0078
Benzene	MG/KG	0.06	0.06	44		0.084 J	0.0052 J		
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-					
Chlorobenzene	MG/KG	1.1	1.1	500					
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390		1.2 D			
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-		0.17 DJ			0.0042 J
Methylcyclohexane	MG/KG	-	-	-		0.23 DJ		0.0034 J	
Methylene chloride	MG/KG	0.05	0.05	500			0.010	0.0031 J	0.0039 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-16	SB-16	SB-17	SB-17	SB-17
Sample ID					SB-16 (13-14)	SB-16 (18-19)	SB-17 (4-4.5)	SB-17 (10.5-11.5)	SB-17 (12.5-13.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					13.0-14.0	18.0-19.0	4.0-4.5	10.5-11.5	12.5-13.5
Date Sampled					11/07/13	11/07/13	11/20/13	11/22/13	11/22/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
n-Butylbenzene	MG/KG	12	12	500		0.33 J		0.0037 J	0.021
n-Propylbenzene	MG/KG	3.9	3.9	500		0.44 D			0.0046 J
sec-Butylbenzene	MG/KG	11	11	500		0.057 J			0.0037 J
Styrene	MG/KG	300 CP-51	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	150					
Toluene	MG/KG	0.7	0.7	500		0.14 J	0.0026 J		
Trichloroethene	MG/KG	0.47	0.47	200					
Xylene (total)	MG/KG	0.26	1.6	500		5.5 D			
Total BTEX	MG/KG	-	-	-	ND	6.924	0.0078	ND	ND
Total Volatile Organic Compounds	MG/KG	-	-	-	0.0165	13.159	0.0178	0.0447	0.0642
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-		4.4	0.38 J		0.80
2,4-Dimethylphenol	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-	0.14 J	6.7 D	2.2		0.21 J
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500					
3,3'-Dichlorobenzidine	MG/KG	-	-	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500		16 D	1.7 J		3.3
Acenaphthylene	MG/KG	100	107	500	0.12 J	2.9	12	0.091 J	1.1

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

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SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-16	SB-16	SB-17	SB-17	SB-17
Sample ID					SB-16 (13-14)	SB-16 (18-19)	SB-17 (4-4.5)	SB-17 (10.5-11.5)	SB-17 (12.5-13.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					13.0-14.0	18.0-19.0	4.0-4.5	10.5-11.5	12.5-13.5
Date Sampled					11/07/13	11/07/13	11/20/13	11/22/13	11/22/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500	0.17 J	3.6	16		2.9
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6	0.13 J	2.5	65 D	0.66	2.4
Benzo(a)pyrene	MG/KG	1	22	1	0.096 J	2.4	77 D	0.56	1.7
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	0.099 J	1.4	110 D	0.61	1.5
Benzo(g,h,i)perylene	MG/KG	100	1000	500		1.5	51 D	0.37 J	0.73 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	0.056 J	1.5	39 D	0.18 J	0.56
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-					
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-					
Carbazole	MG/KG	-	-	-		0.21 J	4.2		
Chrysene	MG/KG	1	1	56	0.12 J	2.7	60 D	0.62	2.4
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56		0.21 J	13		0.20 J
Dibenzofuran	MG/KG	7	210	350	0.11 J	0.41	4.5		
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-					
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-					
Fluoranthene	MG/KG	100	1000	500	0.28 J	4.8	120 D	0.70	4.6
Fluorene	MG/KG	30	386	500	0.19 J	4.4	6.3		2.5
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6		1.1	64 D	0.34 J	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

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CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-16	SB-16	SB-17	SB-17	SB-17
Sample ID					SB-16 (13-14)	SB-16 (18-19)	SB-17 (4-4.5)	SB-17 (10.5-11.5)	SB-17 (12.5-13.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					13.0-14.0	18.0-19.0	4.0-4.5	10.5-11.5	12.5-13.5
Date Sampled					11/07/13	11/07/13	11/20/13	11/22/13	11/22/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Naphthalene	MG/KG	12	12	500	0.26 J	22 D	3.5		
Phenanthrene	MG/KG	100	1000	500	0.54	14 D	51 D	0.10 J	11 D
Phenol	MG/KG	0.33	0.33	500					
Pyrene	MG/KG	100	1000	500	0.24 J	6.9 D	100 D	1.1	6.9 D
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	2.441	94.61	791.7	5.331	42
Total Semivolatile Organic Compounds	MG/KG	-	-	-	2.551	99.63	800.78	5.331	42.8
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	9,220	6,710	8,120	6,350	9,480
Antimony	MG/KG	12 CP-51	-	-			0.44 J		
Arsenic	MG/KG	13	16	16	1.0 J	1.1	4.9	2.2	0.87
Barium	MG/KG	350	820	400	90.0	68.7	79.7	45.7	94.8
Beryllium	MG/KG	7.2	47	590					
Cadmium	MG/KG	2.5	7.5	9.3			0.11 J		
Calcium	MG/KG	10000 CP-51	-	-	1,480	1,030	64,100	858	1,550
Chromium	MG/KG	30	NS	1500	24.5	17.9	16.7	15.5	24.1
Cobalt	MG/KG	20 CP-51	-	-	6.4 J	6.6	5.0	4.0	7.2 J
Copper	MG/KG	50	1720	270	16.3	19.8	78.7	15.9	18.7
Iron	MG/KG	2000 CP-51	-	-	14,100	11,300	12,400	11,400	14,900 J
Lead	MG/KG	63	450	1000	3.6	2.9	264	4.3	4.1

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

Blank cell or ND - Not detected. D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value. J+ - The reported concntration is an estimated value, with high bias. NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-16	SB-16	SB-17	SB-17	SB-17
Sample ID					SB-16 (13-14)	SB-16 (18-19)	SB-17 (4-4.5)	SB-17 (10.5-11.5)	SB-17 (12.5-13.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					13.0-14.0	18.0-19.0	4.0-4.5	10.5-11.5	12.5-13.5
Date Sampled					11/07/13	11/07/13	11/20/13	11/22/13	11/22/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Magnesium	MG/KG	-	-	-	3,620	2,980	2,380	2,030	3,880
Manganese	MG/KG	1600	2000	10000	277	150	156	83.7	190
Mercury	MG/KG	0.18	0.73	2.8			0.99	0.011 J	
Nickel	MG/KG	30	130	310	18.6	16.4	59.1	9.9	21.0 J
Potassium	MG/KG	-	-	-	3,950	3,080	1,300	1,420	4,260
Selenium	MG/KG	3.9	4	1500					0.86 J
Silver	MG/KG	2	8.3	1500					
Sodium	MG/KG	-	-	-	71.6	77.0	256	28.0 J	51.0
Thallium	MG/KG	5 CP-51	-	-	1.4	0.98	1.2	0.38 J	1.0
Vanadium	MG/KG	39 CP-51	-	-	23.4	16.2	22.9	26.7	22.7
Zinc	MG/KG	109	2480	10000	29.3	23.9	99.4	20.6	31.0 J
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27			46.6	3.8	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-17	SB-18	SB-18	SB-18	SB-18
Sample ID					SB-17 (15-16)	SB-18 (3-3.5)	SB-18 (8.5-10)	SB-18 (12.5-13.5)	SB-18 (15.8-16.8)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					15.0-16.0	3.0-3.5	8.5-10.0	12.5-13.5	15.8-16.8
Date Sampled					11/22/13	11/20/13	11/22/13	11/22/13	11/22/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-					
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-					
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190		0.12	11	9.4	3.4
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500					
1,2-Dichloroethane	MG/KG	0.02	0.02	30					
1,2-Dichloropropane	MG/KG	700 CP-51	-	-					
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190			3.9	3.0	1.7
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130					
2-Butanone	MG/KG	0.12	0.12	500					
2-Hexanone	MG/KG	-	-	-					
Acetone	MG/KG	0.05	0.05	500		0.0073			
Benzene	MG/KG	0.06	0.06	44		0.068	1.1 J	1.1 J	
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-		0.012			
Chlorobenzene	MG/KG	1.1	1.1	500					
Cyclohexane	MG/KG	-	-	-			4.4	6.2	
Ethylbenzene	MG/KG	1	1	390		0.015	22	15	1.6
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-			1.4 J	1.6	0.83
Methylcyclohexane	MG/KG	-	-	-			17	21	4.4
Methylene chloride	MG/KG	0.05	0.05	500		0.0028 J			

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-17	SB-18	SB-18	SB-18	SB-18
Sample ID					SB-17 (15-16)	SB-18 (3-3.5)	SB-18 (8.5-10)	SB-18 (12.5-13.5)	SB-18 (15.8-16.8)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					15.0-16.0	3.0-3.5	8.5-10.0	12.5-13.5	15.8-16.8
Date Sampled					11/22/13	11/20/13	11/22/13	11/22/13	11/22/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
n-Butylbenzene	MG/KG	12	12	500			0.96 J	1.1 J	
n-Propylbenzene	MG/KG	3.9	3.9	500			1.4 J	1.6	0.77
sec-Butylbenzene	MG/KG	11	11	500					0.23 J
Styrene	MG/KG	300 CP-51	-	-		0.087			
Tetrachloroethene	MG/KG	1.3	1.3	150					
Toluene	MG/KG	0.7	0.7	500		0.19			
Trichloroethene	MG/KG	0.47	0.47	200					
Xylene (total)	MG/KG	0.26	1.6	500		0.36	11.9	8.2	1.41
Total BTEX	MG/KG	-	-	-	ND	0.633	35	24.3	3.01
Total Volatile Organic Compounds	MG/KG	-	-	-	ND	0.8621	75.06	68.2	14.34
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-		7.6	5.7	6.4 DJ	150 D
2,4-Dimethylphenol	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-		51 D	23	27 D	180 D
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500					
3,3'-Dichlorobenzidine	MG/KG	-	-	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500		13	22	37 D	540 D
Acenaphthylene	MG/KG	100	107	500		50 D	6.4	3.5	58 DJ

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-17	SB-18	SB-18	SB-18	SB-18
Sample ID					SB-17 (15-16)	SB-18 (3-3.5)	SB-18 (8.5-10)	SB-18 (12.5-13.5)	SB-18 (15.8-16.8)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					15.0-16.0	3.0-3.5	8.5-10.0	12.5-13.5	15.8-16.8
Date Sampled					11/22/13	11/20/13	11/22/13	11/22/13	11/22/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500		70 D	20	15 D	200 D
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6		90 D	28 D	11 D	140 D
Benzo(a)pyrene	MG/KG	1	22	1		80 D	21	8.9 D	150 D
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6		110 D	22	8.0 D	130 D
Benzo(g,h,i)perylene	MG/KG	100	1000	500		37 D	9.3	4.5	77 D
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56		40 D	11	3.9	40 DJ
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-					
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-					
Carbazole	MG/KG	-	-	-		23	4.9	2.6	19
Chrysene	MG/KG	1	1	56		80 D	20	8.9 D	130 D
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56		12	3.2	1.2	20
Dibenzofuran	MG/KG	7	210	350		41 D	12	9.5 D	92 D
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-					
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-	0.088 J			0.12 J	
Fluoranthene	MG/KG	100	1000	500		220 D	62 D	29 D	460 D
Fluorene	MG/KG	30	386	500		57 D	18	18 D	350 D
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6		44 D	11	4.4	62 DJ

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

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Concentration Exceeds Criteria (2)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-17	SB-18	SB-18	SB-18	SB-18
Sample ID					SB-17 (15-16)	SB-18 (3-3.5)	SB-18 (8.5-10)	SB-18 (12.5-13.5)	SB-18 (15.8-16.8)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					15.0-16.0	3.0-3.5	8.5-10.0	12.5-13.5	15.8-16.8
Date Sampled					11/22/13	11/20/13	11/22/13	11/22/13	11/22/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Naphthalene	MG/KG	12	12	500		140 D	130 D	93 D	380 D
Phenanthrene	MG/KG	100	1000	500		200 D	63 D	55 D	940 D
Phenol	MG/KG	0.33	0.33	500					
Pyrene	MG/KG	100	1000	500		170 D	53 D	30 D	600 D
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	ND	1,464	522.9	358.3	4,457
Total Semivolatile Organic Compounds	MG/KG	-	-	-	0.088	1,535.6	545.5	376.92	4,718
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	8,470	13,400	17,200	13,700	8,150
Antimony	MG/KG	12 CP-51	-	-					
Arsenic	MG/KG	13	16	16	1.0	2.8	3.8	2.6	2.6
Barium	MG/KG	350	820	400	85.5	106	88.5	62.2	59.9
Beryllium	MG/KG	7.2	47	590			0.52		
Cadmium	MG/KG	2.5	7.5	9.3		0.16 J			
Calcium	MG/KG	10000 CP-51	-	-	1,550	2,580	6,880	1,220	947
Chromium	MG/KG	30	NS	1500	23.0	25.4	24.0	23.4	16.7
Cobalt	MG/KG	20 CP-51	-	-	6.7	9.3	7.2	7.7	11.3
Copper	MG/KG	50	1720	270	19.5	28.1	12.4	19.1	21.1
Iron	MG/KG	2000 CP-51	-	-	13,400	19,200	16,400	19,600	20,200
Lead	MG/KG	63	450	1000	3.6	26.2	26.2	6.3	4.8

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-17	SB-18	SB-18	SB-18	SB-18
Sample ID					SB-17 (15-16)	SB-18 (3-3.5)	SB-18 (8.5-10)	SB-18 (12.5-13.5)	SB-18 (15.8-16.8)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					15.0-16.0	3.0-3.5	8.5-10.0	12.5-13.5	15.8-16.8
Date Sampled					11/22/13	11/20/13	11/22/13	11/22/13	11/22/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Magnesium	MG/KG	-	-	-	3,730	3,750	3,230	3,430	3,240
Manganese	MG/KG	1600	2000	10000	292	498	244	213	161
Mercury	MG/KG	0.18	0.73	2.8		0.12	0.13	0.011 J	
Nickel	MG/KG	30	130	310	19.0	21.6	14.6	15.2	19.0
Potassium	MG/KG	-	-	-	4,310	2,860	952	2,040	2,170
Selenium	MG/KG	3.9	4	1500	0.48 J	0.92 J	1.3 J	0.65 J	
Silver	MG/KG	2	8.3	1500					
Sodium	MG/KG	-	-	-	57.1	132	116	63.0	64.0
Thallium	MG/KG	5 CP-51	-	-	1.1	1.3	0.76 J	0.99	0.58 J
Vanadium	MG/KG	39 CP-51	-	-	21.2	27.1	29.5	29.9	17.3
Zinc	MG/KG	109	2480	10000	29.2	204	41.5	29.1	27.0
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27	2.2	2.1			

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

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Concentration Exceeds Criteria 1

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-18	SB-19	SB-19	SB-19	SB-20
Sample ID					SB-18 (23-25)	SB-19 (9-10)	SB-19 (10.5-11.5)	SB-19 (21.6-22.7)	SB-20 (3-3.3)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					23.0-25.0	9.0-10.0	10.5-11.5	21.6-22.7	3.0-3.3
Date Sampled					11/22/13	11/07/13	11/07/13	11/07/13	10/31/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-					
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-					
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190	0.0036 J		0.87 D	0.0047 J	
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500					
1,2-Dichloroethane	MG/KG	0.02	0.02	30					
1,2-Dichloropropane	MG/KG	700 CP-51	-	-			0.036 J		
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190		0.17	0.63 D	0.0029 J	
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130					
2-Butanone	MG/KG	0.12	0.12	500					0.0026 J
2-Hexanone	MG/KG	-	-	-					
Acetone	MG/KG	0.05	0.05	500			0.0084 J		0.026
Benzene	MG/KG	0.06	0.06	44					
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-					
Chlorobenzene	MG/KG	1.1	1.1	500					
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390		0.049	0.16 DJ		
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-		0.027	0.15 J		
Methylcyclohexane	MG/KG	-	-	-		0.12	1.6 D		
Methylene chloride	MG/KG	0.05	0.05	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

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Only Detected Results Reported.

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SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-18	SB-19	SB-19	SB-19	SB-20
Sample ID					SB-18 (23-25)	SB-19 (9-10)	SB-19 (10.5-11.5)	SB-19 (21.6-22.7)	SB-20 (3-3.3)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					23.0-25.0	9.0-10.0	10.5-11.5	21.6-22.7	3.0-3.3
Date Sampled					11/22/13	11/07/13	11/07/13	11/07/13	10/31/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
n-Butylbenzene	MG/KG	12	12	500		0.013 J			
n-Propylbenzene	MG/KG	3.9	3.9	500		0.051	0.19 DJ		
sec-Butylbenzene	MG/KG	11	11	500			0.031 J		
Styrene	MG/KG	300 CP-51	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	150					
Toluene	MG/KG	0.7	0.7	500			0.011 J		
Trichloroethene	MG/KG	0.47	0.47	200					
Xylene (total)	MG/KG	0.26	1.6	500		0.159	0.75 D	0.0037 J	
Total BTEX	MG/KG	-	-	-	ND	0.208	0.921	0.0037	ND
Total Volatile Organic Compounds	MG/KG	-	-	-	0.0036	0.589	4.4364	0.0113	0.0286
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-		0.84	5.1		
2,4-Dimethylphenol	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-		0.92	7.8 D		
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500					
3,3'-Dichlorobenzidine	MG/KG	-	-	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500	0.080 J	0.51	1.5		
Acenaphthylene	MG/KG	100	107	500		1.8	13 D		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

Blank cell or ND - Not detected. D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value. J+ - The reported concntration is an estimated value, with high bias. NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-18	SB-19	SB-19	SB-19	SB-20
Sample ID					SB-18 (23-25)	SB-19 (9-10)	SB-19 (10.5-11.5)	SB-19 (21.6-22.7)	SB-20 (3-3.3)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					23.0-25.0	9.0-10.0	10.5-11.5	21.6-22.7	3.0-3.3
Date Sampled					11/22/13	11/07/13	11/07/13	11/07/13	10/31/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500	0.086 J	0.71	2.7		0.076 J
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6	0.075 J	0.40	1.6		0.086 J
Benzo(a)pyrene	MG/KG	1	22	1		0.44	2.0		0.090 J
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6		0.37	1.4		0.11 J
Benzo(g,h,i)perylene	MG/KG	100	1000	500		0.35 J	1.6		
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56		0.18 J	0.85		
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-					
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-	0.076 J				
Carbazole	MG/KG	-	-	-					
Chrysene	MG/KG	1	1	56		0.43	1.8		0.084 J
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56			0.13 J		
Dibenzofuran	MG/KG	7	210	350					
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-					
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-	0.090 J				
Fluoranthene	MG/KG	100	1000	500	0.19 J	1.4	5.2		0.18 J
Fluorene	MG/KG	30	386	500		1.0	4.6		
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6		0.26 J	1.1		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-18	SB-19	SB-19	SB-19	SB-20
Sample ID					SB-18 (23-25)	SB-19 (9-10)	SB-19 (10.5-11.5)	SB-19 (21.6-22.7)	SB-20 (3-3.3)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					23.0-25.0	9.0-10.0	10.5-11.5	21.6-22.7	3.0-3.3
Date Sampled					11/22/13	11/07/13	11/07/13	11/07/13	10/31/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Naphthalene	MG/KG	12	12	500		1.0	22 D		
Phenanthrene	MG/KG	100	1000	500	0.31 J	3.2	14 D		0.19 J
Phenol	MG/KG	0.33	0.33	500					
Pyrene	MG/KG	100	1000	500	0.21 J	2.0	8.0 D		0.17 J
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	0.951	14.97	89.28	ND	0.986
Total Semivolatile Organic Compounds	MG/KG	-	-	-	1.117	15.81	94.38	ND	0.986
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	6,130	12,600	11,100	42,900	8,100
Antimony	MG/KG	12 CP-51	-	-					
Arsenic	MG/KG	13	16	16	0.95 J	1.2	1.4	1.6	2.1
Barium	MG/KG	350	820	400	54.9	136	100	139	39.3
Beryllium	MG/KG	7.2	47	590		0.26		1.0	0.27
Cadmium	MG/KG	2.5	7.5	9.3				0.12 J	
Calcium	MG/KG	10000 CP-51	-	-	1,130	2,070	1,980	25,700	17,700
Chromium	MG/KG	30	NS	1500	17.4	31.9	27.4	403	23.3
Cobalt	MG/KG	20 CP-51	-	-	5.4	9.9	8.1	31.1	4.0
Copper	MG/KG	50	1720	270	19.5	28.5	26.2		8.1
Iron	MG/KG	2000 CP-51	-	-	12,100	22,600	17,200	38,200	10,800
Lead	MG/KG	63	450	1000	3.0	4.6	4.0	3.0	9.7

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-18	SB-19	SB-19	SB-19	SB-20
Sample ID					SB-18 (23-25)	SB-19 (9-10)	SB-19 (10.5-11.5)	SB-19 (21.6-22.7)	SB-20 (3-3.3)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					23.0-25.0	9.0-10.0	10.5-11.5	21.6-22.7	3.0-3.3
Date Sampled					11/22/13	11/07/13	11/07/13	11/07/13	10/31/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Magnesium	MG/KG	-	-	-	2,480	5,360	4,920	67,000	2,270
Manganese	MG/KG	1600	2000	10000	167	397	413	1,380	153
Mercury	MG/KG	0.18	0.73	2.8		0.0049 J			0.018 J
Nickel	MG/KG	30	130	310	17.3	27.9	22.1	408	8.4
Potassium	MG/KG	-	-	-	2,380	5,710	5,300	17,700	706
Selenium	MG/KG	3.9	4	1500		0.68 J	0.60 J		
Silver	MG/KG	2	8.3	1500					
Sodium	MG/KG	-	-	-	47.0 J	469	385	635	417
Thallium	MG/KG	5 CP-51	-	-	0.49 J	2.0	2.2	5.6	
Vanadium	MG/KG	39 CP-51	-	-	15.5	33.0	27.2	37.2	17.4
Zinc	MG/KG	109	2480	10000	19.1	41.4	35.6	74.3	20.4
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-20	SB-20	SB-21	SB-21	SB-21
Sample ID					SB-20 (7-8)	SB-20 (14.5-15.5)	SB-21 (2.5-3.5)	SB-21 (9-10)	SB-21 (20.7-21.1)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					7.0-8.0	14.5-15.5	2.5-3.5	9.0-10.0	20.7-21.1
Date Sampled					10/31/13	10/31/13	11/04/13	11/07/13	11/07/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-					
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-					
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190				3.0	0.16
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500					
1,2-Dichloroethane	MG/KG	0.02	0.02	30					
1,2-Dichloropropane	MG/KG	700 CP-51	-	-					
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190				1.4	0.0077 J
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130					
2-Butanone	MG/KG	0.12	0.12	500	0.0034 J		0.017		
2-Hexanone	MG/KG	-	-	-					
Acetone	MG/KG	0.05	0.05	500	0.023	0.0044 J	0.079	0.017 J	0.012
Benzene	MG/KG	0.06	0.06	44			0.0035 J	0.11	
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-					
Chlorobenzene	MG/KG	1.1	1.1	500					
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390				1.1	0.0070 J
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-				0.15	0.024
Methylcyclohexane	MG/KG	-	-	-				0.081	0.0037 J
Methylene chloride	MG/KG	0.05	0.05	500	0.0021 J				

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria (2)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-20	SB-20	SB-21	SB-21	SB-21
Sample ID					SB-20 (7-8)	SB-20 (14.5-15.5)	SB-21 (2.5-3.5)	SB-21 (9-10)	SB-21 (20.7-21.1)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					7.0-8.0	14.5-15.5	2.5-3.5	9.0-10.0	20.7-21.1
Date Sampled					10/31/13	10/31/13	11/04/13	11/07/13	11/07/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
n-Butylbenzene	MG/KG	12	12	500				0.063	0.032
n-Propylbenzene	MG/KG	3.9	3.9	500				0.10	0.018
sec-Butylbenzene	MG/KG	11	11	500				0.0087 J	0.0059 J
Styrene	MG/KG	300 CP-51	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	150					
Toluene	MG/KG	0.7	0.7	500				0.46	
Trichloroethene	MG/KG	0.47	0.47	200					
Xylene (total)	MG/KG	0.26	1.6	500				9.3	0.0031 J
Total BTEX	MG/KG	-	-	-	ND	ND	0.0035	10.97	0.0101
Total Volatile Organic Compounds	MG/KG	-	-	-	0.0285	0.0044	0.0995	15.7897	0.2734
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-			0.37 J	10	2.3
2,4-Dimethylphenol	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-			1.3 J	62 D	
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500					
3,3'-Dichlorobenzidine	MG/KG	-	-	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500			9.0	18	22 D
Acenaphthylene	MG/KG	100	107	500			1.7	8.5	2.7

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-20	SB-20	SB-21	SB-21	SB-21
Sample ID					SB-20 (7-8)	SB-20 (14.5-15.5)	SB-21 (2.5-3.5)	SB-21 (9-10)	SB-21 (20.7-21.1)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					7.0-8.0	14.5-15.5	2.5-3.5	9.0-10.0	20.7-21.1
Date Sampled					10/31/13	10/31/13	11/04/13	11/07/13	11/07/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500			14	34 D	13 D
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6			22	29 D	7.7 D
Benzo(a)pyrene	MG/KG	1	22	1			18	21	4.6
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6			20	21	
Benzo(g,h,i)perylene	MG/KG	100	1000	500			11	9.6	2.1
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56			11	13	2.1
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-					0.73
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-					0.13 J
Carbazole	MG/KG	-	-	-			5.5	14	0.22 J
Chrysene	MG/KG	1	1	56			18	20	5.8
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56			3.7	3.6	0.45
Dibenzofuran	MG/KG	7	210	350			5.9	32 D	0.42
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-					
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-					
Fluoranthene	MG/KG	100	1000	500			50 D	75 D	14 D
Fluorene	MG/KG	30	386	500			9.3	39 D	10 D
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6			12	11	1.8

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-20	SB-20	SB-21	SB-21	SB-21
Sample ID					SB-20 (7-8)	SB-20 (14.5-15.5)	SB-21 (2.5-3.5)	SB-21 (9-10)	SB-21 (20.7-21.1)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					7.0-8.0	14.5-15.5	2.5-3.5	9.0-10.0	20.7-21.1
Date Sampled					10/31/13	10/31/13	11/04/13	11/07/13	11/07/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Naphthalene	MG/KG	12	12	500			3.3	220 D	0.21 J
Phenanthrene	MG/KG	100	1000	500			44 D	120 D	40 D
Phenol	MG/KG	0.33	0.33	500					
Pyrene	MG/KG	100	1000	500			40 D	58 D	20 D
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	ND	ND	288.3	762.7	146.46
Total Semivolatile Organic Compounds	MG/KG	-	-	-	ND	ND	300.07	818.7	150.26
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	14,400	7,050	10,400	9,390	17,800
Antimony	MG/KG	12 CP-51	-	-					
Arsenic	MG/KG	13	16	16	3.7	1.0 J	2.8	1.2	1.4
Barium	MG/KG	350	820	400	117	64.2	75.8 J	93.3	162
Beryllium	MG/KG	7.2	47	590	0.47	0.23 J	0.36		0.43
Cadmium	MG/KG	2.5	7.5	9.3					
Calcium	MG/KG	10000 CP-51	-	-	2,530	1,540	28,000 J	1,400	2,550
Chromium	MG/KG	30	NS	1500	59.1	18.3	20.8	22.3	140
Cobalt	MG/KG	20 CP-51	-	-	10.1	7.3	6.0 J	6.9	11.6
Copper	MG/KG	50	1720	270	27.9	18.7	28.0	17.4	16.5
Iron	MG/KG	2000 CP-51	-	-	21,300	13,100	13,200 J	13,600	23,800
Lead	MG/KG	63	450	1000	8.2	3.3	67.4 J	3.6	5.7

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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[SITEID] = '04' AND [MATRIX] = 'SO' AND [LOGDATE] >= #10/29/2013#

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-20	SB-20	SB-21	SB-21	SB-21
Sample ID					SB-20 (7-8)	SB-20 (14.5-15.5)	SB-21 (2.5-3.5)	SB-21 (9-10)	SB-21 (20.7-21.1)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					7.0-8.0	14.5-15.5	2.5-3.5	9.0-10.0	20.7-21.1
Date Sampled					10/31/13	10/31/13	11/04/13	11/07/13	11/07/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Magnesium	MG/KG	-	-	-	5,860	2,590	12,300 J	3,560	11,500
Manganese	MG/KG	1600	2000	10000	260	196	287 J	236	373
Mercury	MG/KG	0.18	0.73	2.8	0.0045 J		0.21		
Nickel	MG/KG	30	130	310	23.8	20.2	15.8	19.3	89.1
Potassium	MG/KG	-	-	-	4,570	2,710	2,100	4,090	11,300
Selenium	MG/KG	3.9	4	1500				0.61 J	0.71 J
Silver	MG/KG	2	8.3	1500					
Sodium	MG/KG	-	-	-	713	120	550	197	275
Thallium	MG/KG	5 CP-51	-	-	1.5	0.85 J	0.86	1.2	2.6
Vanadium	MG/KG	39 CP-51	-	-	38.7	19.6	23.6 J	22.6	32.0
Zinc	MG/KG	109	2480	10000	48.7	22.1	61.9 J	28.9	55.7
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-21	SB-21	SB-22	SB-22	SB-22
Sample ID					110713-DUP-1	SB-21 (21.5-22.5)	SB-22 (2-2.3)	SB-22 (10-11.5)	SB-22 (18.5-19.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					21.5-22.5	21.5-22.5	2.0-2.3	10.0-11.5	18.5-19.5
Date Sampled					11/07/13	11/07/13	10/31/13	10/31/13	10/31/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**	Field Duplicate (1-1)				
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-					
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-					
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190		0.0053 J			
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500					
1,2-Dichloroethane	MG/KG	0.02	0.02	30					
1,2-Dichloropropane	MG/KG	700 CP-51	-	-					
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190					
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130					
2-Butanone	MG/KG	0.12	0.12	500			0.0058 J		
2-Hexanone	MG/KG	-	-	-					
Acetone	MG/KG	0.05	0.05	500			0.041	0.0080	
Benzene	MG/KG	0.06	0.06	44			0.0041 J		
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-					
Chlorobenzene	MG/KG	1.1	1.1	500					
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390					
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-					
Methylcyclohexane	MG/KG	-	-	-					
Methylene chloride	MG/KG	0.05	0.05	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-21	SB-21	SB-22	SB-22	SB-22
Sample ID					110713-DUP-1	SB-21 (21.5-22.5)	SB-22 (2-2.3)	SB-22 (10-11.5)	SB-22 (18.5-19.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					21.5-22.5	21.5-22.5	2.0-2.3	10.0-11.5	18.5-19.5
Date Sampled					11/07/13	11/07/13	10/31/13	10/31/13	10/31/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**	Field Duplicate (1-1)				
Volatile Organic Compounds									
n-Butylbenzene	MG/KG	12	12	500					
n-Propylbenzene	MG/KG	3.9	3.9	500					
sec-Butylbenzene	MG/KG	11	11	500					
Styrene	MG/KG	300 CP-51	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	150					
Toluene	MG/KG	0.7	0.7	500					
Trichloroethene	MG/KG	0.47	0.47	200					
Xylene (total)	MG/KG	0.26	1.6	500					
Total BTEX	MG/KG	-	-	-	ND	ND	0.0041	ND	ND
Total Volatile Organic Compounds	MG/KG	-	-	-	ND	0.0053	0.0509	0.008	ND
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-					
2,4-Dimethylphenol	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-			0.38 J		
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500					
3,3'-Dichlorobenzidine	MG/KG	-	-	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500	0.52	0.34 J	3.8		
Acenaphthylene	MG/KG	100	107	500			3.3		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-21	SB-21	SB-22	SB-22	SB-22
Sample ID					110713-DUP-1	SB-21 (21.5-22.5)	SB-22 (2-2.3)	SB-22 (10-11.5)	SB-22 (18.5-19.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					21.5-22.5	21.5-22.5	2.0-2.3	10.0-11.5	18.5-19.5
Date Sampled					11/07/13	11/07/13	10/31/13	10/31/13	10/31/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**	Field Duplicate (1-1)				
Semivolatile Organic Compounds									
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500	0.55	0.34 J	9.2		
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6	0.40	0.22 J	18		
Benzo(a)pyrene	MG/KG	1	22	1	0.29 J	0.17 J	18		
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	0.21 J	0.13 J	15		
Benzo(g,h,i)perylene	MG/KG	100	1000	500	0.14 J	0.085 J	9.7		
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	0.15 J		14		
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-		1.4			
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-		0.073 J			
Carbazole	MG/KG	-	-	-			1.3 J		
Chrysene	MG/KG	1	1	56	0.37 J	0.25 J	17		
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56			2.2		
Dibenzofuran	MG/KG	7	210	350			2.7		
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-					
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-					
Fluoranthene	MG/KG	100	1000	500	0.71	0.41	35 D		
Fluorene	MG/KG	30	386	500	0.39 J	0.23 J	4.9		
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	0.12 J		11		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-21	SB-21	SB-22	SB-22	SB-22
Sample ID					110713-DUP-1	SB-21 (21.5-22.5)	SB-22 (2-2.3)	SB-22 (10-11.5)	SB-22 (18.5-19.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					21.5-22.5	21.5-22.5	2.0-2.3	10.0-11.5	18.5-19.5
Date Sampled					11/07/13	11/07/13	10/31/13	10/31/13	10/31/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**	Field Duplicate (1-1)				
Semivolatile Organic Compounds									
Naphthalene	MG/KG	12	12	500			0.57 J		
Phenanthrene	MG/KG	100	1000	500	1.8	1.2	20		
Phenol	MG/KG	0.33	0.33	500					
Pyrene	MG/KG	100	1000	500	0.97	0.61	29 D		
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	6.62	3.985	211.05	ND	ND
Total Semivolatile Organic Compounds	MG/KG	-	-	-	6.62	5.458	215.05	ND	ND
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	23,900	30,200	10,100	11,600	8,820
Antimony	MG/KG	12 CP-51	-	-					
Arsenic	MG/KG	13	16	16	1.5	2.2	2.7	1.2	1.1
Barium	MG/KG	350	820	400	106	118	68.4	114	111
Beryllium	MG/KG	7.2	47	590	0.69	0.86	0.33	0.26	0.21 J
Cadmium	MG/KG	2.5	7.5	9.3		0.024 J			
Calcium	MG/KG	10000 CP-51	-	-	4,050	5,060	5,660	1,210	1,900
Chromium	MG/KG	30	NS	1500	218	203	20.5	28.1	40.7
Cobalt	MG/KG	20 CP-51	-	-	18.9	22.1	6.4	8.3	7.2
Copper	MG/KG	50	1720	270	4.7	2.8	21.3	20.8	14.4
Iron	MG/KG	2000 CP-51	-	-	22,700	33,200	14,700	17,000	16,100
Lead	MG/KG	63	450	1000	4.4	4.6	53.5	4.7	3.4

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-21	SB-21	SB-22	SB-22	SB-22
Sample ID					110713-DUP-1	SB-21 (21.5-22.5)	SB-22 (2-2.3)	SB-22 (10-11.5)	SB-22 (18.5-19.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					21.5-22.5	21.5-22.5	2.0-2.3	10.0-11.5	18.5-19.5
Date Sampled					11/07/13	11/07/13	10/31/13	10/31/13	10/31/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**	Field Duplicate (1-1)				
Metals									
Magnesium	MG/KG	-	-	-	24,600 J	35,600 J	3,500	4,320	5,580
Manganese	MG/KG	1600	2000	10000	461 J	842 J	265	220	442
Mercury	MG/KG	0.18	0.73	2.8			0.19		
Nickel	MG/KG	30	130	310	277	300	19.9	24.1	35.8
Potassium	MG/KG	-	-	-	9,080	10,200	1,680	4,910	4,720
Selenium	MG/KG	3.9	4	1500	1.4 J	1.2 J			
Silver	MG/KG	2	8.3	1500			0.075 J		
Sodium	MG/KG	-	-	-	474	608	455	171	136
Thallium	MG/KG	5 CP-51	-	-	2.8	3.6	0.73 J	1.3	1.2
Vanadium	MG/KG	39 CP-51	-	-	34.6	44.7	22.6	27.2	22.9
Zinc	MG/KG	109	2480	10000	87.5	107	56.5	35.8	29.6
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-23	SB-23	SB-24	SB-24	SB-25
Sample ID					SB-23 (4.5-5)	SB-23 (13.5-14)	SB-24 (9-10)	SB-24 (14-15)	SB-25 (7.2-8.2)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.5-5.0	13.5-14.0	9.0-10.0	14.0-15.0	7.2-8.2
Date Sampled					11/04/13	11/06/13	11/07/13	11/07/13	11/07/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-					
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-					
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190		64	0.0016 J		4.0
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500					
1,2-Dichloroethane	MG/KG	0.02	0.02	30		0.34			
1,2-Dichloropropane	MG/KG	700 CP-51	-	-					
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190		18			0.39
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130		1.3			
2-Butanone	MG/KG	0.12	0.12	500					0.0047 J
2-Hexanone	MG/KG	-	-	-					
Acetone	MG/KG	0.05	0.05	500	0.031 J	0.091	0.017	0.0037 J	0.012
Benzene	MG/KG	0.06	0.06	44		26			0.37
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-					
Chlorobenzene	MG/KG	1.1	1.1	500		0.59			
Cyclohexane	MG/KG	-	-	-		0.068 J			0.0046 J
Ethylbenzene	MG/KG	1	1	390		74			0.99
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-		1.9			0.027
Methylcyclohexane	MG/KG	-	-	-		0.22			0.013
Methylene chloride	MG/KG	0.05	0.05	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-23	SB-23	SB-24	SB-24	SB-25
Sample ID					SB-23 (4.5-5)	SB-23 (13.5-14)	SB-24 (9-10)	SB-24 (14-15)	SB-25 (7.2-8.2)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.5-5.0	13.5-14.0	9.0-10.0	14.0-15.0	7.2-8.2
Date Sampled					11/04/13	11/06/13	11/07/13	11/07/13	11/07/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
n-Butylbenzene	MG/KG	12	12	500		1.6			0.032
n-Propylbenzene	MG/KG	3.9	3.9	500		1.1			0.043
sec-Butylbenzene	MG/KG	11	11	500		0.19			
Styrene	MG/KG	300 CP-51	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	150					
Toluene	MG/KG	0.7	0.7	500		1.0			3.6
Trichloroethene	MG/KG	0.47	0.47	200					
Xylene (total)	MG/KG	0.26	1.6	500		66			9.6
Total BTEX	MG/KG	-	-	-	ND	167	ND	ND	14.56
Total Volatile Organic Compounds	MG/KG	-	-	-	0.031	256.399	0.0186	0.0037	19.0863
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-		22			45 DJ
2,4-Dimethylphenol	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-	0.39 J	230 D			340 D
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500					
3,3'-Dichlorobenzidine	MG/KG	-	-	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500	9.4	170 D	0.084 J		41 DJ
Acenaphthylene	MG/KG	100	107	500	2.0	30			150 D

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-23	SB-23	SB-24	SB-24	SB-25
Sample ID					SB-23 (4.5-5)	SB-23 (13.5-14)	SB-24 (9-10)	SB-24 (14-15)	SB-25 (7.2-8.2)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.5-5.0	13.5-14.0	9.0-10.0	14.0-15.0	7.2-8.2
Date Sampled					11/04/13	11/06/13	11/07/13	11/07/13	11/07/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500	15	84 D	0.25 J		180 D
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6	18	66 D			120 D
Benzo(a)pyrene	MG/KG	1	22	1	15	9.7 DJ			21 DJ
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	17	35			89 D
Benzo(g,h,i)perylene	MG/KG	100	1000	500	8.3	22			17
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	6.8	20			23
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-		87 D	0.35		
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-			0.075 J		
Carbazole	MG/KG	-	-	-	5.5		0.97		77 DJ
Chrysene	MG/KG	1	1	56	14	36			120 D
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56	2.7				15
Dibenzofuran	MG/KG	7	210	350	6.6		0.15 J		150 D
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-					
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-					
Fluoranthene	MG/KG	100	1000	500	45 D	100 D	0.18 J		280 D
Fluorene	MG/KG	30	386	500	9.7	78 D	0.36		230 D
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	9.0	20			30 DJ

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-23	SB-23	SB-24	SB-24	SB-25
Sample ID					SB-23 (4.5-5)	SB-23 (13.5-14)	SB-24 (9-10)	SB-24 (14-15)	SB-25 (7.2-8.2)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.5-5.0	13.5-14.0	9.0-10.0	14.0-15.0	7.2-8.2
Date Sampled					11/04/13	11/06/13	11/07/13	11/07/13	11/07/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Naphthalene	MG/KG	12	12	500	0.94 J	380 D			840 D
Phenanthrene	MG/KG	100	1000	500	47 D	260 D	0.27 J		510 D
Phenol	MG/KG	0.33	0.33	500					
Pyrene	MG/KG	100	1000	500	36 D	150 D	0.17 J		220 D
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	256.23	1,690.7	1.314	ND	3,226
Total Semivolatile Organic Compounds	MG/KG	-	-	-	268.33	1,799.7	2.859	ND	3,498
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	7,960	5,180	8,030	6,170	13,500
Antimony	MG/KG	12 CP-51	-	-		2.3			
Arsenic	MG/KG	13	16	16	4.5	13.4	2.0	1.1	1.9
Barium	MG/KG	350	820	400	62.6	137	47.0	60.9	121
Beryllium	MG/KG	7.2	47	590	0.32		0.20		0.24
Cadmium	MG/KG	2.5	7.5	9.3		24.6			
Calcium	MG/KG	10000 CP-51	-	-	56,900	9,560	912	1,330	1,570
Chromium	MG/KG	30	NS	1500	15.6	269	15.2	29.6	23.9
Cobalt	MG/KG	20 CP-51	-	-	6.1	5.6	6.1	6.3	9.8
Copper	MG/KG	50	1720	270	24.6	222	22.0	22.6	36.5
Iron	MG/KG	2000 CP-51	-	-	13,000	41,200	12,400	12,300	18,100
Lead	MG/KG	63	450	1000	67.9	1,240	5.3	3.3	4.3

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-23	SB-23	SB-24	SB-24	SB-25
Sample ID					SB-23 (4.5-5)	SB-23 (13.5-14)	SB-24 (9-10)	SB-24 (14-15)	SB-25 (7.2-8.2)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.5-5.0	13.5-14.0	9.0-10.0	14.0-15.0	7.2-8.2
Date Sampled					11/04/13	11/06/13	11/07/13	11/07/13	11/07/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Magnesium	MG/KG	-	-	-	8,640	2,510	3,350	3,260	4,650
Manganese	MG/KG	1600	2000	10000	267	260	163	146	337
Mercury	MG/KG	0.18	0.73	2.8	0.15	1.9		0.0029 J	0.0056 J
Nickel	MG/KG	30	130	310	11.9	74.1	16.7	16.6	34.7
Potassium	MG/KG	-	-	-	1,830	1,040	1,970	2,860	4,570
Selenium	MG/KG	3.9	4	1500		2.5	0.60 J		0.81 J
Silver	MG/KG	2	8.3	1500		0.85 J			
Sodium	MG/KG	-	-	-	561	1,770	115	89.5	321
Thallium	MG/KG	5 CP-51	-	-			0.76 J	1.3	1.6
Vanadium	MG/KG	39 CP-51	-	-	22.7	18.5	17.0	16.3	30.2
Zinc	MG/KG	109	2480	10000	44.5	7,040	24.9	24.3	35.9
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-25	SB-25	SB-26	SB-26	SB-26
Sample ID					SB-25 (9-10)	SB-25 (13-14)	SB-26 (2.3-2.6)	SB-26 (8-10)	SB-26 (12.5-14.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					9.0-10.0	13.0-14.0	2.3-2.6	8.0-10.0	12.5-14.5
Date Sampled					11/07/13	11/07/13	01/11/14	01/12/14	01/12/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-	0.0012 J				
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-					
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190	0.073			76	4.9
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500					
1,2-Dichloroethane	MG/KG	0.02	0.02	30					
1,2-Dichloropropane	MG/KG	700 CP-51	-	-					
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190	0.023			36	2.0
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130					
2-Butanone	MG/KG	0.12	0.12	500					
2-Hexanone	MG/KG	-	-	-					5.3
Acetone	MG/KG	0.05	0.05	500	0.0070	0.0069	0.017		
Benzene	MG/KG	0.06	0.06	44	0.056		0.0023 J		
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-					
Chlorobenzene	MG/KG	1.1	1.1	500					
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390	0.025			44	0.74
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-	0.0021 J			4.0 J	0.60
Methylcyclohexane	MG/KG	-	-	-			0.0050 J	23 J	0.84 J
Methylene chloride	MG/KG	0.05	0.05	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-25	SB-25	SB-26	SB-26	SB-26
Sample ID					SB-25 (9-10)	SB-25 (13-14)	SB-26 (2.3-2.6)	SB-26 (8-10)	SB-26 (12.5-14.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					9.0-10.0	13.0-14.0	2.3-2.6	8.0-10.0	12.5-14.5
Date Sampled					11/07/13	11/07/13	01/11/14	01/12/14	01/12/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
n-Butylbenzene	MG/KG	12	12	500	0.0029 J				1.5
n-Propylbenzene	MG/KG	3.9	3.9	500	0.0026 J			2.1 J	0.98
sec-Butylbenzene	MG/KG	11	11	500					0.36
Styrene	MG/KG	300 CP-51	-	-	0.025			8.6	
Tetrachloroethene	MG/KG	1.3	1.3	150			0.0025 J		
Toluene	MG/KG	0.7	0.7	500	0.085	0.0014 J	0.0026 J	19	
Trichloroethene	MG/KG	0.47	0.47	200	0.0016 J				
Xylene (total)	MG/KG	0.26	1.6	500	0.203	0.0044 J		134	1.6
Total BTEX	MG/KG	-	-	-	0.369	0.0058	0.0049	197	2.34
Total Volatile Organic Compounds	MG/KG	-	-	-	0.5074	0.0127	0.0294	346.7	18.82
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-	1.8		4.2	0.94	12 D
2,4-Dimethylphenol	MG/KG	-	-	-	1.8				
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-	12 D		4.0	4.4	7.0 D
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500	0.31 J				
3,3'-Dichlorobenzidine	MG/KG	-	-	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500	0.63				
Acenaphthene	MG/KG	20	98	500	1.6		4.2	4.5	38 D
Acenaphthylene	MG/KG	100	107	500	3.2		39 D	1.2	3.7

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-25	SB-25	SB-26	SB-26	SB-26
Sample ID					SB-25 (9-10)	SB-25 (13-14)	SB-26 (2.3-2.6)	SB-26 (8-10)	SB-26 (12.5-14.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					9.0-10.0	13.0-14.0	2.3-2.6	8.0-10.0	12.5-14.5
Date Sampled					11/07/13	11/07/13	01/11/14	01/12/14	01/12/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acetophenone	MG/KG	-	-	-			0.18 J		
Anthracene	MG/KG	100	1000	500	6.5 D		23 D	3.0	16 D
Benzaldehyde	MG/KG	-	-	-			0.22 J		
Benzo(a)anthracene	MG/KG	1	1	5.6	4.3		50 D	2.3	10 D
Benzo(a)pyrene	MG/KG	1	22	1	3.0		56 D	1.8	7.5 D
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	3.1		71 D	2.2	7.8 D
Benzo(g,h,i)perylene	MG/KG	100	1000	500	1.2		72 D	0.98	3.4
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	1.5		18 D	0.80	2.4
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-	0.43				
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-	0.089 J				
Carbazole	MG/KG	-	-	-	3.8		0.84	1.2	0.68
Chrysene	MG/KG	1	1	56	3.3		53 D	1.9	8.6 D
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56	0.35 J		7.2 DJ	0.27 J	0.82
Dibenzofuran	MG/KG	7	210	350	5.1		0.66	2.6	12 D
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-					
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-			0.093 J		
Fluoranthene	MG/KG	100	1000	500	9.8 D		150 D	5.4	30 D
Fluorene	MG/KG	30	386	500	7.5 D		16 DJ	3.5	22 D
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	1.3		63 D	1.3	4.2

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-25	SB-25	SB-26	SB-26	SB-26
Sample ID					SB-25 (9-10)	SB-25 (13-14)	SB-26 (2.3-2.6)	SB-26 (8-10)	SB-26 (12.5-14.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					9.0-10.0	13.0-14.0	2.3-2.6	8.0-10.0	12.5-14.5
Date Sampled					11/07/13	11/07/13	01/11/14	01/12/14	01/12/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Naphthalene	MG/KG	12	12	500	29 D		5.5	20 D	17 D
Phenanthrene	MG/KG	100	1000	500	19 D	0.093 J	140 D	12 D	55 D
Phenol	MG/KG	0.33	0.33	500					
Pyrene	MG/KG	100	1000	500	7.9 D		190 D	5.5	34 D
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	114.55	0.093	961.9	71.05	267.42
Total Semivolatile Organic Compounds	MG/KG	-	-	-	128.509	0.093	968.093	75.79	292.1
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	15,400	5,340	7,120	18,700	18,200
Antimony	MG/KG	12 CP-51	-	-					
Arsenic	MG/KG	13	16	16	1.8	0.84 J	11.5	2.6	3.3
Barium	MG/KG	350	820	400	151	62.0	205	79.9	102
Beryllium	MG/KG	7.2	47	590	0.27		0.32	0.42	0.30
Cadmium	MG/KG	2.5	7.5	9.3			0.11 J		
Calcium	MG/KG	10000 CP-51	-	-	1,330	933	34,600	2,030	4,410
Chromium	MG/KG	30	NS	1500	34.1	14.8	42.1	29.5	49.9
Cobalt	MG/KG	20 CP-51	-	-	10.6	4.7	15.8	6.1	14.3
Copper	MG/KG	50	1720	270	31.8	16.8	219	16.7	37.2
Iron	MG/KG	2000 CP-51	-	-	20,600	9,760	40,000	21,100	29,400
Lead	MG/KG	63	450	1000	5.3	3.4	236	8.0	3.3

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-25	SB-25	SB-26	SB-26	SB-26
Sample ID					SB-25 (9-10)	SB-25 (13-14)	SB-26 (2.3-2.6)	SB-26 (8-10)	SB-26 (12.5-14.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					9.0-10.0	13.0-14.0	2.3-2.6	8.0-10.0	12.5-14.5
Date Sampled					11/07/13	11/07/13	01/11/14	01/12/14	01/12/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Magnesium	MG/KG	-	-	-	5,580	2,550	2,040	4,070	8,060
Manganese	MG/KG	1600	2000	10000	422	118	280	143	387
Mercury	MG/KG	0.18	0.73	2.8	0.0026 J		1.7		
Nickel	MG/KG	30	130	310	30.0	14.1	260	17.8	25.4
Potassium	MG/KG	-	-	-	6,100	2,570	1,190	1,380	3,690
Selenium	MG/KG	3.9	4	1500	0.72 J				
Silver	MG/KG	2	8.3	1500					
Sodium	MG/KG	-	-	-	291	91.7	239	218	190
Thallium	MG/KG	5 CP-51	-	-	2.5	0.88 J	0.31 J		
Vanadium	MG/KG	39 CP-51	-	-	35.5	13.4	22.1	38.4	45.7
Zinc	MG/KG	109	2480	10000	44.7	20.4	246	36.5	58.1
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27			22.5		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-26	SB-27	SB-27	SB-27	SB-27
Sample ID					SB-26 (17.5-19.1)	011114-DUP-1	SB-27 (4-4.5)	SB-27 (9-10)	SB-27 (11-12.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					17.5-19.1	4.0-4.5	4.0-4.5	9.0-10.0	11.0-12.5
Date Sampled					01/12/14	01/11/14	01/11/14	01/12/14	01/12/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		Field Duplicate (1-1)			
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-					
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-					
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190				0.0064	
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500					
1,2-Dichloroethane	MG/KG	0.02	0.02	30					
1,2-Dichloropropane	MG/KG	700 CP-51	-	-					
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190				0.0029 J	
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130					
2-Butanone	MG/KG	0.12	0.12	500				0.0073	0.0034 J
2-Hexanone	MG/KG	-	-	-					
Acetone	MG/KG	0.05	0.05	500	0.0038 J		0.0065	0.032	0.013
Benzene	MG/KG	0.06	0.06	44					0.014
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-					
Chlorobenzene	MG/KG	1.1	1.1	500					
Cyclohexane	MG/KG	-	-	-					0.012 J
Ethylbenzene	MG/KG	1	1	390				0.0026 J	0.0052 J
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-					0.0073
Methylcyclohexane	MG/KG	-	-	-				0.0057 J	0.025 J
Methylene chloride	MG/KG	0.05	0.05	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-26	SB-27	SB-27	SB-27	SB-27
Sample ID					SB-26 (17.5-19.1)	011114-DUP-1	SB-27 (4-4.5)	SB-27 (9-10)	SB-27 (11-12.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					17.5-19.1	4.0-4.5	4.0-4.5	9.0-10.0	11.0-12.5
Date Sampled					01/12/14	01/11/14	01/11/14	01/12/14	01/12/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		Field Duplicate (1-1)			
Volatile Organic Compounds									
n-Butylbenzene	MG/KG	12	12	500					0.0049 J
n-Propylbenzene	MG/KG	3.9	3.9	500					0.0053 J
sec-Butylbenzene	MG/KG	11	11	500					0.0050 J
Styrene	MG/KG	300 CP-51	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	150			0.0026 J		
Toluene	MG/KG	0.7	0.7	500					0.0063
Trichloroethene	MG/KG	0.47	0.47	200					
Xylene (total)	MG/KG	0.26	1.6	500	0.0024 J			0.0107	0.0095
Total BTEX	MG/KG	-	-	-	0.0024	ND	ND	0.0133	0.035
Total Volatile Organic Compounds	MG/KG	-	-	-	0.0062	ND	0.0091	0.0676	0.1109
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-					
2,4-Dimethylphenol	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-		0.23 J		0.14 J	5.8
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500					
3,3'-Dichlorobenzidine	MG/KG	-	-	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500		0.69	0.092 J	5.7 J	4.3
Acenaphthylene	MG/KG	100	107	500		0.30 J	1.9		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-26	SB-27	SB-27	SB-27	SB-27
Sample ID					SB-26 (17.5-19.1)	011114-DUP-1	SB-27 (4-4.5)	SB-27 (9-10)	SB-27 (11-12.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					17.5-19.1	4.0-4.5	4.0-4.5	9.0-10.0	11.0-12.5
Date Sampled					01/12/14	01/11/14	01/11/14	01/12/14	01/12/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		Field Duplicate (1-1)			
Semivolatile Organic Compounds									
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500		1.9	1.5	15 D	2.0
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6		3.7	3.0	15 D	0.55
Benzo(a)pyrene	MG/KG	1	22	1		2.7	3.0	12 D	0.38 J
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6		3.9	4.5	16 D	0.51
Benzo(g,h,i)perylene	MG/KG	100	1000	500		1.9	2.6	6.0	0.33 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56		1.1	1.6	4.2	0.13 J
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-			0.12 J		
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-					
Carbazole	MG/KG	-	-	-		0.70		1.7	1.9
Chrysene	MG/KG	1	1	56		3.7	3.0	13 D	0.95
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56		0.49	0.46	1.5	
Dibenzofuran	MG/KG	7	210	350		0.38		6.6 J	4.3
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-					
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-					
Fluoranthene	MG/KG	100	1000	500		7.3 D	8.2 D	42 D	2.9
Fluorene	MG/KG	30	386	500		0.80	0.32 J	8.4 D	4.7
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6		1.9	2.8	8.0 DJ	0.28 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-26	SB-27	SB-27	SB-27	SB-27
Sample ID					SB-26 (17.5-19.1)	011114-DUP-1	SB-27 (4-4.5)	SB-27 (9-10)	SB-27 (11-12.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					17.5-19.1	4.0-4.5	4.0-4.5	9.0-10.0	11.0-12.5
Date Sampled					01/12/14	01/11/14	01/11/14	01/12/14	01/12/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		Field Duplicate (1-1)			
Semivolatile Organic Compounds									
Naphthalene	MG/KG	12	12	500		0.20 J		0.16 J	9.7 DJ
Phenanthrene	MG/KG	100	1000	500		7.5 D	4.9	27 D	10 D
Phenol	MG/KG	0.33	0.33	500					
Pyrene	MG/KG	100	1000	500		6.7 D	9.5 D	29 D	2.7
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	ND	45.01	47.372	203.1	45.23
Total Semivolatile Organic Compounds	MG/KG	-	-	-	ND	46.09	47.492	211.4	51.43
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	10,500	14,800	10,700	18,900	9,260
Antimony	MG/KG	12 CP-51	-	-					
Arsenic	MG/KG	13	16	16	0.66 J	2.6 J	6.5 J	1.4	0.74 J
Barium	MG/KG	350	820	400	119	166 J	82.2 J	210	84.3
Beryllium	MG/KG	7.2	47	590	0.17 J	0.30	0.26	0.24	
Cadmium	MG/KG	2.5	7.5	9.3					
Calcium	MG/KG	10000 CP-51	-	-	1,190	15,500 J	8,340 J	5,050	1,090
Chromium	MG/KG	30	NS	1500	27.2	33.2	23.0	38.5	19.5
Cobalt	MG/KG	20 CP-51	-	-	7.6	11.3	7.2	13.2	5.4
Copper	MG/KG	50	1720	270	18.2	61.9	41.4	31.6	15.6
Iron	MG/KG	2000 CP-51	-	-	15,600	21,100	15,800	30,800	14,400
Lead	MG/KG	63	450	1000	2.2	126 J	51.4 J	19.0	5.9

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Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-26	SB-27	SB-27	SB-27	SB-27
Sample ID					SB-26 (17.5-19.1)	011114-DUP-1	SB-27 (4-4.5)	SB-27 (9-10)	SB-27 (11-12.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					17.5-19.1	4.0-4.5	4.0-4.5	9.0-10.0	11.0-12.5
Date Sampled					01/12/14	01/11/14	01/11/14	01/12/14	01/12/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		Field Duplicate (1-1)			
Metals									
Magnesium	MG/KG	-	-	-	4,520	7,950 J	4,020 J	7,930	3,990
Manganese	MG/KG	1600	2000	10000	257	458	303	434	149
Mercury	MG/KG	0.18	0.73	2.8		0.28	0.28	0.16	0.23
Nickel	MG/KG	30	130	310	24.8	33.1	26.6	29.8	11.6
Potassium	MG/KG	-	-	-	5,090	6,730 J	2,880 J	8,680	6,330
Selenium	MG/KG	3.9	4	1500					
Silver	MG/KG	2	8.3	1500		0.13 J			
Sodium	MG/KG	-	-	-	80.3	370	273	380	134
Thallium	MG/KG	5 CP-51	-	-		0.40 J		0.22 J	0.48 J
Vanadium	MG/KG	39 CP-51	-	-	26.9	39.6	29.4	46.1	30.8
Zinc	MG/KG	109	2480	10000	34.5	121 J	63.4 J	65.7	39.8
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27			1.1		

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-27	SB-28	SB-28	SB-28	SB-29
Sample ID					SB-27 (22-23.5)	SB-28 (10-12)	SB-28 (17-19)	SB-28 (22-23)	SB-29 (2.5-3)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					22.0-23.5	10.0-12.0	17.0-19.0	22.0-23.0	2.5-3.0
Date Sampled					01/12/14	01/12/14	01/12/14	01/12/14	01/11/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-					
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-					
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190	0.0066 J	0.0076	0.019	0.10	
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500					
1,2-Dichloroethane	MG/KG	0.02	0.02	30					
1,2-Dichloropropane	MG/KG	700 CP-51	-	-					
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190		0.0026 J	0.0071	0.012 J	
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130					
2-Butanone	MG/KG	0.12	0.12	500	0.025			0.015 J	
2-Hexanone	MG/KG	-	-	-					
Acetone	MG/KG	0.05	0.05	500	0.12	0.0068	0.0091	0.062	0.0039 J
Benzene	MG/KG	0.06	0.06	44		0.029	0.010	0.17	
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-					
Chlorobenzene	MG/KG	1.1	1.1	500					
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390		0.0036 J	0.0062	0.42	
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-		0.0033 J	0.0043 J	0.033	
Methylcyclohexane	MG/KG	-	-	-					
Methylene chloride	MG/KG	0.05	0.05	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-27	SB-28	SB-28	SB-28	SB-29
Sample ID					SB-27 (22-23.5)	SB-28 (10-12)	SB-28 (17-19)	SB-28 (22-23)	SB-29 (2.5-3)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					22.0-23.5	10.0-12.0	17.0-19.0	22.0-23.0	2.5-3.0
Date Sampled					01/12/14	01/12/14	01/12/14	01/12/14	01/11/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
n-Butylbenzene	MG/KG	12	12	500		0.0028 J			
n-Propylbenzene	MG/KG	3.9	3.9	500		0.0030 J	0.0028 J	0.010 J	
sec-Butylbenzene	MG/KG	11	11	500					
Styrene	MG/KG	300 CP-51	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	150					
Toluene	MG/KG	0.7	0.7	500		0.0025 J	0.0045 J	0.021	
Trichloroethene	MG/KG	0.47	0.47	200					
Xylene (total)	MG/KG	0.26	1.6	500		0.0084	0.0138	0.28	
Total BTEX	MG/KG	-	-	-	ND	0.0435	0.0345	0.891	ND
Total Volatile Organic Compounds	MG/KG	-	-	-	0.1516	0.0696	0.0768	1.123	0.0039
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-			0.25 J	1.2 J	
2,4-Dimethylphenol	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-	0.33 J	0.12 J	0.55	7.1 DJ	
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500					
3,3'-Dichlorobenzidine	MG/KG	-	-	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500	0.67	0.43	2.3	21 D	0.21 J
Acenaphthylene	MG/KG	100	107	500	0.097 J				0.52 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-27	SB-28	SB-28	SB-28	SB-29
Sample ID					SB-27 (22-23.5)	SB-28 (10-12)	SB-28 (17-19)	SB-28 (22-23)	SB-29 (2.5-3)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					22.0-23.5	10.0-12.0	17.0-19.0	22.0-23.0	2.5-3.0
Date Sampled					01/12/14	01/12/14	01/12/14	01/12/14	01/11/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500	1.3	0.17 J	1.3	38 D	0.68
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6	1.2	0.22 J	0.52	49 D	1.8
Benzo(a)pyrene	MG/KG	1	22	1	1.1	0.19 J	0.38 J	38 D	1.6
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	1.3	0.26 J	0.46	55 D	2.2
Benzo(g,h,i)perylene	MG/KG	100	1000	500	0.75	0.10 J	0.23 J	20 D	1.3
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	0.49		0.15 J	17 D	0.60
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-					
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-					
Carbazole	MG/KG	-	-	-	0.87	0.15 J	0.56	14 DJ	0.21 J
Chrysene	MG/KG	1	1	56	1.2	0.24 J	0.56	42 D	2.1
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56	0.18 J			5.7	0.28 J
Dibenzofuran	MG/KG	7	210	350	0.57	0.14 J	1.4	18 D	0.088 J
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-					
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-					
Fluoranthene	MG/KG	100	1000	500	3.3	0.48	2.1	130 D	3.8
Fluorene	MG/KG	30	386	500	0.97	0.26 J	2.2	27 D	
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	0.89	0.14 J	0.25 J	27 DJ	1.5

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

Blank cell or ND - Not detected. D - Result reported from a secondary dilution analysis.

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-27	SB-28	SB-28	SB-28	SB-29
Sample ID					SB-27 (22-23.5)	SB-28 (10-12)	SB-28 (17-19)	SB-28 (22-23)	SB-29 (2.5-3)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					22.0-23.5	10.0-12.0	17.0-19.0	22.0-23.0	2.5-3.0
Date Sampled					01/12/14	01/12/14	01/12/14	01/12/14	01/11/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Naphthalene	MG/KG	12	12	500	0.61	0.66	1.8	17 D	
Phenanthrene	MG/KG	100	1000	500	4.0	0.60	6.1	130 D	2.5
Phenol	MG/KG	0.33	0.33	500					
Pyrene	MG/KG	100	1000	500	3.0	0.42	2.0	93 D	2.8
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	21.387	4.29	20.9	716.8	21.89
Total Semivolatile Organic Compounds	MG/KG	-	-	-	22.827	4.58	23.11	750	22.188
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	15,400	15,400	10,800	12,100	12,100
Antimony	MG/KG	12 CP-51	-	-					
Arsenic	MG/KG	13	16	16	9.2	2.4	8.8	2.9	2.5
Barium	MG/KG	350	820	400	719	118	95.2	66.8	159
Beryllium	MG/KG	7.2	47	590	0.24 J	0.41	0.22	0.19 J	0.32
Cadmium	MG/KG	2.5	7.5	9.3	3.0	0.11 J		0.027 J	
Calcium	MG/KG	10000 CP-51	-	-	12,500	18,000	9,870	14,200	7,640
Chromium	MG/KG	30	NS	1500	89.1	25.4	24.4	14.3	27.9
Cobalt	MG/KG	20 CP-51	-	-	12.0	8.6	6.0	11.0	9.2
Copper	MG/KG	50	1720	270	72.6	22.9	24.1	31.9	72.5
Iron	MG/KG	2000 CP-51	-	-	63,900	21,100	12,800	19,400	17,900
Lead	MG/KG	63	450	1000	801	18.3	16.0	50.4 J	197

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-27	SB-28	SB-28	SB-28	SB-29
Sample ID					SB-27 (22-23.5)	SB-28 (10-12)	SB-28 (17-19)	SB-28 (22-23)	SB-29 (2.5-3)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					22.0-23.5	10.0-12.0	17.0-19.0	22.0-23.0	2.5-3.0
Date Sampled					01/12/14	01/12/14	01/12/14	01/12/14	01/11/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Magnesium	MG/KG	-	-	-	10,100	4,320	4,140	5,700	5,700
Manganese	MG/KG	1600	2000	10000	662	541	186	251	356
Mercury	MG/KG	0.18	0.73	2.8	0.17	0.046	0.091	0.099	0.25
Nickel	MG/KG	30	130	310	33.7	19.1	18.5	16.0	31.2
Potassium	MG/KG	-	-	-	9,390	3,450	3,570	2,390	5,730
Selenium	MG/KG	3.9	4	1500					
Silver	MG/KG	2	8.3	1500					0.22 J
Sodium	MG/KG	-	-	-	246	286	388	526 J	455
Thallium	MG/KG	5 CP-51	-	-					
Vanadium	MG/KG	39 CP-51	-	-	46.3	34.7	25.3	38.1	32.6
Zinc	MG/KG	109	2480	10000	425	300	43.6	774	124
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27	1.7				

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria (2)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-29	SB-29	SB-30	SB-30	SB-31
Sample ID					SB-29 (5.8-7)	SB-29 (20.8-21.9)	SB-30 (3-3.5)	SB-30 (5.8-7.0)	SB-31 (4-4.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					5.8-7.0	20.8-21.9	3.0-3.5	5.8-7.0	4.0-4.5
Date Sampled					01/12/14	01/12/14	11/15/13	11/19/13	11/20/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-					
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-					
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190		2.9			
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500					
1,2-Dichloroethane	MG/KG	0.02	0.02	30					
1,2-Dichloropropane	MG/KG	700 CP-51	-	-					
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190		1.0			
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130					
2-Butanone	MG/KG	0.12	0.12	500					
2-Hexanone	MG/KG	-	-	-					
Acetone	MG/KG	0.05	0.05	500	0.0096				
Benzene	MG/KG	0.06	0.06	44					
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-					
Chlorobenzene	MG/KG	1.1	1.1	500					
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390		1.8			
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-		0.34 J			
Methylcyclohexane	MG/KG	-	-	-		0.12 J			
Methylene chloride	MG/KG	0.05	0.05	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria (2)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-29	SB-29	SB-30	SB-30	SB-31
Sample ID					SB-29 (5.8-7)	SB-29 (20.8-21.9)	SB-30 (3-3.5)	SB-30 (5.8-7.0)	SB-31 (4-4.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					5.8-7.0	20.8-21.9	3.0-3.5	5.8-7.0	4.0-4.5
Date Sampled					01/12/14	01/12/14	11/15/13	11/19/13	11/20/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
n-Butylbenzene	MG/KG	12	12	500		0.18 J			
n-Propylbenzene	MG/KG	3.9	3.9	500		0.26 J			
sec-Butylbenzene	MG/KG	11	11	500					
Styrene	MG/KG	300 CP-51	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	150					
Toluene	MG/KG	0.7	0.7	500					
Trichloroethene	MG/KG	0.47	0.47	200					
Xylene (total)	MG/KG	0.26	1.6	500		2.54			
Total BTEX	MG/KG	-	-	-	ND	4.34	ND	ND	ND
Total Volatile Organic Compounds	MG/KG	-	-	-	0.0096	9.14	ND	ND	ND
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-		1.3			
2,4-Dimethylphenol	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-	0.23 J	10 D	0.15 J		
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500					
3,3'-Dichlorobenzidine	MG/KG	-	-	-					
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500	0.32 J	1.0	0.12 J		
Acenaphthylene	MG/KG	100	107	500		1.3	0.36 J		2.4

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-29	SB-29	SB-30	SB-30	SB-31
Sample ID					SB-29 (5.8-7)	SB-29 (20.8-21.9)	SB-30 (3-3.5)	SB-30 (5.8-7.0)	SB-31 (4-4.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					5.8-7.0	20.8-21.9	3.0-3.5	5.8-7.0	4.0-4.5
Date Sampled					01/12/14	01/12/14	11/15/13	11/19/13	11/20/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500	0.84	3.6	0.76		0.83 J
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6	1.1	2.0	1.4		5.2
Benzo(a)pyrene	MG/KG	1	22	1	0.89	1.8	1.5		8.4
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	1.1	1.9	1.8		11
Benzo(g,h,i)perylene	MG/KG	100	1000	500	0.53	1.3	1.8		15 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	0.44	0.52	1.3		3.5
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-					
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-					
Carbazole	MG/KG	-	-	-	0.14 J	0.16 J	0.41		
Chrysene	MG/KG	1	1	56	1.1	2.2	1.5		5.7
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56	0.16 J	0.21 J	0.43		1.5 J
Dibenzofuran	MG/KG	7	210	350	0.20 J	0.38 J			
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-					
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-			0.081 J		
Fluoranthene	MG/KG	100	1000	500	2.5	4.8	2.6		8.1
Fluorene	MG/KG	30	386	500	0.45	2.8	0.17 J		0.50 J
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	0.62	1.2	1.4		11

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-29	SB-29	SB-30	SB-30	SB-31
Sample ID					SB-29 (5.8-7)	SB-29 (20.8-21.9)	SB-30 (3-3.5)	SB-30 (5.8-7.0)	SB-31 (4-4.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					5.8-7.0	20.8-21.9	3.0-3.5	5.8-7.0	4.0-4.5
Date Sampled					01/12/14	01/12/14	11/15/13	11/19/13	11/20/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Naphthalene	MG/KG	12	12	500	0.74	49 D	0.11 J		0.74 J
Phenanthrene	MG/KG	100	1000	500	2.6	16 D	1.5		3.1
Phenol	MG/KG	0.33	0.33	500					
Pyrene	MG/KG	100	1000	500	2.3	6.7	2.5		12
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	15.92	106.33	19.4	ND	88.97
Total Semivolatile Organic Compounds	MG/KG	-	-	-	16.26	108.17	19.891	ND	88.97
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	11,900	23,000	10,500	19,400	5,360
Antimony	MG/KG	12 CP-51	-	-					1.9
Arsenic	MG/KG	13	16	16	2.6	3.2	103	5.4	13.9
Barium	MG/KG	350	820	400	114	192	246	199	169
Beryllium	MG/KG	7.2	47	590	0.32	0.57	0.29		
Cadmium	MG/KG	2.5	7.5	9.3			1.3	0.28	0.99
Calcium	MG/KG	10000 CP-51	-	-	4,040	3,770	6,030	1,670	8,050
Chromium	MG/KG	30	NS	1500	22.9	41.3	36.7	32.4	15.5
Cobalt	MG/KG	20 CP-51	-	-	7.0	13.2	8.8	16.0	9.8
Copper	MG/KG	50	1720	270	23.9	46.3	145	46.5	117
Iron	MG/KG	2000 CP-51	-	-	16,800	28,500	20,800	33,200	75,000
Lead	MG/KG	63	450	1000	57.4	55.6	1,010	2.8	545

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

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Concentration Exceeds Criteria (2)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-29	SB-29	SB-30	SB-30	SB-31
Sample ID					SB-29 (5.8-7)	SB-29 (20.8-21.9)	SB-30 (3-3.5)	SB-30 (5.8-7.0)	SB-31 (4-4.5)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					5.8-7.0	20.8-21.9	3.0-3.5	5.8-7.0	4.0-4.5
Date Sampled					01/12/14	01/12/14	11/15/13	11/19/13	11/20/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Magnesium	MG/KG	-	-	-	3,900	6,950	4,620	7,940	1,790
Manganese	MG/KG	1600	2000	10000	305	575	349	365	699
Mercury	MG/KG	0.18	0.73	2.8	0.10	0.63	1.5		5.0
Nickel	MG/KG	30	130	310	17.6	34.6	62.4	22.1	19.2
Potassium	MG/KG	-	-	-	3,000	6,570	2,990	12,200	1,080
Selenium	MG/KG	3.9	4	1500					
Silver	MG/KG	2	8.3	1500			0.21 J		
Sodium	MG/KG	-	-	-	293	300	128	98.4	156
Thallium	MG/KG	5 CP-51	-	-			1.4	3.6	
Vanadium	MG/KG	39 CP-51	-	-	28.3	47.6	32.0	50.5	28.0
Zinc	MG/KG	109	2480	10000	77.9	100	361	68.2	244
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27		6.6	0.61 J		4.2

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria (2)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-31	SB-31	SB-31	SB-32	SB-32
Sample ID					SB-31 (8.8-9.5)	SB-31 (11.5-12.5)	SB-31 (13-14.5)	SB-32 (3-3.5)	SB-32 (8.8-10)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					8.8-9.5	11.5-12.5	13.0-14.5	3.0-3.5	8.8-10.0
Date Sampled					11/22/13	11/22/13	11/22/13	11/15/13	11/19/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-					
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-					
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190	0.058	7.6	6.3		
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500					
1,2-Dichloroethane	MG/KG	0.02	0.02	30					
1,2-Dichloropropane	MG/KG	700 CP-51	-	-					
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190	0.010 J	2.2	2.2		
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130					
2-Butanone	MG/KG	0.12	0.12	500	0.015				
2-Hexanone	MG/KG	-	-	-					
Acetone	MG/KG	0.05	0.05	500	0.060				0.0036 J
Benzene	MG/KG	0.06	0.06	44	0.0073 J				
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-					
Chlorobenzene	MG/KG	1.1	1.1	500					
Cyclohexane	MG/KG	-	-	-					
Ethylbenzene	MG/KG	1	1	390	0.010 J	0.28 J	0.85		
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-	0.025	1.0	0.72		
Methylcyclohexane	MG/KG	-	-	-	0.0076 J	1.9	0.41		
Methylene chloride	MG/KG	0.05	0.05	500					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-31	SB-31	SB-31	SB-32	SB-32
Sample ID					SB-31 (8.8-9.5)	SB-31 (11.5-12.5)	SB-31 (13-14.5)	SB-32 (3-3.5)	SB-32 (8.8-10)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					8.8-9.5	11.5-12.5	13.0-14.5	3.0-3.5	8.8-10.0
Date Sampled					11/22/13	11/22/13	11/22/13	11/15/13	11/19/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
n-Butylbenzene	MG/KG	12	12	500		0.79			
n-Propylbenzene	MG/KG	3.9	3.9	500	0.017	1.0	0.80		
sec-Butylbenzene	MG/KG	11	11	500		0.10 J			
Styrene	MG/KG	300 CP-51	-	-					
Tetrachloroethene	MG/KG	1.3	1.3	150					
Toluene	MG/KG	0.7	0.7	500	0.0073 J				
Trichloroethene	MG/KG	0.47	0.47	200					
Xylene (total)	MG/KG	0.26	1.6	500	0.035	0.30 J	1.05		
Total BTEX	MG/KG	-	-	-	0.0596	0.58	1.9	ND	ND
Total Volatile Organic Compounds	MG/KG	-	-	-	0.2522	15.17	12.33	ND	0.0036
Semivolatile Organic Compounds									
1,1'-Biphenyl	MG/KG	60 CP-51	-	-		12	3.7		
2,4-Dimethylphenol	MG/KG	-	-	-					
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-	0.73 J	100 D	26 D		
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500					
3,3'-Dichlorobenzidine	MG/KG	-	-	-		0.64 J			
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500					
Acenaphthene	MG/KG	20	98	500	4.7	65 D	16 D		
Acenaphthylene	MG/KG	100	107	500	2.6	9.0	2.2	0.54	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-31	SB-31	SB-31	SB-32	SB-32
Sample ID					SB-31 (8.8-9.5)	SB-31 (11.5-12.5)	SB-31 (13-14.5)	SB-32 (3-3.5)	SB-32 (8.8-10)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					8.8-9.5	11.5-12.5	13.0-14.5	3.0-3.5	8.8-10.0
Date Sampled					11/22/13	11/22/13	11/22/13	11/15/13	11/19/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Acetophenone	MG/KG	-	-	-					
Anthracene	MG/KG	100	1000	500	8.3	25	7.3 D	0.42	
Benzaldehyde	MG/KG	-	-	-					
Benzo(a)anthracene	MG/KG	1	1	5.6	21	19	5.3	1.8	
Benzo(a)pyrene	MG/KG	1	22	1	22	15	3.9	2.0	
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	27	13	2.7	2.0	
Benzo(g,h,i)perylene	MG/KG	100	1000	500	14	7.9	2.0	1.6	
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56	8.4	5.5	2.2	1.3	
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-					
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-				0.095 J	
Carbazole	MG/KG	-	-	-	2.1		0.20 J	0.10 J	
Chrysene	MG/KG	1	1	56	16	18	4.4	1.7	
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56	4.6	1.5 J	0.35 J	0.24 J	
Dibenzofuran	MG/KG	7	210	350	2.6		1.2		
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-					
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-			0.091 J		
Fluoranthene	MG/KG	100	1000	500	30 D	48 D	11 D	2.3	
Fluorene	MG/KG	30	386	500	5.3	28 D	8.9 D	0.084 J	
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	16	7.0	1.6	1.5	

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-31	SB-31	SB-31	SB-32	SB-32
Sample ID					SB-31 (8.8-9.5)	SB-31 (11.5-12.5)	SB-31 (13-14.5)	SB-32 (3-3.5)	SB-32 (8.8-10)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					8.8-9.5	11.5-12.5	13.0-14.5	3.0-3.5	8.8-10.0
Date Sampled					11/22/13	11/22/13	11/22/13	11/15/13	11/19/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Semivolatile Organic Compounds									
Naphthalene	MG/KG	12	12	500	3.1	41 D	35 D		
Phenanthrene	MG/KG	100	1000	500	20	110 D	29 D	0.72	
Phenol	MG/KG	0.33	0.33	500					
Pyrene	MG/KG	100	1000	500	25	60 D	20 D	2.6	
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	228.73	572.9	177.85	18.804	ND
Total Semivolatile Organic Compounds	MG/KG	-	-	-	233.43	585.54	183.041	18.999	ND
Metals									
Aluminum	MG/KG	10000 CP-51	-	-	11,500	14,200	12,900	12,200	16,500
Antimony	MG/KG	12 CP-51	-	-				1.1 J	
Arsenic	MG/KG	13	16	16	3.1	2.3	1.1	28.4 J	1.2
Barium	MG/KG	350	820	400	75.2	58.7	120	197	154
Beryllium	MG/KG	7.2	47	590	0.23			0.34	
Cadmium	MG/KG	2.5	7.5	9.3				1.5 J	
Calcium	MG/KG	10000 CP-51	-	-	16,600	1,060	1,180	7,190	843
Chromium	MG/KG	30	NS	1500	15.8	35.6	36.2	26.5	27.5
Cobalt	MG/KG	20 CP-51	-	-	5.3	7.2	11.4	10.5	11.9
Copper	MG/KG	50	1720	270	14.4	12.8	18.5	89.1 J	31.8
Iron	MG/KG	2000 CP-51	-	-	13,600	24,700	18,200	59,100 J	27,800
Lead	MG/KG	63	450	1000	60.7	6.7	4.7	379	4.6

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					SB-31	SB-31	SB-31	SB-32	SB-32
Sample ID					SB-31 (8.8-9.5)	SB-31 (11.5-12.5)	SB-31 (13-14.5)	SB-32 (3-3.5)	SB-32 (8.8-10)
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					8.8-9.5	11.5-12.5	13.0-14.5	3.0-3.5	8.8-10.0
Date Sampled					11/22/13	11/22/13	11/22/13	11/15/13	11/19/13
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Magnesium	MG/KG	-	-	-	2,360	4,250	5,390	3,570	5,660
Manganese	MG/KG	1600	2000	10000	300	193	300	784 J	454
Mercury	MG/KG	0.18	0.73	2.8	0.13	0.013 J	0.0032 J	1.8 J+	
Nickel	MG/KG	30	130	310	13.0	14.8	26.9	21.6	23.6
Potassium	MG/KG	-	-	-	794	2,720	5,270	3,290	7,430
Selenium	MG/KG	3.9	4	1500	0.59 J	0.46 J			0.95 J
Silver	MG/KG	2	8.3	1500					
Sodium	MG/KG	-	-	-	159	219	156	179	101
Thallium	MG/KG	5 CP-51	-	-	0.57 J	1.2	1.4	2.2	2.2
Vanadium	MG/KG	39 CP-51	-	-	21.4	33.4	28.6	40.5	34.3
Zinc	MG/KG	109	2480	10000	40.1	33.2	40.2	341 J	49.8
Miscellaneous Parameters									
Cyanide, Total	MG/KG	27	40	27					

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-09	TP-09
Sample ID					TP-9 (2.7-2.9)	TP-9 (3.9-4.2)
Matrix					Soil	Soil
Depth Interval (ft)					2.7-2.9	3.9-4.2
Date Sampled					01/15/14	01/15/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		
Volatile Organic Compounds						
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	-	-		
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	3.4 CP-51	-		
1,2,4-Trimethylbenzene	MG/KG	3.6	3.6	190		
1,2-Dichlorobenzene	MG/KG	1.1	1.1	500		
1,2-Dichloroethane	MG/KG	0.02	0.02	30		
1,2-Dichloropropane	MG/KG	700 CP-51	-	-		
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	8.4	190		
1,4-Dichlorobenzene	MG/KG	1.8	1.8	130		
2-Butanone	MG/KG	0.12	0.12	500		
2-Hexanone	MG/KG	-	-	-		
Acetone	MG/KG	0.05	0.05	500	0.0074 J	
Benzene	MG/KG	0.06	0.06	44		
Carbon disulfide	MG/KG	2.7 CP-51	2.7 CP-51	-		
Chlorobenzene	MG/KG	1.1	1.1	500		
Cyclohexane	MG/KG	-	-	-		
Ethylbenzene	MG/KG	1	1	390		
Isopropylbenzene	MG/KG	2.3 CP-51	2.3 CP-51	-		
Methylcyclohexane	MG/KG	-	-	-		
Methylene chloride	MG/KG	0.05	0.05	500		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

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Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

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Concentration Exceeds Criteria (2)

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TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-09	TP-09
Sample ID					TP-9 (2.7-2.9)	TP-9 (3.9-4.2)
Matrix					Soil	Soil
Depth Interval (ft)					2.7-2.9	3.9-4.2
Date Sampled					01/15/14	01/15/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		
Volatile Organic Compounds						
n-Butylbenzene	MG/KG	12	12	500		
n-Propylbenzene	MG/KG	3.9	3.9	500		
sec-Butylbenzene	MG/KG	11	11	500		
Styrene	MG/KG	300 CP-51	-	-		
Tetrachloroethene	MG/KG	1.3	1.3	150		
Toluene	MG/KG	0.7	0.7	500		
Trichloroethene	MG/KG	0.47	0.47	200		
Xylene (total)	MG/KG	0.26	1.6	500		
Total BTEX	MG/KG	-	-	-	ND	ND
Total Volatile Organic Compounds	MG/KG	-	-	-	0.0074	ND
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	60 CP-51	-	-		
2,4-Dimethylphenol	MG/KG	-	-	-		
2-Methylnaphthalene	MG/KG	0.41 CP-51	36.4 CP-51	-		
2-Methylphenol (o-cresol)	MG/KG	0.33	0.33	500		
3,3'-Dichlorobenzidine	MG/KG	-	-	-		
4-Methylphenol (p-cresol)	MG/KG	0.33	0.33	500		
Acenaphthene	MG/KG	20	98	500		
Acenaphthylene	MG/KG	100	107	500		0.092 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-09	TP-09
Sample ID					TP-9 (2.7-2.9)	TP-9 (3.9-4.2)
Matrix					Soil	Soil
Depth Interval (ft)					2.7-2.9	3.9-4.2
Date Sampled					01/15/14	01/15/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		
Semivolatile Organic Compounds						
Acetophenone	MG/KG	-	-	-		
Anthracene	MG/KG	100	1000	500		
Benzaldehyde	MG/KG	-	-	-		
Benzo(a)anthracene	MG/KG	1	1	5.6		0.17 J
Benzo(a)pyrene	MG/KG	1	22	1	0.071 J	0.21 J
Benzo(b)fluoranthene	MG/KG	1	1.7	5.6	0.086 J	0.27 J
Benzo(g,h,i)perylene	MG/KG	100	1000	500	0.078 J	0.24 J
Benzo(k)fluoranthene	MG/KG	0.8	1.7	56		0.080 J
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	435 CP-51	-		
Butylbenzylphthalate	MG/KG	100 CP-51	122 CP-51	-		
Carbazole	MG/KG	-	-	-		
Chrysene	MG/KG	1	1	56		0.18 J
Dibenz(a,h)anthracene	MG/KG	0.33	1000	0.56		
Dibenzofuran	MG/KG	7	210	350		
Diethylphthalate	MG/KG	7.1 CP-51	7.1 CP-51	-		
Di-n-butylphthalate	MG/KG	0.014 CP-51	8.1 CP-51	-		
Fluoranthene	MG/KG	100	1000	500	0.078 J	0.39
Fluorene	MG/KG	30	386	500		
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	8.2	5.6	0.079 J	0.23 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

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Concentration Exceeds Criteria (2)

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Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-09	TP-09
Sample ID					TP-9 (2.7-2.9)	TP-9 (3.9-4.2)
Matrix					Soil	Soil
Depth Interval (ft)					2.7-2.9	3.9-4.2
Date Sampled					01/15/14	01/15/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		
Semivolatile Organic Compounds						
Naphthalene	MG/KG	12	12	500	0.16 J	0.18 J
Phenanthrene	MG/KG	100	1000	500		0.28 J
Phenol	MG/KG	0.33	0.33	500		
Pyrene	MG/KG	100	1000	500	0.11 J	0.54
Total Polynuclear Aromatic Hydrocarbons	MG/KG	-	-	-	0.662	2.862
Total Semivolatile Organic Compounds	MG/KG	-	-	-	0.662	2.862
Metals						
Aluminum	MG/KG	10000 CP-51	-	-	15,100	18,700
Antimony	MG/KG	12 CP-51	-	-		
Arsenic	MG/KG	13	16	16	1.4	1.4
Barium	MG/KG	350	820	400	157	202
Beryllium	MG/KG	7.2	47	590		
Cadmium	MG/KG	2.5	7.5	9.3		0.12 J
Calcium	MG/KG	10000 CP-51	-	-	1,920	2,070
Chromium	MG/KG	30	NS	1500	45.3	44.4
Cobalt	MG/KG	20 CP-51	-	-	8.7	15.9 J
Copper	MG/KG	50	1720	270	62.3	65.8
Iron	MG/KG	2000 CP-51	-	-	23,200	30,500
Lead	MG/KG	63	450	1000	28.4	24.7 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

Blank cell or ND - Not detected. D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value. J+ - The reported concntration is an estimated value, with high bias. NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-5
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID					TP-09	TP-09
Sample ID					TP-9 (2.7-2.9)	TP-9 (3.9-4.2)
Matrix					Soil	Soil
Depth Interval (ft)					2.7-2.9	3.9-4.2
Date Sampled					01/15/14	01/15/14
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**		
Metals						
Magnesium	MG/KG	-	-	-	7,280	9,540
Manganese	MG/KG	1600	2000	10000	393	492
Mercury	MG/KG	0.18	0.73	2.8	0.079	0.14
Nickel	MG/KG	30	130	310	27.7	38.8
Potassium	MG/KG	-	-	-	10,200	13,500
Selenium	MG/KG	3.9	4	1500	0.85 J	
Silver	MG/KG	2	8.3	1500	0.23 J	0.24 J
Sodium	MG/KG	-	-	-	182	241
Thallium	MG/KG	5 CP-51	-	-		1.7
Vanadium	MG/KG	39 CP-51	-	-	43.9	57.8
Zinc	MG/KG	109	2480	10000	87.6	112
Miscellaneous Parameters						
Cyanide, Total	MG/KG	27	40	27		

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

- = No standard, criteria or guidance value.

Blank cell or ND - Not detected. D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value. J+ - The reported concntration is an estimated value, with high bias. NA - Not analyzed.

Only Detected Results Reported.

TABLE 4-6A
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL SAMPLES
UNRESTRICTED USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Volatile Organic Compounds										
1,2,3-Trichlorobenzene	MG/KG	20 CP-51	80	2	0.001	0.003	0.002	0	SB-16	13-14
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	80	1	0.002	0.002	0.002	0	SB-16	13-14
1,2,4-Trimethylbenzene	MG/KG	3.6	80	28	0.002	76.00	7.05	8	SB-26	8-10
1,2-Dichlorobenzene	MG/KG	1.1	80	1	0.370	0.370	0.370	0	SB-16	18-19
1,2-Dichloroethane	MG/KG	0.02	80	1	0.340	0.340	0.340	1	SB-23	13.5-14
1,2-Dichloropropane	MG/KG	700 CP-51	80	2	0.018	0.036	0.027	0	SB-19	10.5-11.5
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	80	23	0.003	36.00	3.21	2	SB-26	8-10
1,4-Dichlorobenzene	MG/KG	1.8	80	1	1.30	1.30	1.30	0	SB-23	13.5-14
2-Butanone	MG/KG	0.12	80	15	0.003	0.025	0.009	0	SB-27	22-23.5
2-Hexanone	MG/KG	-	80	1	5.30	5.30	5.30	0	SB-26	12.5-14.5
Acetone	MG/KG	0.05	80	45	0.004	0.120	0.022	5	SB-27	22-23.5
Benzene	MG/KG	0.06	80	17	0.002	26.00	1.71	8	SB-23	13.5-14
Carbon disulfide	MG/KG	2.7 CP-51	80	1	0.012	0.012	0.012	0	SB-18	3-3.5
Chlorobenzene	MG/KG	1.1	80	1	0.590	0.590	0.590	0	SB-23	13.5-14
Cyclohexane	MG/KG	-	80	5	0.005	6.20	2.14	0	SB-18	12.5-13.5
Ethylbenzene	MG/KG	1	80	24	0.003	74.00	6.84	8	SB-23	13.5-14
Isopropylbenzene	MG/KG	2.3 CP-51	80	23	0.002	4.00	0.567	1	SB-26	8-10

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

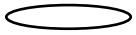
Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-6A
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL SAMPLES
UNRESTRICTED USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Volatile Organic Compounds										
Methylcyclohexane	MG/KG	-	80	21	0.003	23.00	3.38	0	SB-26	8-10
Methylene chloride	MG/KG	0.05	80	11	0.002	0.010	0.004	0	SB-17	4-4.5
n-Butylbenzene	MG/KG	12	80	17	0.003	1.60	0.392	0	SB-23	13.5-14
n-Propylbenzene	MG/KG	3.9	80	23	0.003	2.10	0.476	0	SB-26	8-10
sec-Butylbenzene	MG/KG	11	80	11	0.004	0.360	0.092	0	SB-26	12.5-14.5
Styrene	MG/KG	300 CP-51	80	3	0.025	8.60	2.90	0	SB-26	8-10
Tetrachloroethene	MG/KG	1.3	80	2	0.003	0.003	0.003	0	SB-27	4-4.5
Toluene	MG/KG	0.7	80	16	0.001	19.00	1.53	3	SB-26	8-10
Trichloroethene	MG/KG	0.47	80	2	0.002	0.003	0.003	0	SB-16	9-10
Xylene (total)	MG/KG	0.26	80	27	0.002	134.0	9.38	15	SB-26	8-10
Semivolatile Organic Compounds										
1,1'-Biphenyl	MG/KG	60 CP-51	80	23	0.250	150.0	12.97	1	SB-18	15.8-16.8
2,4-Dimethylphenol	MG/KG	-	80	1	1.80	1.80	1.80	0	SB-25	9-10
2-Methylnaphthalene	MG/KG	0.41 CP-51	80	36	0.120	340.0	30.97	26	SB-25	7.2-8.2
2-Methylphenol (o-cresol)	MG/KG	0.33	80	1	0.310	0.310	0.310	0	SB-25	9-10
3,3'-Dichlorobenzidine	MG/KG	-	80	1	0.640	0.640	0.640	0	SB-31	11.5-12.5
4-Methylphenol (p-cresol)	MG/KG	0.33	80	2	0.120	0.630	0.375	1	SB-25	9-10

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.


Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-6A
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL SAMPLES
UNRESTRICTED USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Semivolatile Organic Compounds										
Acenaphthene	MG/KG	20	80	43	0.080	540.0	25.27	9	SB-18	15.8-16.8
Acenaphthylene	MG/KG	100	80	42	0.091	150.0	10.57	1	SB-25	7.2-8.2
Acetophenone	MG/KG	-	80	1	0.180	0.180	0.180	0	SB-26	2.3-2.6
Anthracene	MG/KG	100	80	53	0.076	200.0	16.13	2	SB-18	15.8-16.8
Benzaldehyde	MG/KG	-	80	1	0.220	0.220	0.220	0	SB-26	2.3-2.6
Benzo(a)anthracene	MG/KG	1	80	55	0.075	140.0	15.84	38	SB-18	15.8-16.8
Benzo(a)pyrene	MG/KG	1	80	55	0.071	150.0	12.79	38	SB-18	15.8-16.8
Benzo(b)fluoranthene	MG/KG	1	80	54	0.086	130.0	16.28	39	SB-18	15.8-16.8
Benzo(g,h,i)perylene	MG/KG	100	80	53	0.078	77.00	9.16	0	SB-18	15.8-16.8
Benzo(k)fluoranthene	MG/KG	0.8	80	51	0.056	40.00	6.37	32	SB-18	15.8-16.8
bis(2-Ethylhexyl)phthalate	MG/KG	50 CP-51	80	6	0.120	87.00	15.01	1	SB-23	13.5-14
Butylbenzylphthalate	MG/KG	100 CP-51	80	6	0.073	0.130	0.090	0	SB-21	20.7-21.1
Carbazole	MG/KG	-	80	35	0.088	77.00	5.40	0	SB-25	7.2-8.2
Chrysene	MG/KG	1	80	54	0.084	130.0	14.36	38	SB-18	15.8-16.8
Dibenz(a,h)anthracene	MG/KG	0.33	80	42	0.070	20.00	2.82	27	SB-18	15.8-16.8
Dibenzofuran	MG/KG	7	80	32	0.088	150.0	12.93	8	SB-25	7.2-8.2
Diethylphthalate	MG/KG	7.1 CP-51	80	1	0.071	0.071	0.071	0	MW-08B	9.5-10.5

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

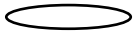

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-6A
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL SAMPLES
UNRESTRICTED USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Semivolatile Organic Compounds										
Di-n-butylphthalate	MG/KG	0.014 CP-51	80	7	0.081	0.120	0.098	7	SB-18	12.5-13.5
Fluoranthene	MG/KG	100	80	57	0.078	460.0	36.71	6	SB-18	15.8-16.8
Fluorene	MG/KG	30	80	46	0.082	350.0	21.53	5	SB-18	15.8-16.8
Indeno(1,2,3-cd)pyrene	MG/KG	0.5	80	51	0.079	64.00	9.57	39	SB-17	4-4.5
Naphthalene	MG/KG	12	80	39	0.110	840.0	63.33	16	SB-25	7.2-8.2
Phenanthrene	MG/KG	100	80	57	0.093	940.0	53.41	8	SB-18	15.8-16.8
Phenol	MG/KG	0.33	80	1	0.110	0.110	0.110	0	MW-02B	3.5-4
Pyrene	MG/KG	100	80	58	0.081	600.0	37.20	5	SB-18	15.8-16.8
Metals										
Aluminum	MG/KG	10000 CP-51	80	80	4,790	4.29E+04	1.24E+04	49	SB-19	21.6-22.7
Antimony	MG/KG	12 CP-51	80	7	0.340	2.30	0.990	0	SB-23	13.5-14
Arsenic	MG/KG	13	80	80	0.570	103.0	4.32	4	SB-30	3-3.5
Barium	MG/KG	350	80	80	39.30	719.0	116.7	1	SB-27	22-23.5
Beryllium	MG/KG	7.2	80	52	0.073	1.00	0.330	0	SB-19	21.6-22.7
Cadmium	MG/KG	2.5	80	17	0.024	24.60	1.98	2	SB-23	13.5-14
Calcium	MG/KG	10000 CP-51	80	80	843.0	6.41E+04	7,474	15	SB-17	4-4.5
Chromium	MG/KG	30	80	80	10.70	403.0	40.93	28	SB-19	21.6-22.7

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.


Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-6A
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL SAMPLES
UNRESTRICTED USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Metals										
Cobalt	MG/KG	20 CP-51	80	80	4.00	31.10	8.91	2	SB-19	21.6-22.7
Copper	MG/KG	50	80	79	2.80	222.0	36.92	15	SB-23	13.5-14
Iron	MG/KG	2000 CP-51	80	80	8,840	7.50E+04	2.07E+04	80	SB-31	4-4.5
Lead	MG/KG	63	80	80	2.20	1,240	82.62	15	SB-23	13.5-14
Magnesium	MG/KG	-	80	80	1,430	6.70E+04	6,044	0	SB-19	21.6-22.7
Manganese	MG/KG	1600	80	80	83.70	1,380	336.9	0	SB-19	21.6-22.7
Mercury	MG/KG	0.18	80	50	0.002	5.00	0.404	18	SB-31	4-4.5
Nickel	MG/KG	30	80	80	8.40	408.0	38.07	16	SB-19	21.6-22.7
Potassium	MG/KG	-	80	80	706.0	1.77E+04	4,368	0	SB-19	21.6-22.7
Selenium	MG/KG	3.9	80	28	0.460	2.60	0.945	0	SB-16	3.2-3.6
Silver	MG/KG	2	80	8	0.075	0.850	0.261	0	SB-23	13.5-14
Sodium	MG/KG	-	80	80	28.00	1,770	235.7	0	SB-23	13.5-14
Thallium	MG/KG	5 CP-51	80	63	0.220	5.60	1.32	1	SB-19	21.6-22.7
Vanadium	MG/KG	39 CP-51	80	80	13.40	57.80	28.86	12	TP-09	3.9-4.2
Zinc	MG/KG	109	80	80	15.20	7,040	171.8	14	SB-23	13.5-14
Miscellaneous Parameters										
Cyanide, Total	MG/KG	27	80	10	0.610	46.60	9.14	1	SB-17	4-4.5

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-6B
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL SAMPLES
PROTECTION OF GROUNDWATER
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Volatile Organic Compounds										
1,2,3-Trichlorobenzene	MG/KG	-	80	2	0.001	0.003	0.002	0	SB-16	13-14
1,2,4-Trichlorobenzene	MG/KG	3.4 CP-51	80	1	0.002	0.002	0.002	0	SB-16	13-14
1,2,4-Trimethylbenzene	MG/KG	3.6	80	28	0.002	76.00	7.05	8	SB-26	8-10
1,2-Dichlorobenzene	MG/KG	1.1	80	1	0.370	0.370	0.370	0	SB-16	18-19
1,2-Dichloroethane	MG/KG	0.02	80	1	0.340	0.340	0.340	1	SB-23	13.5-14
1,2-Dichloropropane	MG/KG	-	80	2	0.018	0.036	0.027	0	SB-19	10.5-11.5
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	8.4	80	23	0.003	36.00	3.21	2	SB-26	8-10
1,4-Dichlorobenzene	MG/KG	1.8	80	1	1.30	1.30	1.30	0	SB-23	13.5-14
2-Butanone	MG/KG	0.12	80	15	0.003	0.025	0.009	0	SB-27	22-23.5
2-Hexanone	MG/KG	-	80	1	5.30	5.30	5.30	0	SB-26	12.5-14.5
Acetone	MG/KG	0.05	80	45	0.004	0.120	0.022	5	SB-27	22-23.5
Benzene	MG/KG	0.06	80	17	0.002	26.00	1.71	8	SB-23	13.5-14
Carbon disulfide	MG/KG	2.7 CP-51	80	1	0.012	0.012	0.012	0	SB-18	3-3.5
Chlorobenzene	MG/KG	1.1	80	1	0.590	0.590	0.590	0	SB-23	13.5-14
Cyclohexane	MG/KG	-	80	5	0.005	6.20	2.14	0	SB-18	12.5-13.5
Ethylbenzene	MG/KG	1	80	24	0.003	74.00	6.84	8	SB-23	13.5-14
Isopropylbenzene	MG/KG	2.3 CP-51	80	23	0.002	4.00	0.567	1	SB-26	8-10

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

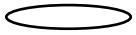
Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-6B
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL SAMPLES
PROTECTION OF GROUNDWATER
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Volatile Organic Compounds										
Methylcyclohexane	MG/KG	-	80	21	0.003	23.00	3.38	0	SB-26	8-10
Methylene chloride	MG/KG	0.05	80	11	0.002	0.010	0.004	0	SB-17	4-4.5
n-Butylbenzene	MG/KG	12	80	17	0.003	1.60	0.392	0	SB-23	13.5-14
n-Propylbenzene	MG/KG	3.9	80	23	0.003	2.10	0.476	0	SB-26	8-10
sec-Butylbenzene	MG/KG	11	80	11	0.004	0.360	0.092	0	SB-26	12.5-14.5
Styrene	MG/KG	-	80	3	0.025	8.60	2.90	0	SB-26	8-10
Tetrachloroethene	MG/KG	1.3	80	2	0.003	0.003	0.003	0	SB-27	4-4.5
Toluene	MG/KG	0.7	80	16	0.001	19.00	1.53	3	SB-26	8-10
Trichloroethene	MG/KG	0.47	80	2	0.002	0.003	0.003	0	SB-16	9-10
Xylene (total)	MG/KG	1.6	80	27	0.002	134.0	9.38	8	SB-26	8-10
Semivolatile Organic Compounds										
1,1'-Biphenyl	MG/KG	-	80	23	0.250	150.0	12.97	0	SB-18	15.8-16.8
2,4-Dimethylphenol	MG/KG	-	80	1	1.80	1.80	1.80	0	SB-25	9-10
2-Methylnaphthalene	MG/KG	36.4 CP-51	80	36	0.120	340.0	30.97	6	SB-25	7.2-8.2
2-Methylphenol (o-cresol)	MG/KG	0.33	80	1	0.310	0.310	0.310	0	SB-25	9-10
3,3'-Dichlorobenzidine	MG/KG	-	80	1	0.640	0.640	0.640	0	SB-31	11.5-12.5
4-Methylphenol (p-cresol)	MG/KG	0.33	80	2	0.120	0.630	0.375	1	SB-25	9-10

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.


Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-6B
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL SAMPLES
PROTECTION OF GROUNDWATER
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Semivolatile Organic Compounds										
Acenaphthene	MG/KG	98	80	43	0.080	540.0	25.27	2	SB-18	15.8-16.8
Acenaphthylene	MG/KG	107	80	42	0.091	150.0	10.57	1	SB-25	7.2-8.2
Acetophenone	MG/KG	-	80	1	0.180	0.180	0.180	0	SB-26	2.3-2.6
Anthracene	MG/KG	1000	80	53	0.076	200.0	16.13	0	SB-18	15.8-16.8
Benzaldehyde	MG/KG	-	80	1	0.220	0.220	0.220	0	SB-26	2.3-2.6
Benzo(a)anthracene	MG/KG	1	80	55	0.075	140.0	15.84	38	SB-18	15.8-16.8
Benzo(a)pyrene	MG/KG	22	80	55	0.071	150.0	12.79	6	SB-18	15.8-16.8
Benzo(b)fluoranthene	MG/KG	1.7	80	54	0.086	130.0	16.28	32	SB-18	15.8-16.8
Benzo(g,h,i)perylene	MG/KG	1000	80	53	0.078	77.00	9.16	0	SB-18	15.8-16.8
Benzo(k)fluoranthene	MG/KG	1.7	80	51	0.056	40.00	6.37	24	SB-18	15.8-16.8
bis(2-Ethylhexyl)phthalate	MG/KG	435 CP-51	80	6	0.120	87.00	15.01	0	SB-23	13.5-14
Butylbenzylphthalate	MG/KG	122 CP-51	80	6	0.073	0.130	0.090	0	SB-21	20.7-21.1
Carbazole	MG/KG	-	80	35	0.088	77.00	5.40	0	SB-25	7.2-8.2
Chrysene	MG/KG	1	80	54	0.084	130.0	14.36	38	SB-18	15.8-16.8
Dibenz(a,h)anthracene	MG/KG	1000	80	42	0.070	20.00	2.82	0	SB-18	15.8-16.8
Dibenzofuran	MG/KG	210	80	32	0.088	150.0	12.93	0	SB-25	7.2-8.2
Diethylphthalate	MG/KG	7.1 CP-51	80	1	0.071	0.071	0.071	0	MW-08B	9.5-10.5

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-6B
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL SAMPLES
PROTECTION OF GROUNDWATER
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Semivolatile Organic Compounds										
Di-n-butylphthalate	MG/KG	8.1 CP-51	80	7	0.081	0.120	0.098	0	SB-18	12.5-13.5
Fluoranthene	MG/KG	1000	80	57	0.078	460.0	36.71	0	SB-18	15.8-16.8
Fluorene	MG/KG	386	80	46	0.082	350.0	21.53	0	SB-18	15.8-16.8
Indeno(1,2,3-cd)pyrene	MG/KG	8.2	80	51	0.079	64.00	9.57	17	SB-17	4-4.5
Naphthalene	MG/KG	12	80	39	0.110	840.0	63.33	16	SB-25	7.2-8.2
Phenanthrene	MG/KG	1000	80	57	0.093	940.0	53.41	0	SB-18	15.8-16.8
Phenol	MG/KG	0.33	80	1	0.110	0.110	0.110	0	MW-02B	3.5-4
Pyrene	MG/KG	1000	80	58	0.081	600.0	37.20	0	SB-18	15.8-16.8
Metals										
Aluminum	MG/KG	-	80	80	4,790	4.29E+04	1.24E+04	0	SB-19	21.6-22.7
Antimony	MG/KG	-	80	7	0.340	2.30	0.990	0	SB-23	13.5-14
Arsenic	MG/KG	16	80	80	0.570	103.0	4.32	2	SB-30	3-3.5
Barium	MG/KG	820	80	80	39.30	719.0	116.7	0	SB-27	22-23.5
Beryllium	MG/KG	47	80	52	0.073	1.00	0.330	0	SB-19	21.6-22.7
Cadmium	MG/KG	7.5	80	17	0.024	24.60	1.98	1	SB-23	13.5-14
Calcium	MG/KG	-	80	80	843.0	6.41E+04	7,474	0	SB-17	4-4.5
Chromium	MG/KG	NS	80	80	10.70	403.0	40.93	0	SB-19	21.6-22.7

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-6B
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL SAMPLES
PROTECTION OF GROUNDWATER
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Metals										
Cobalt	MG/KG	-	80	80	4.00	31.10	8.91	0	SB-19	21.6-22.7
Copper	MG/KG	1720	80	79	2.80	222.0	36.92	0	SB-23	13.5-14
Iron	MG/KG	-	80	80	8,840	7.50E+04	2.07E+04	0	SB-31	4-4.5
Lead	MG/KG	450	80	80	2.20	1,240	82.62	4	SB-23	13.5-14
Magnesium	MG/KG	-	80	80	1,430	6.70E+04	6,044	0	SB-19	21.6-22.7
Manganese	MG/KG	2000	80	80	83.70	1,380	336.9	0	SB-19	21.6-22.7
Mercury	MG/KG	0.73	80	50	0.002	5.00	0.404	8	SB-31	4-4.5
Nickel	MG/KG	130	80	80	8.40	408.0	38.07	4	SB-19	21.6-22.7
Potassium	MG/KG	-	80	80	706.0	1.77E+04	4,368	0	SB-19	21.6-22.7
Selenium	MG/KG	4	80	28	0.460	2.60	0.945	0	SB-16	3.2-3.6
Silver	MG/KG	8.3	80	8	0.075	0.850	0.261	0	SB-23	13.5-14
Sodium	MG/KG	-	80	80	28.00	1,770	235.7	0	SB-23	13.5-14
Thallium	MG/KG	-	80	63	0.220	5.60	1.32	0	SB-19	21.6-22.7
Vanadium	MG/KG	-	80	80	13.40	57.80	28.86	0	TP-09	3.9-4.2
Zinc	MG/KG	2480	80	80	15.20	7,040	171.8	1	SB-23	13.5-14
Miscellaneous Parameters										
Cyanide, Total	MG/KG	40	80	10	0.610	46.60	9.14	1	SB-17	4-4.5

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater.

Concentration Exceeds Criteria

Only Detected Results Reported.

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WHERE [SITEID] = '04' AND [MATRIX] = 'SO' AND [LOGDATE] >= #10/29/2013#;

TABLE 4-6C
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL SAMPLES
COMMERCIAL USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Volatile Organic Compounds										
1,2,3-Trichlorobenzene	MG/KG	-	80	2	0.001	0.003	0.002	0	SB-16	13-14
1,2,4-Trichlorobenzene	MG/KG	-	80	1	0.002	0.002	0.002	0	SB-16	13-14
1,2,4-Trimethylbenzene	MG/KG	190	80	28	0.002	76.00	7.05	0	SB-26	8-10
1,2-Dichlorobenzene	MG/KG	500	80	1	0.370	0.370	0.370	0	SB-16	18-19
1,2-Dichloroethane	MG/KG	30	80	1	0.340	0.340	0.340	0	SB-23	13.5-14
1,2-Dichloropropane	MG/KG	-	80	2	0.018	0.036	0.027	0	SB-19	10.5-11.5
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	190	80	23	0.003	36.00	3.21	0	SB-26	8-10
1,4-Dichlorobenzene	MG/KG	130	80	1	1.30	1.30	1.30	0	SB-23	13.5-14
2-Butanone	MG/KG	500	80	15	0.003	0.025	0.009	0	SB-27	22-23.5
2-Hexanone	MG/KG	-	80	1	5.30	5.30	5.30	0	SB-26	12.5-14.5
Acetone	MG/KG	500	80	45	0.004	0.120	0.022	0	SB-27	22-23.5
Benzene	MG/KG	44	80	17	0.002	26.00	1.71	0	SB-23	13.5-14
Carbon disulfide	MG/KG	-	80	1	0.012	0.012	0.012	0	SB-18	3-3.5
Chlorobenzene	MG/KG	500	80	1	0.590	0.590	0.590	0	SB-23	13.5-14
Cyclohexane	MG/KG	-	80	5	0.005	6.20	2.14	0	SB-18	12.5-13.5
Ethylbenzene	MG/KG	390	80	24	0.003	74.00	6.84	0	SB-23	13.5-14
Isopropylbenzene	MG/KG	-	80	23	0.002	4.00	0.567	0	SB-26	8-10

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

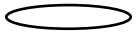
Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-6C
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL SAMPLES
COMMERCIAL USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Volatile Organic Compounds										
Methylcyclohexane	MG/KG	-	80	21	0.003	23.00	3.38	0	SB-26	8-10
Methylene chloride	MG/KG	500	80	11	0.002	0.010	0.004	0	SB-17	4-4.5
n-Butylbenzene	MG/KG	500	80	17	0.003	1.60	0.392	0	SB-23	13.5-14
n-Propylbenzene	MG/KG	500	80	23	0.003	2.10	0.476	0	SB-26	8-10
sec-Butylbenzene	MG/KG	500	80	11	0.004	0.360	0.092	0	SB-26	12.5-14.5
Styrene	MG/KG	-	80	3	0.025	8.60	2.90	0	SB-26	8-10
Tetrachloroethene	MG/KG	150	80	2	0.003	0.003	0.003	0	SB-27	4-4.5
Toluene	MG/KG	500	80	16	0.001	19.00	1.53	0	SB-26	8-10
Trichloroethene	MG/KG	200	80	2	0.002	0.003	0.003	0	SB-16	9-10
Xylene (total)	MG/KG	500	80	27	0.002	134.0	9.38	0	SB-26	8-10
Semivolatile Organic Compounds										
1,1'-Biphenyl	MG/KG	-	80	23	0.250	150.0	12.97	0	SB-18	15.8-16.8
2,4-Dimethylphenol	MG/KG	-	80	1	1.80	1.80	1.80	0	SB-25	9-10
2-Methylnaphthalene	MG/KG	-	80	36	0.120	340.0	30.97	0	SB-25	7.2-8.2
2-Methylphenol (o-cresol)	MG/KG	500	80	1	0.310	0.310	0.310	0	SB-25	9-10
3,3'-Dichlorobenzidine	MG/KG	-	80	1	0.640	0.640	0.640	0	SB-31	11.5-12.5
4-Methylphenol (p-cresol)	MG/KG	500	80	2	0.120	0.630	0.375	0	SB-25	9-10

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.


Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-6C
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL SAMPLES
COMMERCIAL USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Semivolatile Organic Compounds										
Acenaphthene	MG/KG	500	80	43	0.080	540.0	25.27	1	SB-18	15.8-16.8
Acenaphthylene	MG/KG	500	80	42	0.091	150.0	10.57	0	SB-25	7.2-8.2
Acetophenone	MG/KG	-	80	1	0.180	0.180	0.180	0	SB-26	2.3-2.6
Anthracene	MG/KG	500	80	53	0.076	200.0	16.13	0	SB-18	15.8-16.8
Benzaldehyde	MG/KG	-	80	1	0.220	0.220	0.220	0	SB-26	2.3-2.6
Benzo(a)anthracene	MG/KG	5.6	80	55	0.075	140.0	15.84	21	SB-18	15.8-16.8
Benzo(a)pyrene	MG/KG	1	80	55	0.071	150.0	12.79	38	SB-18	15.8-16.8
Benzo(b)fluoranthene	MG/KG	5.6	80	54	0.086	130.0	16.28	21	SB-18	15.8-16.8
Benzo(g,h,i)perylene	MG/KG	500	80	53	0.078	77.00	9.16	0	SB-18	15.8-16.8
Benzo(k)fluoranthene	MG/KG	56	80	51	0.056	40.00	6.37	0	SB-18	15.8-16.8
bis(2-Ethylhexyl)phthalate	MG/KG	-	80	6	0.120	87.00	15.01	0	SB-23	13.5-14
Butylbenzylphthalate	MG/KG	-	80	6	0.073	0.130	0.090	0	SB-21	20.7-21.1
Carbazole	MG/KG	-	80	35	0.088	77.00	5.40	0	SB-25	7.2-8.2
Chrysene	MG/KG	56	80	54	0.084	130.0	14.36	4	SB-18	15.8-16.8
Dibenz(a,h)anthracene	MG/KG	0.56	80	42	0.070	20.00	2.82	20	SB-18	15.8-16.8
Dibenzofuran	MG/KG	350	80	32	0.088	150.0	12.93	0	SB-25	7.2-8.2
Diethylphthalate	MG/KG	-	80	1	0.071	0.071	0.071	0	MW-08B	9.5-10.5

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-6C
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL SAMPLES
COMMERCIAL USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Semivolatile Organic Compounds										
Di-n-butylphthalate	MG/KG	-	80	7	0.081	0.120	0.098	0	SB-18	12.5-13.5
Fluoranthene	MG/KG	500	80	57	0.078	460.0	36.71	0	SB-18	15.8-16.8
Fluorene	MG/KG	500	80	46	0.082	350.0	21.53	0	SB-18	15.8-16.8
Indeno(1,2,3-cd)pyrene	MG/KG	5.6	80	51	0.079	64.00	9.57	19	SB-17	4-4.5
Naphthalene	MG/KG	500	80	39	0.110	840.0	63.33	1	SB-25	7.2-8.2
Phenanthrene	MG/KG	500	80	57	0.093	940.0	53.41	2	SB-18	15.8-16.8
Phenol	MG/KG	500	80	1	0.110	0.110	0.110	0	MW-02B	3.5-4
Pyrene	MG/KG	500	80	58	0.081	600.0	37.20	1	SB-18	15.8-16.8
Metals										
Aluminum	MG/KG	-	80	80	4,790	4.29E+04	1.24E+04	0	SB-19	21.6-22.7
Antimony	MG/KG	-	80	7	0.340	2.30	0.990	0	SB-23	13.5-14
Arsenic	MG/KG	16	80	80	0.570	103.0	4.32	2	SB-30	3-3.5
Barium	MG/KG	400	80	80	39.30	719.0	116.7	1	SB-27	22-23.5
Beryllium	MG/KG	590	80	52	0.073	1.00	0.330	0	SB-19	21.6-22.7
Cadmium	MG/KG	9.3	80	17	0.024	24.60	1.98	1	SB-23	13.5-14
Calcium	MG/KG	-	80	80	843.0	6.41E+04	7,474	0	SB-17	4-4.5
Chromium	MG/KG	1500	80	80	10.70	403.0	40.93	0	SB-19	21.6-22.7

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-6C
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL SAMPLES
COMMERCIAL USE
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

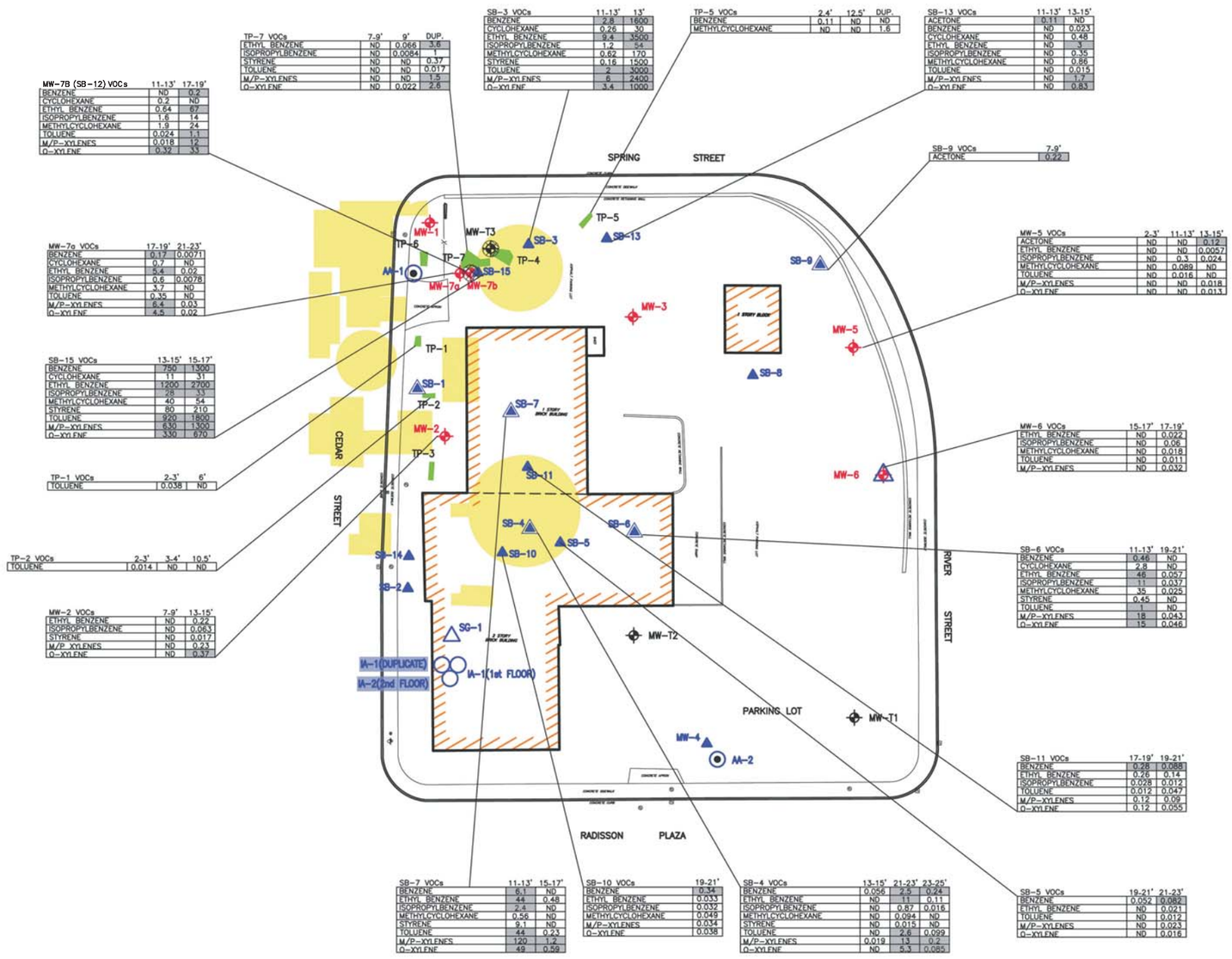
Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value	Depth Of Max
					Min	Max	Avg			
Metals										
Cobalt	MG/KG	-	80	80	4.00	31.10	8.91	0	SB-19	21.6-22.7
Copper	MG/KG	270	80	79	2.80	222.0	36.92	0	SB-23	13.5-14
Iron	MG/KG	-	80	80	8,840	7.50E+04	2.07E+04	0	SB-31	4-4.5
Lead	MG/KG	1000	80	80	2.20	1,240	82.62	2	SB-23	13.5-14
Magnesium	MG/KG	-	80	80	1,430	6.70E+04	6,044	0	SB-19	21.6-22.7
Manganese	MG/KG	10000	80	80	83.70	1,380	336.9	0	SB-19	21.6-22.7
Mercury	MG/KG	2.8	80	50	0.002	5.00	0.404	1	SB-31	4-4.5
Nickel	MG/KG	310	80	80	8.40	408.0	38.07	1	SB-19	21.6-22.7
Potassium	MG/KG	-	80	80	706.0	1.77E+04	4,368	0	SB-19	21.6-22.7
Selenium	MG/KG	1500	80	28	0.460	2.60	0.945	0	SB-16	3.2-3.6
Silver	MG/KG	1500	80	8	0.075	0.850	0.261	0	SB-23	13.5-14
Sodium	MG/KG	-	80	80	28.00	1,770	235.7	0	SB-23	13.5-14
Thallium	MG/KG	-	80	63	0.220	5.60	1.32	0	SB-19	21.6-22.7
Vanadium	MG/KG	-	80	80	13.40	57.80	28.86	0	TP-09	3.9-4.2
Zinc	MG/KG	10000	80	80	15.20	7,040	171.8	0	SB-23	13.5-14
Miscellaneous Parameters										
Cyanide, Total	MG/KG	27	80	10	0.610	46.60	9.14	1	SB-17	4-4.5

*Criteria- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial.

Concentration Exceeds Criteria

Only Detected Results Reported.

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WHERE [SITEID] = '04' AND [MATRIX] = 'SO' AND [LOGDATE] >= #10/29/2013#;



MW-7B (SB-12) VOCs	11-13'	17-19'
BENZENE	ND	0.2
CYCLOHEXANE	0.2	ND
ETHYL BENZENE	0.64	67
ISOPROPYLBENZENE	1.6	14
METHYLCYCLOHEXANE	1.9	24
TOLUENE	0.024	1.1
M/P-XYLENES	0.018	12
O-XYLENE	0.32	33

TP-7 VOCs	7-9'	9'	DUP.
ETHYL BENZENE	ND	0.066	3.6
ISOPROPYLBENZENE	ND	0.0084	1
STYRENE	ND	ND	0.37
TOLUENE	ND	ND	0.017
M/P-XYLENES	ND	ND	1.5
O-XYLENE	ND	0.022	2.6

SB-3 VOCs	11-13'	13'
BENZENE	2.8	1600
CYCLOHEXANE	0.26	30
ETHYL BENZENE	9.4	3500
ISOPROPYLBENZENE	1.2	54
METHYLCYCLOHEXANE	0.62	170
STYRENE	0.16	1500
TOLUENE	2	3000
M/P-XYLENES	6	2400
O-XYLENE	3.4	1000

TP-5 VOCs	2.4'	12.5'	DUP.
BENZENE	0.11	ND	ND
METHYLCYCLOHEXANE	ND	ND	1.6

SB-13 VOCs	11-13'	13-15'
ACETONE	0.11	ND
BENZENE	ND	0.023
CYCLOHEXANE	ND	0.48
ETHYL BENZENE	ND	3
ISOPROPYLBENZENE	ND	0.39
METHYLCYCLOHEXANE	ND	0.86
TOLUENE	ND	0.015
M/P-XYLENES	ND	1.7
O-XYLENE	ND	0.83

SB-9 VOCs	7-9'
ACETONE	0.22

MW-7a VOCs	17-19'	21-23'
BENZENE	0.17	0.0071
CYCLOHEXANE	0.7	ND
ETHYL BENZENE	5.4	0.02
ISOPROPYLBENZENE	0.6	0.0078
METHYLCYCLOHEXANE	3.7	ND
TOLUENE	0.35	ND
M/P-XYLENES	5.4	0.03
O-XYLENE	4.5	0.02

MW-5 VOCs	2-3'	11-13'	13-15'
ACETONE	ND	ND	0.12
ETHYL BENZENE	ND	ND	0.0057
ISOPROPYLBENZENE	ND	0.3	0.024
METHYLCYCLOHEXANE	ND	0.089	ND
TOLUENE	ND	0.016	ND
M/P-XYLENES	ND	ND	0.018
O-XYLENE	ND	ND	0.013

SB-15 VOCs	13-15'	15-17'
BENZENE	750	1300
CYCLOHEXANE	11	31
ETHYL BENZENE	1200	2700
ISOPROPYLBENZENE	28	33
METHYLCYCLOHEXANE	40	54
STYRENE	80	210
TOLUENE	920	1800
M/P-XYLENES	630	1300
O-XYLENE	330	670

TP-1 VOCs	2-3'	6'
TOLUENE	0.038	ND

TP-2 VOCs	2-3'	3-4'	10.5'
TOLUENE	0.014	ND	ND

MW-2 VOCs	7-9'	13-15'
ETHYL BENZENE	ND	0.22
ISOPROPYLBENZENE	ND	0.063
STYRENE	ND	0.017
M/P XYLENES	ND	0.23
O-XYLENE	ND	0.37

MW-6 VOCs	15-17'	17-19'
ETHYL BENZENE	ND	0.022
ISOPROPYLBENZENE	ND	0.06
METHYLCYCLOHEXANE	ND	0.018
TOLUENE	ND	0.011
M/P-XYLENES	ND	0.032

SB-6 VOCs	11-13'	19-21'
BENZENE	0.46	ND
CYCLOHEXANE	2.8	ND
ETHYL BENZENE	46	0.057
ISOPROPYLBENZENE	11	0.037
METHYLCYCLOHEXANE	35	0.025
STYRENE	0.45	ND
TOLUENE	1	ND
M/P-XYLENES	18	0.043
O-XYLENE	15	0.046

SB-11 VOCs	17-19'	19-21'
BENZENE	0.28	0.088
ETHYL BENZENE	0.26	0.14
ISOPROPYLBENZENE	0.028	0.012
TOLUENE	0.012	0.047
M/P-XYLENES	0.12	0.09
O-XYLENE	0.12	0.055

SB-7 VOCs	11-13'	15-17'
BENZENE	6.1	ND
ETHYL BENZENE	44	0.48
ISOPROPYLBENZENE	2.4	ND
METHYLCYCLOHEXANE	0.56	ND
STYRENE	9.1	ND
TOLUENE	44	0.23
M/P-XYLENES	120	1.2
O-XYLENE	49	0.59

SB-10 VOCs	19-21'
BENZENE	0.34
ETHYL BENZENE	0.033
ISOPROPYLBENZENE	0.032
METHYLCYCLOHEXANE	0.049
M/P-XYLENES	0.034
O-XYLENE	0.038

SB-4 VOCs	13-15'	21-23'	23-25'
BENZENE	0.056	2.5	0.24
ETHYL BENZENE	ND	11	0.11
ISOPROPYLBENZENE	ND	0.87	0.016
METHYLCYCLOHEXANE	ND	0.094	ND
STYRENE	ND	0.015	ND
TOLUENE	ND	2.6	0.099
M/P-XYLENES	0.019	13	0.2
O-XYLENE	ND	5.3	0.085

SB-5 VOCs	19-21'	21-23'
BENZENE	0.052	0.082
ETHYL BENZENE	ND	0.021
TOLUENE	ND	0.012
M/P-XYLENES	ND	0.023
O-XYLENE	ND	0.016

LEGEND:

- SOIL BORING LOCATION
- MONITORING WELL
- HISTORIC MONITORING WELL
- TEST PIT LOCATION
- APPROXIMATE LOCATION OF FORMER MGP STRUCTURES
- SOIL GAS LOCATION
- INDOOR AIR SAMPLING LOCATION
- AMBIENT AIR SAMPLING LOCATION
- NAPL OBSERVED

NOTES:

1. ALL CONCENTRATIONS ARE IN PARTS PER MILLION (ppm).
2. SHADED VALUES EXCEED 6 NYCRR PART 375 UNRESTRICTED SOIL CLEANUP OBJECTIVES.
3. ND = NOT DETECTED
4. VOCs WERE NOT DETECTED IN SUBSURFACE SOIL SAMPLES COLLECTED FROM MW-1, MW-3, SB-1, SB-2, SB-14, TP-3, TP-4 AND TP-6.
5. HISTORIC MONITORING WELLS MW-T1 AND MW-T2 ARE DAMAGED AND NOT USEABLE.
6. REFUSAL WAS ENCOUNTERED WITHIN THE TOP 2 FT AT LOCATION MW-4. THEREFORE A MONITORING WELL COULD NOT BE INSTALLED.

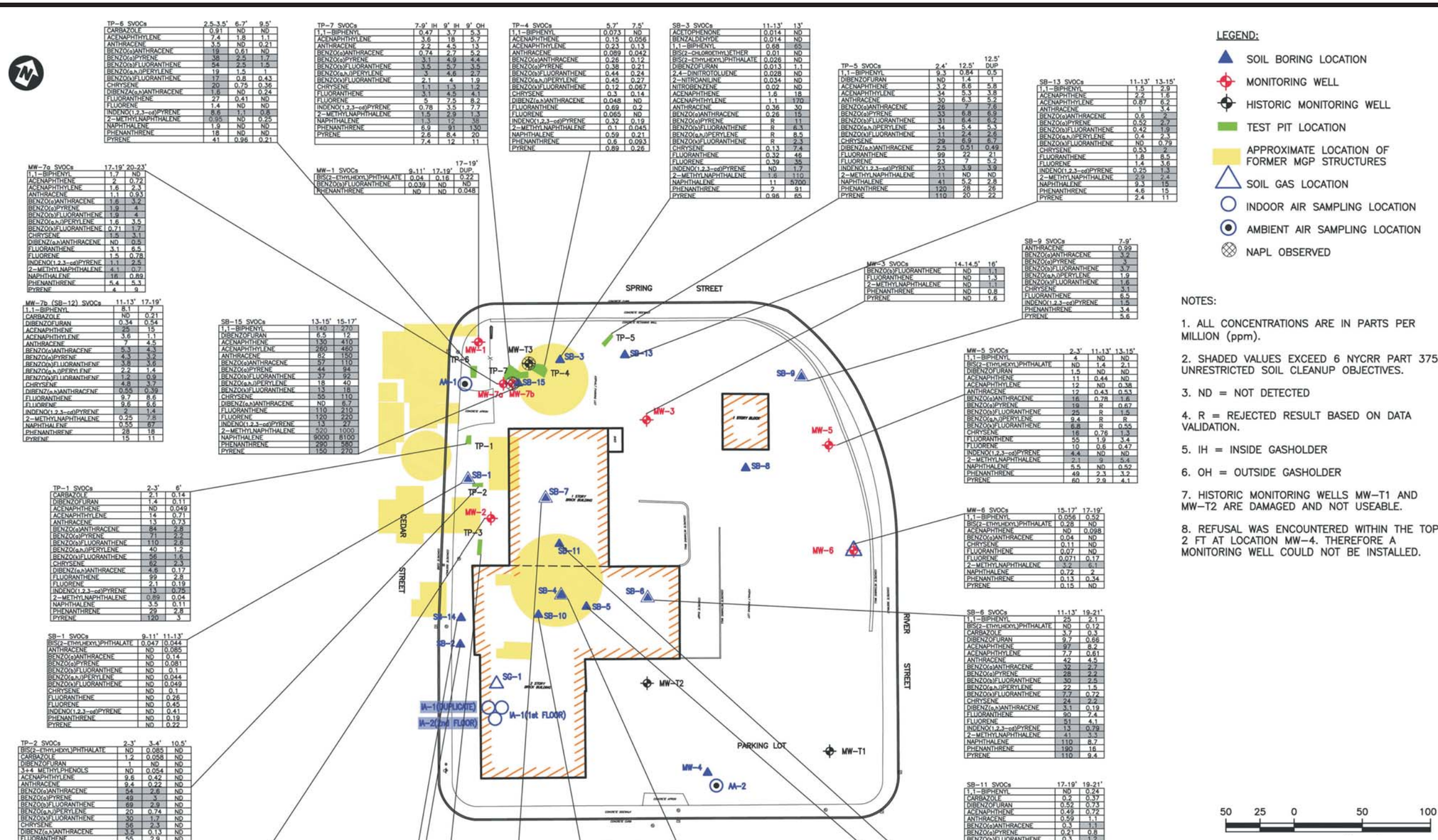
SOURCE: Draft Data Summary for Site Characterization Activities at the Cedar Street Works Site; Parsons; July 2009; Figure 5, with modifications by URS (2014).

CEDAR STREET WORKS SITE
SUMMARY OF VOCs DETECTED IN SUBSURFACE SOIL - SITE CHARACTERIZATION

conEdison URS

FIGURE 4-2

AG20989-11176944-081214-GCM



TP-6 SVOCs	2.5-3.5'	6-7'	9.5'
CARBAZOLE	0.91	ND	ND
ACENAPHTHYLENE	7.4	1.8	1.1
ANTHRACENE	3.5	ND	0.21
BENZO(a)ANTHRACENE	19	0.61	ND
BENZO(a)PYRENE	38	2.5	1.7
BENZO(b)FLUORANTHENE	54	2.5	1.5
BENZO(g,h,i)PERYLENE	19	1.5	1
BENZO(k)FLUORANTHENE	17	0.8	0.43
CHRYSENE	20	0.75	0.36
DIBENZA(a,h)ANTHRACENE	1.6	ND	0.24
FLUORANTHENE	27	0.41	ND
FLUORENE	1.4	ND	ND
INDENO(1,2,3-cd)PYRENE	8.6	1.1	0.8
2-METHYLNAPHTHALENE	0.95	ND	0.25
NAPHTHALENE	1.9	ND	ND
PHENANTHRENE	18	ND	ND
PYRENE	41	0.96	0.21

TP-7 SVOCs	7-9' IH	9' IH	9' OH
1,1-BIPHENYL	0.47	3.7	5.3
ACENAPHTHYLENE	3.6	18	5.7
ANTHRACENE	2.2	4.5	1.3
BENZO(a)ANTHRACENE	0.74	2.7	5.2
BENZO(a)PYRENE	3.1	4.9	4.4
BENZO(b)FLUORANTHENE	3.5	5.7	3.5
BENZO(g,h,i)PERYLENE	3	4.6	2.7
BENZO(k)FLUORANTHENE	2.1	4	1.9
CHRYSENE	1.1	1.3	1.2
FLUORANTHENE	3.1	4.5	4.1
FLUORENE	5	7.5	8.2
INDENO(1,2,3-cd)PYRENE	0.78	3.5	7.7
2-METHYLNAPHTHALENE	1.9	2.9	1.3
NAPHTHALENE	1.3	12	38
PHENANTHRENE	6.9	91	130
PYRENE	2.6	8.4	20
	7.4	12	11

TP-4 SVOCs	5.7'	7.5'
1,1-BIPHENYL	0.073	ND
ACENAPHTHENE	0.15	0.056
ACENAPHTHYLENE	0.23	0.13
ANTHRACENE	0.089	0.042
BENZO(a)ANTHRACENE	0.26	0.12
BENZO(a)PYRENE	0.38	0.21
BENZO(b)FLUORANTHENE	0.44	0.24
BENZO(g,h,i)PERYLENE	0.45	0.27
BENZO(k)FLUORANTHENE	0.12	0.067
CHRYSENE	0.3	0.14
DIBENZ(a,h)ANTHRACENE	0.048	ND
FLUORANTHENE	0.69	0.2
FLUORENE	0.065	ND
INDENO(1,2,3-cd)PYRENE	0.32	0.19
2-METHYLNAPHTHALENE	0.1	0.045
NAPHTHALENE	0.59	0.21
PHENANTHRENE	0.6	0.093
PYRENE	0.89	0.26

SB-3 SVOCs	11-13'	13'
ACETOPHENONE	0.014	ND
BENZALDEHYDE	0.014	ND
1,1-BIPHENYL	0.68	65
BIS(2-CHLOROETHYL)ETHER	0.01	ND
BIS(2-ETHYLHEXYL)PHTHALATE	0.026	ND
DIBENZOFURAN	0.013	1.1
2,4-DINITROTOLUENE	0.028	ND
2-NITROANILINE	0.034	ND
NITROBENZENE	0.02	ND
ACENAPHTHENE	1.6	18
ACENAPHTHYLENE	1.1	170
ANTHRACENE	0.36	30
BENZO(a)ANTHRACENE	0.26	15
BENZO(a)PYRENE	R	11
BENZO(b)FLUORANTHENE	R	8.3
BENZO(g,h,i)PERYLENE	R	8.5
BENZO(k)FLUORANTHENE	R	2.3
CHRYSENE	0.13	7.4
FLUORANTHENE	0.32	46
FLUORENE	0.39	35
INDENO(1,2,3-cd)PYRENE	ND	1.7
2-METHYLNAPHTHALENE	1.6	110
NAPHTHALENE	11	5700
PHENANTHRENE	2	91
PYRENE	0.96	65

TP-5 SVOCs	2.4'	12.5'	12.5' DUP
1,1-BIPHENYL	9.3	0.84	0.5
DIBENZOFURAN	ND	1.4	1
ACENAPHTHENE	3.2	8.6	5.8
ACENAPHTHYLENE	34	5.3	3.8
ANTHRACENE	30	6.3	5.2
BENZO(a)ANTHRACENE	26	7	7.6
BENZO(a)PYRENE	33	6.8	6.9
BENZO(b)FLUORANTHENE	31	6.4	6.2
BENZO(g,h,i)PERYLENE	34	5.4	5.3
BENZO(k)FLUORANTHENE	11	2.4	2.6
CHRYSENE	29	6.9	6.7
DIBENZ(a,h)ANTHRACENE	2.5	0.51	0.49
FLUORANTHENE	99	22	21
FLUORENE	23	7	5.2
INDENO(1,2,3-cd)PYRENE	23	3.9	3.9
2-METHYLNAPHTHALENE	11	ND	ND
NAPHTHALENE	41	5.2	2.8
PHENANTHRENE	120	28	26
PYRENE	110	20	22

SB-13 SVOCs	11-13'	13-15'
1,1-BIPHENYL	1.5	2.9
ACENAPHTHENE	2.2	1.6
ACENAPHTHYLENE	0.87	6.2
ANTHRACENE	1	3.4
BENZO(a)ANTHRACENE	0.6	2
BENZO(a)PYRENE	0.52	2.7
BENZO(b)FLUORANTHENE	0.42	1.9
BENZO(g,h,i)PERYLENE	0.4	2.3
BENZO(k)FLUORANTHENE	ND	0.79
CHRYSENE	0.53	2
FLUORANTHENE	1.8	8.5
FLUORENE	1.4	3.6
INDENO(1,2,3-cd)PYRENE	0.25	1.3
2-METHYLNAPHTHALENE	0.9	2.4
NAPHTHALENE	9.3	15
PHENANTHRENE	4.6	15
PYRENE	2.4	11

MW-7a SVOCs	17-19'	20-23'
1,1-BIPHENYL	1.7	ND
ACENAPHTHENE	2	0.72
ACENAPHTHYLENE	1.6	2.3
ANTHRACENE	1.1	0.93
BENZO(a)ANTHRACENE	1.6	3.2
BENZO(a)PYRENE	1.9	4
BENZO(b)FLUORANTHENE	1.9	4
BENZO(g,h,i)PERYLENE	1.6	3.5
BENZO(k)FLUORANTHENE	0.71	1.7
CHRYSENE	1.5	3.1
DIBENZ(a,h)ANTHRACENE	ND	0.5
FLUORANTHENE	3.1	6.5
FLUORENE	1.5	0.78
INDENO(1,2,3-cd)PYRENE	1.1	2.5
2-METHYLNAPHTHALENE	4.1	0.7
NAPHTHALENE	1.6	0.89
PHENANTHRENE	5.4	5.3
PYRENE	4	9

MW-1 SVOCs	9-11'	17-19'	17-19' DUP.
BIS(2-ETHYLHEXYL)PHTHALATE	0.04	0.16	0.22
BENZO(k)FLUORANTHENE	0.039	ND	ND
PHENANTHRENE	ND	ND	0.048

MW-3 SVOCs	14-14.5'	16'
BENZO(b)FLUORANTHENE	ND	1.1
FLUORANTHENE	ND	1.3
2-METHYLNAPHTHALENE	ND	1.1
PHENANTHRENE	ND	0.8
PYRENE	ND	1.6

SB-9 SVOCs	7-9'
ANTHRACENE	0.99
BENZO(a)ANTHRACENE	3.2
BENZO(a)PYRENE	3
BENZO(b)FLUORANTHENE	3.7
BENZO(g,h,i)PERYLENE	1.9
BENZO(k)FLUORANTHENE	1.6
CHRYSENE	3.1
FLUORANTHENE	6.5
INDENO(1,2,3-cd)PYRENE	1.5
PHENANTHRENE	3.4
PYRENE	5.6

MW-7b (SB-12) SVOCs	11-13'	17-19'
1,1-BIPHENYL	8.1	7
CARBAZOLE	ND	0.21
DIBENZOFURAN	0.34	0.54
ACENAPHTHENE	25	15
ACENAPHTHYLENE	3.8	1.1
ANTHRACENE	7	4.5
BENZO(a)ANTHRACENE	5.3	4.3
BENZO(a)PYRENE	4.3	3.2
BENZO(b)FLUORANTHENE	3.8	3.6
BENZO(g,h,i)PERYLENE	2.2	1.4
BENZO(k)FLUORANTHENE	1.2	0.9
CHRYSENE	4.8	3.7
DIBENZ(a,h)ANTHRACENE	0.55	0.39
FLUORANTHENE	9.7	8.6
FLUORENE	9.6	6.6
INDENO(1,2,3-cd)PYRENE	2	1.4
2-METHYLNAPHTHALENE	0.25	7.8
NAPHTHALENE	0.55	67
PHENANTHRENE	28	18
PYRENE	15	11

SB-15 SVOCs	13-15'	15-17'
1,1-BIPHENYL	140	270
DIBENZOFURAN	6.5	12
ACENAPHTHENE	130	410
ACENAPHTHYLENE	260	460
ANTHRACENE	82	150
BENZO(a)ANTHRACENE	57	110
BENZO(a)PYRENE	44	94
BENZO(b)FLUORANTHENE	37	92
BENZO(g,h,i)PERYLENE	18	40
BENZO(k)FLUORANTHENE	13	18
CHRYSENE	55	110
DIBENZ(a,h)ANTHRACENE	ND	6.7
FLUORANTHENE	110	210
FLUORENE	120	220
INDENO(1,2,3-cd)PYRENE	13	27
2-METHYLNAPHTHALENE	520	1000
NAPHTHALENE	9000	8100
PHENANTHRENE	280	580
PYRENE	150	270

MW-5 SVOCs	2-3'	11-13'	13-15'
1,1-BIPHENYL	4	ND	ND
BIS(2-ETHYLHEXYL)PHTHALATE	ND	1.4	2.1
DIBENZOFURAN	1.5	ND	ND
ACENAPHTHENE	11	0.44	ND
ACENAPHTHYLENE	12	ND	0.38
ANTHRACENE	12	0.43	0.53
BENZO(a)ANTHRACENE	16	0.78	1.6
BENZO(a)PYRENE	19	R	0.67
BENZO(b)FLUORANTHENE	25	R	1.5
BENZO(g,h,i)PERYLENE	9.4	R	R
BENZO(k)FLUORANTHENE	8.8	R	0.55
CHRYSENE	16	0.76	1.3
FLUORANTHENE	55	1.9	3.4
FLUORENE	10	0.6	0.47
INDENO(1,2,3-cd)PYRENE	4.4	ND	ND
2-METHYLNAPHTHALENE	2.1	9	5.4
NAPHTHALENE	5.5	ND	0.52
PHENANTHRENE	49	2.3	3.2
PYRENE	60	2.9	4.1

MW-6 SVOCs	15-17'	17-19'
1,1-BIPHENYL	0.056	0.52
BIS(2-ETHYLHEXYL)PHTHALATE	0.28	ND
ACENAPHTHENE	ND	0.098
BENZO(a)ANTHRACENE	0.04	ND
CHRYSENE	0.11	ND
FLUORANTHENE	0.07	ND
FLUORENE	0.071	0.17
2-METHYLNAPHTHALENE	0.2	0.1
NAPHTHALENE	0.72	2
PHENANTHRENE	0.13	0.34
PYRENE	0.15	ND

SB-6 SVOCs	11-13'	19-21'
1,1-BIPHENYL	25	2.1
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.12
CARBAZOLE	3.7	0.3
DIBENZOFURAN	9.7	0.66
ACENAPHTHENE	97	8.2
ACENAPHTHYLENE	7.7	0.61
ANTHRACENE	42	4.5
BENZO(a)ANTHRACENE	32	2.7
BENZO(a)PYRENE	28	2.2
BENZO(b)FLUORANTHENE	30	2.5
BENZO(g,h,i)PERYLENE	22	1.5
BENZO(k)FLUORANTHENE	7.7	0.72
CHRYSENE	24	2.2
DIBENZ(a,h)ANTHRACENE	3.1	0.19
FLUORANTHENE	90	7.4
FLUORENE	51	4.1
INDENO(1,2,3-cd)PYRENE	13	0.79
2-METHYLNAPHTHALENE	41	3.3
NAPHTHALENE	110	8.7
PHENANTHRENE	190	16
PYRENE	110	9.4

SB-11 SVOCs	17-19'	19-21'
1,1-BIPHENYL	ND	0.24
CARBAZOLE	0.2	0.17
DIBENZOFURAN	0.52	0.73
ACENAPHTHENE	0.49	0.72
ANTHRACENE	0.59	1.1
BENZO(a)ANTHRACENE	0.3	1.1
BENZO(a)PYRENE	0.21	0.8
BENZO(b)FLUORANTHENE	0.3	1.2
BENZO(g,h,i)PERYLENE	ND	0.37
BENZO(k)FLUORANTHENE	ND	0.39
CHRYSENE	0.3	1
FLUORANTHENE	1.2	3
FLUORENE	0.68	1.1
INDENO(1,2,3-cd)PYRENE	ND	0.35
2-METHYLNAPHTHALENE	0.37	0.27
NAPHTHALENE	0.95	3.8
PHENANTHRENE	2.6	4.6
PYRENE	0.94	2.7

SB-5 SVOCs	19-21'	21-23'
ACENAPHTHENE	ND	0.35
ANTHRACENE	ND	0.26
BENZO(a)ANTHRACENE	1	0.39
BENZO(a)PYRENE	ND	0.26
BENZO(b)FLUORANTHENE	0.94	0.4
BENZO(g,h,i)PERYLENE	ND	0.23
CHRYSENE	ND	0.33
FLUORANTHENE	2.1	0.79
FLUORENE	ND	0.29
NAPHTHALENE	4.2	0.75
PHENANTHRENE	1.8	0.86
PYRENE	1.8	0.78

TP-1 SVOCs	2-3'	6'
CARBAZOLE	2.1	0.14
DIBENZOFURAN	1.4	0.11
ACENAPHTHENE	ND	0.049
ACENAPHTHYLENE	14	0.71
ANTHRACENE	13	0.73
BENZO(a)ANTHRACENE	84	2.8
BENZO(a)PYRENE	71	2.2
BENZO(b)FLUORANTHENE	110	2.6
BENZO(g,h,i)PERYLENE	40	1.2
BENZO(k)FLUORANTHENE	56	1.6
CHRYSENE	62	2.3
DIBENZ(a,h)ANTHRACENE	4.8	0.17
FLUORANTHENE	99	2.8
FLUORENE	2.1	0.19
INDENO(1,2,3-cd)PYRENE	13	0.75
2-METHYLNAPHTHALENE	0.89	0.04
NAPHTHALENE	3.5	0.11
PHENANTHRENE	29	2.8
PYRENE	120	3

SB-1 SVOCs	9-11'	11-13'
BIS(2-ETHYLHEXYL)PHTHALATE	0.047	0.044
ANTHRACENE	ND	0.085
BENZO(a)ANTHRACENE	ND	0.14
BENZO(a)PYRENE	ND	0.081
BENZO(b)FLUORANTHENE	ND	0.1
BENZO(g,h,i)PERYLENE	ND	0.044
BENZO(k)FLUORANTHENE	ND	0.049
CHRYSENE	ND	0.1
FLUORANTHENE	ND	0.26
FLUORENE	ND	0.45
INDENO(1,2,3-cd)PYRENE	ND	0.41
PHENANTHRENE	ND	0.19
PYRENE	ND	0.22

TP-2 SVOCs	2-3'	3-4'	10.5'
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.085	ND
CARBAZOLE	1.2	0.058	ND
DIBENZOFURAN	1	ND	ND
3+4 METHYLPHENOLS	ND	0.054	ND
ACENAPHTHYLENE	9.6	0.42	ND
ANTHRACENE	9.4	0.22	ND
BENZO(a)ANTHRACENE	54	2.6	ND
BENZO(a)PYRENE	49	3	ND
BENZO(b)FLUORANTHENE	69	2.9	ND
BENZO(g,h,i)PERYLENE	20	0.74	ND
BENZO(k)FLUORANTHENE	30	1.2	ND
CHRYSENE	56	2.3	ND
DIBENZ(a,h)ANTHRACENE	3.5	0.13	ND
FLUORANTHENE	55	2.9	ND
FLUORENE	0.94	ND	ND
INDENO(1,2,3-cd)PYRENE	11	0.43	ND
2-METHYLNAPHTHALENE	0.89	0.041	ND
NAPHTHALENE	4.1	0.14	ND
PHENANTHRENE	14	0.38	ND
PYRENE	66	2.9	ND

SB-14 SVOCs	9-11'	23-25'
BIS(2-ETHYLHEXYL)PHTHALATE	0.046	0.039
NAPHTHALENE	0.16	ND

SB-2 SVOCs	9-11'	23-25'
BIS(2-ETHYLHEXYL)PHTHALATE	0.1	0.54
FLUORANTHENE	ND	0.05
PHENANTHRENE	ND	0.043
PYRENE	ND	0.045

MW-2 SVOCs	7-9'	13-15'
1,1-BIPHENYL	2.7	0.86
CARBAZOLE	18	2.1
DIBENZOFURAN	44	5.4
ACENAPHTHENE	13	1.4
ACENAPHTHYLENE	45	4.9
ANTHRACENE	100	12
BENZO(a)ANTHRACENE	160	13
BENZO(a)PYRENE	95	9.3
BENZO(b)FLUORANTHENE	150	14
BENZO(g,h,i)PERYLENE	54	3
BENZO(k)FLUORANTHENE	48	5.2
CHRYSENE	130	12
DIBENZ(a,h)ANTHRACENE	15	1.1
FLUORANTHENE	310	29
FLUORENE	85	9.5
INDENO(1,2,3-cd)PYRENE	43	2.3
2-METHYLNAPHTHALENE	21	3.7
NAPHTHALENE	15	4.5
PHENANTHRENE	350	34
PYRENE	280	25

TP-3 SVOCs	1-3'	3'
ACENAPHTHYLENE	1.8	1
ANTHRACENE	0.86	ND
BENZO(a)ANTHRACENE	6.7	6
BENZO(a)PYRENE	9.3	8.5
BENZO(b)FLUORANTHENE	12	11
BENZO(g,h,i)PERYLENE	8.8	7.6
BENZO(k)FLUORANTHENE	3.7	3.6
CHRYSENE	6.7	5.8
DIBENZ(a,h)ANTHRACENE	1.1	1.1
FLUORANTHENE	13	10
INDENO(1,2,3-cd)PYRENE	6.5	5.8
PHENANTHRENE	4.6	3.7
PYRENE	14	11

SB-7 SVOCs	11-13'	15-17'
1,1-BIPHENYL	18	1.2
CARBAZOLE	23	2.1
DIBENZOFURAN	61	4.5
2,4-DIMETHYLPHENOL	3.3	ND
3+4 METHYLPHENOLS	0.96	ND
ACENAPHTHENE	46	3.2
ACENAPHTHYLENE	40	5.3
ANTHRACENE	67	7.5
BENZO(a)ANTHRACENE	66	15
BENZO(a)PYRENE	43	11
BENZO(b)FLUORANTHENE	60	15
BENZO(g,h,i)PERYLENE	29	7.7
BENZO(k)FLUORANTHENE	19	5.9
CHRYSENE	49	11
DIBENZ(a,h)ANTHRACENE	7.8	1.8
FLUORANTHENE	150	34
FLUORENE	83	7.3
INDENO(1,2,3-cd)PYRENE	28	5.9
2-METHYLNAPHTHALENE	27	6
NAPHTHALENE	410	23
PHENANTHRENE	210	19
PYRENE	120	27

SB-10 SVOCs	19-21'
1,1-BIPHENYL	0.12
CARBAZOLE	0.18
DIBENZOFURAN	0.4
ACENAPHTHENE	0.35
ACENAPHTHYLENE	0.32
ANTHRACENE	0.43
BENZO(a)ANTHRACENE	0.41
BENZO(a)PYRENE	0.28
BENZO(b)FLUORANTHENE	0.39
BENZO(g,h,i)PERYLENE	0.16
BENZO(k)FLUORANTHENE	0.12
CHRYSENE	0.31
DIBENZ(a,h)ANTHRACENE	0.049
FLUORANTHENE	0.89
FLUORENE	0.55
INDENO(1,2,3-cd)PYRENE	0.14
2-METHYLNAPHTHALENE	0.76
NAPHTHALENE	1
PHENANTHRENE	1.3
PYRENE	0.74

SB-4 SVOCs	13-15'	21-23'	23-25'
1,1-BIPHENYL	ND	ND	1.1
CARBAZOLE	ND	1.8	3.9
DIBENZOFURAN	ND	3.7	8
ACENAPHTHENE	ND	4.3	6.6
ANTHRACENE	ND	6	9.5
BENZO(a)ANTHRACENE	ND	7.2	10
BENZO(a)PYRENE	ND	5.4	8
BENZO(b)FLUORANTHENE	ND	8.6	12
BENZO(g,h,i)PERYLENE	ND	2.8	4.6
BENZO(k)FLUORANTHENE	ND	2.8	3.7
CHRYSENE	ND	6.2	8.7
DIBENZA(a,h)ANTHRACENE	ND	ND	0.82
FLUORANTHENE	ND	19	27
FLUORENE	ND	5.6	9.1
INDENO(1,2,3-cd)PYRENE	ND	2.1	3
2-METHYLNAPHTHALENE	ND	3.1	4.3
NAPHTHALENE	ND	6.5	11
PHENANTHRENE	ND	25	38
PYRENE	ND	16	23

LEGEND:

- SOIL BORING LOCATION
- MONITORING WELL
- HISTORIC MONITORING WELL
- TEST PIT LOCATION
- APPROXIMATE LOCATION OF FORMER MGP STRUCTURES
- SOIL GAS LOCATION
- INDOOR AIR SAMPLING LOCATION
- AMBIENT AIR SAMPLING LOCATION
- NAPL OBSERVED

NOTES:

1. ALL CONCENTRATIONS ARE IN PARTS PER MILLION (ppm).
2. SHADED VALUES EXCEED 6 NYCRR PART 375 UNRESTRICTED SOIL CLEANUP OBJECTIVES.
3. ND = NOT DETECTED
4. R = REJECTED RESULT BASED ON DATA VALIDATION.
5. IH = INSIDE GASHOLDER
6. OH = OUTSIDE GASHOLDER
7. HISTORIC MONITORING WELLS MW-T1 AND MW-T2 ARE DAMAGED AND NOT USEABLE.
8. REFUSAL WAS ENCOUNTERED WITHIN THE TOP 2 FT AT LOCATION MW-4. THEREFORE A MONITORING WELL COULD NOT BE INSTALLED.

SOURCE: Draft Data Summary for Site Characterization Activities at the Cedar Street Works Site; Parsons; July 2009; Figure 6, with modifications by URS (2014).

CEDAR STREET WORKS SITE
SUMMARY OF SVOCs DETECTED IN SUBSURFACE SOIL - SITE CHARACTERIZATION

conEdison URS

FIGURE 4-3

AG20990-11176944-081214-GCM

N

COMMERCE DR

SPRING ST

PALMER AVE

PALMER AVE

RIVER ST

RIVER ST

CONCRETE CURB

CONCRETE RETAINING WALL

CONCRETE APRON

1 STORY BLOCK BUILDING

CONCRETE RETAINING WALL

CONCRETE RETAINING WALL

PARKING LOT

CONCRETE RAMP

2 STORY BRICK BUILDING

PARKING LOT

CEDAR ST

CONCRETE APRON

CONCRETE SIDEWALK

CONCRETE CURB

RADISSON PLZ

MW-08B (3' - 3.2') | 10/13
SVOCs:
Total PAHs | 2.2

MW-08A (2.7' - 2.9') | 10/13
SVOCs:
Total PAHs | 3.58

TP-04 (5.7' - 5.7') | 12/08
SVOCs:
Total PAHs | 5.722

TP-04 (7.5' - 7.5') | 12/08
SVOCs:
Total PAHs | 2.273

MW-09

SB-15 (13' - 15') | 1/09
VOCs:
Total BTEX | 3830
SVOCs:
Total PAHs | 10829
Miscellaneous:
Total Cyanide | 1.92

SB-15 (15' - 17') | 1/09
VOCs:
Total BTEX | 7770
SVOCs:
Total PAHs | 11897.7
Miscellaneous:
Total Cyanide | 2.52

SB-16 (3.2' - 3.6') | 11/13
SVOCs:
Total PAHs | 7.1

SB-16 (4.5' - 5') | 11/13
SVOCs:
Total PAHs | 208.65

SB-16 (9' - 10') | 11/13
VOCs:
Total BTEX | 0.0079
SVOCs:
Total PAHs | 85.86

SB-16 (13' - 14') | 11/13
SVOCs:
Total PAHs | 2.441

SB-16 (18' - 19') | 11/13
VOCs:
Total BTEX | 6.924
SVOCs:
Total PAHs | 94.61

SB-03 (11' - 13') | 12/08
VOCs:
Total BTEX | 23.6
SVOCs:
Total PAHs | 19.72

SB-03 (13' - 13') | 12/08
VOCs:
Total BTEX | 11500
SVOCs:
Total PAHs | 6317.2

TP-09 (2.7' - 2.9') | 1/14
SVOCs:
Total PAHs | 0.662

TP-09 (3.9' - 4.2') | 1/14
SVOCs:
Total PAHs | 2.862

TP-07 IN (7' - 9') | 12/08
SVOCs:
Total PAHs | 47.92
Miscellaneous:
Total Cyanide | 0.992

TP-07 IH (9' - 9') | 12/08
VOCs:
Total BTEX | 0.088
SVOCs:
Total PAHs | 187.5

TP-07 OH (9' - 9') | 12/08
VOCs:
Total BTEX | 7.717
SVOCs:
Total PAHs | 280

TP-05 (2.4' - 2.4') | 12/08
VOCs:
Total BTEX | 0.011
SVOCs:
Total PAHs | 660.7
Miscellaneous:
Total Cyanide | 1.01

TP-05 (12.5' - 12.5') | 12/08
SVOCs:
Total PAHs | 144.61

SB-12 (11' - 13') | 12/08
VOCs:
Total BTEX | 1.003
SVOCs:
Total PAHs | 122.85

SB-12 (17' - 19') | 12/08
VOCs:
Total BTEX | 113.3
SVOCs:
Total PAHs | 158.49

MW-07A (17' - 19') | 1/09
VOCs:
Total BTEX | 16.82
SVOCs:
Total PAHs | 49.11

MW-07A (21' - 23') | 1/09
VOCs:
Total BTEX | 0.0771
SVOCs:
Total PAHs | 49.62
Miscellaneous:
Total Cyanide | 1.48

SB-13 (11' - 13') | 12/08
SVOCs:
Total PAHs | 29.19

SB-13 (13' - 15') | 12/08
VOCs:
Total BTEX | 5.568
SVOCs:
Total PAHs | 79.69

SB-30 (3' - 3.5') | 11/13
SVOCs:
Total PAHs | 19.4
Miscellaneous:
Total Cyanide | 0.61

SB-19 (9' - 10') | 11/13
VOCs:
Total BTEX | 0.208
SVOCs:
Total PAHs | 14.97

SB-19 (10.5' - 11.5') | 11/13
VOCs:
Total BTEX | 0.921
SVOCs:
Total PAHs | 89.28

SB-19 (21.6' - 22.7') | 11/13
VOCs:
Total BTEX | 0.0037

MW-01 (9' - 11') | 12/08
SVOCs:
Total PAHs | 0.039

MW-01 (17' - 19') | 12/08
SVOCs:
Total PAHs | 0.048

SB-20 (3' - 3.3') | 10/13
SVOCs:
Total PAHs | 0.586

SB-18 (3' - 3.5') | 11/13
VOCs:
Total BTEX | 0.633
SVOCs:
Total PAHs | 1660
Miscellaneous:
Total Cyanide | 2.1

SB-18 (8.5' - 10') | 11/13
VOCs:
Total BTEX | 35
SVOCs:
Total PAHs | 522.9

SB-18 (12.5' - 13.5') | 11/13
VOCs:
Total BTEX | 24.3
SVOCs:
Total PAHs | 358.3

SB-18 (15.8' - 16.8') | 11/13
VOCs:
Total BTEX | 3.01
SVOCs:
Total PAHs | 4457

SB-18 (23' - 25') | 11/13
SVOCs:
Total PAHs | 0.951

SB-09 (7' - 9') | 12/08
SVOCs:
Total PAHs | 34.49

MW-03 (16' - 16') | 12/08
SVOCs:
Total PAHs | 5.9

TP-06 (2.5' - 3.5') | 12/08
SVOCs:
Total PAHs | 278.35
Miscellaneous:
Total Cyanide | 9.52

TP-06 (6' - 7') | 12/08
SVOCs:
Total PAHs | 12.93
Miscellaneous:
Total Cyanide | 2.65

TP-06 (9.5' - 9.5') | 12/08
SVOCs:
Total PAHs | 7.8
Miscellaneous:
Total Cyanide | 1.98

SB-21 (2.5' - 3.5') | 11/13
VOCs:
Total BTEX | 0.0035
SVOCs:
Total PAHs | 288.3

SB-21 (9' - 10') | 11/13
VOCs:
Total BTEX | 10.97
SVOCs:
Total PAHs | 762.7

SB-21 (20.7' - 21.1') | 11/13
VOCs:
Total BTEX | 0.0101
SVOCs:
Total PAHs | 146.46

SB-21 (21.5' - 22.5') | 11/13
SVOCs:
Total PAHs | 6.62

SB-22 (2' - 2.3') | 10/13
VOCs:
Total BTEX | 0.0041
SVOCs:
Total PAHs | 211.05

MW-10

SB-17 (4' - 4.5') | 11/13
VOCs:
Total BTEX | 0.0078
SVOCs:
Total PAHs | 791.7
Miscellaneous:
Total Cyanide | 46.9

SB-17 (10.5' - 11.5') | 11/13
SVOCs:
Total PAHs | 5.331
Miscellaneous:
Total Cyanide | 3.8

SB-17 (12.5' - 13.5') | 11/13
SVOCs:
Total PAHs | 42

SB-17 (15' - 16') | 11/13
Miscellaneous:
Total Cyanide | 2.2

SB-26 (2.3' - 2.6') | 1/14
VOCs:
Total BTEX | 0.0049
SVOCs:
Total PAHs | 961.9
Miscellaneous:
Total Cyanide | 22.5

SB-26 (8' - 10') | 1/14
VOCs:
Total BTEX | 197
SVOCs:
Total PAHs | 71.05

SB-26 (12.5' - 14.5') | 1/14
VOCs:
Total BTEX | 2.34
SVOCs:
Total PAHs | 267.42

SB-26 (17.5' - 19.1') | 1/14
VOCs:
Total BTEX | 0.0024

MW-05 (2' - 3') | 12/08
SVOCs:
Total PAHs | 313.2
Miscellaneous:
Total Cyanide | 1.29

MW-05 (11' - 13') | 12/08
VOCs:
Total BTEX | 0.016
SVOCs:
Total PAHs | 19.11

MW-05 (13' - 15') | 12/08
VOCs:
Total BTEX | 0.0367
SVOCs:
Total PAHs | 23.62

SB-01 (3.5' - 4') | 11/13
SVOCs:
Total PAHs | 11.06

SB-01 (11' - 13') | 12/08
SVOCs:
Total PAHs | 1.355

SB-07 (11' - 13') | 1/09
VOCs:
Total BTEX | 263.1
SVOCs:
Total PAHs | 1524.8
Miscellaneous:
Total Cyanide | 1.07

SB-07 (15' - 17') | 1/09
VOCs:
Total BTEX | 2.5
SVOCs:
Total PAHs | 205.6
Miscellaneous:
Total Cyanide | 0.978

SB-31 (4' - 4.5') | 11/13
SVOCs:
Total PAHs | 88.97
Miscellaneous:
Total Cyanide | 4.2

SB-31 (8.8' - 9.5') | 11/13
VOCs:
Total BTEX | 0.0596
SVOCs:
Total PAHs | 228.73

SB-31 (11.5' - 12.5') | 11/13
VOCs:
Total BTEX | 0.58
SVOCs:
Total PAHs | 572.9

SB-31 (13' - 14.5') | 11/13
VOCs:
Total BTEX | 1.9
SVOCs:
Total PAHs | 177.85

TP-01 (2' - 3') | 12/08
VOCs:
Total BTEX | 0.038
SVOCs:
Total PAHs | 722.09
Miscellaneous:
Total Cyanide | 2.35

TP-01 (6' - 6') | 12/08
SVOCs:
Total PAHs | 24.049
Miscellaneous:
Total Cyanide | 0.703

SB-23 (4.5' - 5') | 11/13
SVOCs:
Total PAHs | 256.23

SB-23 (13.5' - 14') | 11/13
VOCs:
Total BTEX | 167
SVOCs:
Total PAHs | 1690.7

SB-24 (9' - 10') | 11/13
SVOCs:
Total PAHs | 1.314

MW-02 (7' - 9') | 12/08
SVOCs:
Total PAHs | 1916
Miscellaneous:
Total Cyanide | 1.24

MW-02 (13' - 15') | 12/08
VOCs:
Total BTEX | 0.82
SVOCs:
Total PAHs | 183.9

MW-02B (3.5' - 4') | 11/13
SVOCs:
Total PAHs | 201.63

SB-11 (17' - 19') | 12/08
VOCs:
Total BTEX | 0.792
SVOCs:
Total PAHs | 8.93

SB-11 (19' - 21') | 12/08
VOCs:
Total BTEX | 0.42
SVOCs:
Total PAHs | 23

MW-06 (15' - 17') | 12/08
SVOCs:
Total PAHs | 4.491

MW-06 (17' - 19') | 12/08
VOCs:
Total BTEX | 0.065
SVOCs:
Total PAHs | 8.708

TP-02 (2' - 3') | 12/08
VOCs:
Total BTEX | 0.014
SVOCs:
Total PAHs | 452.43
Miscellaneous:
Total Cyanide | 2.1

TP-02 (3' - 4') | 12/08
SVOCs:
Total PAHs | 20.801
Miscellaneous:
Total Cyanide | 0.925

SB-25 (7.2' - 8.2') | 11/13
VOCs:
Total BTEX | 14.56
SVOCs:
Total PAHs | 3220

SB-25 (9' - 10') | 11/13
VOCs:
Total BTEX | 0.369
SVOCs:
Total PAHs | 114.55

SB-25 (13' - 14') | 11/13
VOCs:
Total BTEX | 0.0058
SVOCs:
Total PAHs | 0.093

TP-03 (1' - 3') | 12/08
SVOCs:
Total PAHs | 89.06
Miscellaneous:
Total Cyanide | 1.57

TP-03 (3' - 3') | 12/08
SVOCs:
Total PAHs | 75.1
Miscellaneous:
Total Cyanide | 4.63

SB-06 (11' - 13') | 1/09
VOCs:
Total BTEX | 80.46
SVOCs:
Total PAHs | 898.5
Miscellaneous:
Total Cyanide | 2.55

SB-06 (19' - 21') | 1/09
VOCs:
Total BTEX | 0.146
SVOCs:
Total PAHs | 75.01

SB-27 (4' - 4.5') | 1/14
SVOCs:
Total PAHs | 47.372
Miscellaneous:
Total Cyanide | 1.1

SB-27 (9' - 10') | 1/14
VOCs:
Total BTEX | 0.0133
SVOCs:
Total PAHs | 203.1

SB-27 (11' - 12.5') | 1/14
VOCs:
Total BTEX | 0.035
SVOCs:
Total PAHs | 45.23

SB-27 (22' - 23.5') | 1/14
SVOCs:
Total PAHs | 21.387
Miscellaneous:
Total Cyanide | 1.7

SB-32 (3' - 3.5') | 11/13
SVOCs:
Total PAHs | 18.804

SB-14 (9' - 11') | 12/08
SVOCs:
Total PAHs | 0.16

SB-02 (23' - 25') | 12/08
SVOCs:
Total PAHs | 0.138

MW-11A (3' - 3.5') | 11/13
SVOCs:
Total PAHs | 15.857

MW-11A (11.5' - 12.7') | 11/13
SVOCs:
Total PAHs | 0.081

SB-29 (2.5' - 3') | 1/14
SVOCs:
Total PAHs | 21.89

SB-29 (5.8' - 7') | 1/14
SVOCs:
Total PAHs | 15.92

SB-29 (20.8' - 21.9') | 1/14
VOCs:
Total BTEX | 4.34
SVOCs:
Total PAHs | 106.33
Miscellaneous:
Total Cyanide | 6.6

SB-05 (19' - 21') | 1/09
VOCs:
Total BTEX | 0.052
SVOCs:
Total PAHs | 11.84

SB-05 (21' - 23') | 1/09
VOCs:
Total BTEX | 0.154
SVOCs:
Total PAHs | 5.69
Miscellaneous:
Total Cyanide | 4.4

MW-12A (2.8' - 3.2') | 11/13
SVOCs:
Total PAHs | 9.42

SB-28 (10' - 12') | 1/14
VOCs:
Total BTEX | 0.0435
SVOCs:
Total PAHs | 4.29

SB-28 (17' - 19') | 1/14
VOCs:
Total BTEX | 0.0345
SVOCs:
Total PAHs | 20.9

SB-28 (22' - 23') | 1/14
VOCs:
Total BTEX | 0.891
SVOCs:
Total PAHs | 716.8

SB-10 (19' - 21') | 1/09
VOCs:
Total BTEX | 0.445
SVOCs:
Total PAHs | 10.199

SB-04 (13' - 15') | 12/08
VOCs:
Total BTEX | 0.075
SVOCs:
Total PAHs | 6.5

SB-04 (21' - 23') | 12/08
VOCs:
Total BTEX | 34.4
SVOCs:
Total PAHs | 125.1
Miscellaneous:
Total Cyanide | 26

SB-04 (23' - 25') | 12/08
VOCs:
Total BTEX | 0.734
SVOCs:
Total PAHs | 186.32

Legend

- Bedrock Monitoring Well (RI)
- Overburden Monitoring Well (RI)
- Monitoring Well (2009)
- Soil Boring (RI)
- Soil Boring and Rock Core (RI)
- Soil Boring (SC)
- Test Pit (RI)
- Test Pit (SC)
- Former MGP Structure
- Total BTEX > 100 mg/kg
- Total PAHs > 500 mg/kg
- Total PAHs > 500 mg/kg Isoconcentration Contour
- Total PAHs > 1000 mg/kg
- Total Cyanide > 27 mg/kg

Notes:
Units = mg/kg

50 0 50 Feet

CONSOLIDATED EDISON
CEDAR STREET WORKS SITE
SITE CHARACTERIZATION AND REMEDIAL INVESTIGATION
SOIL ANALYTICAL RESULTS
(TOTAL BTEX, PAHS, & CN)

conEdison URS

FIGURE 4-4

J:\Projects\117\0944\GIS\Maps\RI\04-03 SOIL ANALYTICAL TOTALS.mxd 8/24/2014

N

CEDAR ST

SPRING ST

PALMER AVE

CONCRETE CURB

CONCRETE SIDEWALK

CONCRETE RETAINING WALL

CONCRETE APRON

1 STORY BLOCK BUILDING

SHED

1 STORY BRICK BUILDING

2 STORY BRICK BUILDING

CONCRETE RETAINING WALL

CONCRETE RAMP

PARKING LOT

PARKING LOT

CONCRETE SIDEW

CONCRETE CUR

DR

AVE

MW-08B (3'-3.2')	CRIT 1	CRIT 2	10/13
Metals:			
Iron	2000	--	14100

MW-08B (9.5'-10.5')	CRIT 1	CRIT 2	10/13
Metals:			
Aluminum	10000	--	10200
Iron	2000	--	16200

MW-08B (15'-16')	CRIT 1	CRIT 2	10/13
Metals:			
Aluminum	10000	--	11100
Chromium	30	--	32.5
Iron	2000	--	10000

MW-08A (2.7'-2.9')	CRIT 1	CRIT 2	10/13
Metals:			
Iron	2000	--	13300

MW-08A (9.5'-10')	CRIT 1	CRIT 2	10/13
Metals:			
Iron	2000	--	14700

MW-08A (15'-16')	CRIT 1	CRIT 2	10/13
Metals:			
Aluminum	10000	--	15800
Iron	2000	--	33100

SB-20 (3'-3.3')	CRIT 1	CRIT 2	10/13
Metals:			
Calcium	10000	--	17700
Iron	2000	--	10800

SB-20 (9'-8')	CRIT 1	CRIT 2	10/13
Metals:			
Aluminum	10000	--	14400
Chromium	30	--	59.1
Iron	2000	--	21300

SB-20 (14.5'-15.5')	CRIT 1	CRIT 2	10/13
Metals:			
Iron	2000	--	13100

SB-21 (2.5'-3.5')	CRIT 1	CRIT 2	11/13
VOCs:			
Acetone	0.05	0.05	0.079
SVOCs:			
2-Methylnaphthalene	0.41	36.4	1.3
Benzo(a)anthracene	1	1	22
Benzo(a)pyrene	1	22	18
Benzo(b)fluoranthene	1	1.7	20
Benzo(k)fluoranthene	0.8	1.7	11
Chrysene	1	1	18
Dibenz(a,h)anthracene	0.33	1000	3.7
Indeno(1,2,3-cd)pyrene	0.5	8.2	12
Metals:			
Aluminum	10000	--	10400
Calcium	10000	--	28000
Iron	2000	--	13200
Lead	63	450	67.4
Mercury	0.18	0.73	0.21

SB-21 (9'-10')	CRIT 1	CRIT 2	11/13
VOCs:			
Benzene	0.06	0.06	0.11
Ethylbenzene	1	1	1.1
Xylene (total)	0.26	1.6	9.3
SVOCs:			
2-Methylnaphthalene	0.41	36.4	62
Benzo(a)anthracene	1	1	29
Benzo(a)pyrene	1	22	21
Benzo(b)fluoranthene	1	1.7	21
Benzo(k)fluoranthene	0.8	1.7	13
Chrysene	1	1	20
Dibenz(a,h)anthracene	0.33	1000	3.6
Dibenzofuran	7	210	32
Fluorene	30	386	39
Indeno(1,2,3-cd)pyrene	0.5	8.2	31
Naphthalene	12	12	220
Phenanthrene	100	1000	120
Metals:			
Iron	2000	--	13600

SB-21 (20.7'-21.1')	CRIT 1	CRIT 2	11/13
SVOCs:			
Acenaphthene	20	98	22
Benzo(a)anthracene	1	1	7.7
Benzo(a)pyrene	1	22	4.6
Benzo(k)fluoranthene	0.8	1.7	2.1
Chrysene	1	1	5.8
Dibenz(a,h)anthracene	0.33	1000	0.45
Indeno(1,2,3-cd)pyrene	0.5	8.2	1.8
Metals:			
Aluminum	10000	--	17800
Chromium	30	--	2380
Nickel	30	130	89.3

SB-21 (21.5'-22.5')	CRIT 1	CRIT 2	11/13
Metals:			
Aluminum	10000	--	30200
Chromium	30	--	218
Cobalt	20	--	22.1
Iron	2000	--	33200
Nickel	30	130	300
Vanadium	39	--	44.7

MW-10 (7'-8.5')	CRIT 1	CRIT 2	10/13
Metals:			
Aluminum	10000	--	11500
Chromium	30	--	33.6
Iron	2000	--	17000

MW-10 (21'-22')	CRIT 1	CRIT 2	10/13
Metals:			
Iron	2000	--	8940

SB-22 (2'-2.3')	CRIT 1	CRIT 2	10/13
SVOCs:			
Benzo(a)anthracene	1	1	18
Benzo(a)pyrene	1	22	18
Benzo(b)fluoranthene	1	1.7	15
Benzo(k)fluoranthene	0.8	1.7	14
Chrysene	1	1	17
Dibenz(a,h)anthracene	0.33	1000	2.2
Indeno(1,2,3-cd)pyrene	0.5	8.2	11
Metals:			
Aluminum	10000	--	10100
Iron	2000	--	14700
Mercury	0.18	0.73	0.19

SB-22 (10'-11.5')	CRIT 1	CRIT 2	10/13
Metals:			
Aluminum	10000	--	11600
Iron	2000	--	17000

SB-22 (18.5'-19.5')	CRIT 1	CRIT 2	10/13
Metals:			
Chromium	30	--	40.7
Iron	2000	--	16100
Nickel	30	130	35.8

SB-23 (4.5'-5')	CRIT 1	CRIT 2	11/13
SVOCs:			
Benzo(a)anthracene	1	1	18
Benzo(a)pyrene	1	22	15
Benzo(b)fluoranthene	1	1.7	17
Benzo(k)fluoranthene	0.8	1.7	6.8
Chrysene	1	1	14
Dibenz(a,h)anthracene	0.33	1000	2.7
Indeno(1,2,3-cd)pyrene	0.5	8.2	9
Metals:			
Calcium	10000	--	56900
Iron	2000	--	13000
Lead	63	450	67.9

SB-23 (13.5'-14')	CRIT 1	CRIT 2	11/13
VOCs:			
1,2,4-Trimethylbenzene	3.6	3.6	64
1,2-Dichloroethane	0.02	0.02	0.34
1,3,5-Trimethylbenzene (Mesitylene)	8.4	8.4	18
Acetone	0.05	0.05	0.091
Benzene	0.06	0.06	26
Ethylbenzene	1	1	74
Toluene	0.7	0.7	1
Xylene (total)	0.26	1.6	66
SVOCs:			
2-Methylnaphthalene	0.41	36.4	230
2-Methylphenol	20	98	170
Benzo(a)anthracene	1	1	66
Benzo(a)pyrene	1	22	9.7
Benzo(b)fluoranthene	1	1.7	35
Benzo(k)fluoranthene	0.8	1.7	20
bis(2-Ethylhexyl)phthalate	50	435	87
Chrysene	1	1	56
Fluorene	30	386	78
Indeno(1,2,3-cd)pyrene	0.5	8.2	20
Naphthalene	12	12	380
Phenanthrene	100	1000	260
Pyrene	100	1000	150
Metals:			
Arsenic	13	16	13.4
Cadmium	2.5	7.5	24.6
Chromium	30	--	269
Copper	50	1720	222
Iron	2000	--	41200
Lead	63	450	1240
Mercury	0.18	0.73	1.9
Zinc	109	2480	74.1

SB-24 (9'-10')	CRIT 1	CRIT 2	11/13
Metals:			
Iron	2000	--	12400

SB-24 (14'-15')	CRIT 1	CRIT 2	10/13
Metals:			
Iron	2000	--	12300

SB-25 (7.2'-8.2')	CRIT 1	CRIT 2	11/13
VOCs:			
1,2,4-Trimethylbenzene	3.6	3.6	4
Benzene	0.06	0.06	0.37
Toluene	0.7	0.7	3.6
Xylene (total)	0.26	1.6	9.6
SVOCs:			
2-Methylnaphthalene	0.41	36.4	340
Acenaphthene	20	98	41
Acenaphthylene	100	107	150
Anthracene	100	1000	180
Benzo(a)anthracene	1	1	120
Benzo(a)pyrene	1	22	21
Benzo(b)fluoranthene	1	1.7	89
Benzo(k)fluoranthene	0.8	1.7	23
Chrysene	1	1	120
Dibenz(a,h)anthracene	0.33	1000	15
Dibenzofuran	7	210	150
Fluoranthene	100	1000	280
Fluorene	30	386	230
Indeno(1,2,3-cd)pyrene	0.5	8.2	30
Naphthalene	12	12	840
Phenanthrene	100	1000	510
Pyrene	100	1000	220
Metals:			
Aluminum	10000	--	13500
Iron	2000	--	18100
Nickel	30	130	34.7

SB-25 (9'-10')	CRIT 1	CRIT 2	11/13
SVOCs:			
2-Methylnaphthalene	0.41	36.4	12
4-Methylphenol (p-cresol)	0.33	0.33	0.63
Benzo(a)anthracene	1	1	4.3
Benzo(a)pyrene	1	22	3
Benzo(b)fluoranthene	1	1.7	3.1
Benzo(k)fluoranthene	0.8	1.7	1.5
Chrysene	1	1	3.3
Dibenz(a,h)anthracene	0.33	1000	0.35
Indeno(1,2,3-cd)pyrene	0.5	8.2	1.8
Naphthalene	12	12	29
Metals:			
Aluminum	10000	--	15400
Chromium	30	--	34.1
Iron	2000	--	20600

SB-25 (13'-14')	CRIT 1	CRIT 2	11/13
Metals:			
Iron	2000	--	9760

SB-01 (3.5'-4')	CRIT 1	CRIT 2	11/13
SVOCs:			
Benzo(a)pyrene	1	22	1.5
Benzo(b)fluoranthene	1	1.7	1.6
Indeno(1,2,3-cd)pyrene	0.5	8.2	0.95
Metals:			
Aluminum	10000	--	14200
Chromium	30	--	32.5
Iron	2000	--	19400

MW-02R (3.5'-4')	CRIT 1	CRIT 2	11/13
SVOCs:			
2-Methylnaphthalene	0.41	36.4	0.52
Benzo(a)anthracene	1	1	16
Benzo(a)pyrene	1	22	20
Benzo(b)fluoranthene	1	1.7	22
Benzo(k)fluoranthene	0.8	1.7	10
Chrysene	1	1	17
Dibenz(a,h)anthracene	0.33	1000	6.2
Indeno(1,2,3-cd)pyrene	0.5	8.2	15
Metals:			
Aluminum	10000	--	10100
Calcium	10000	--	45200
Iron	2000	--	18300
Lead	63	450	127
Mercury	0.18	0.73	1.1

SB-19 (9'-10')	CRIT 1	CRIT 2	11/13
SVOCs:			
2-Methylnaphthalene	0.41	36.4	1.8
Benzo(a)anthracene	1	1	5.6
Benzo(a)pyrene	1	22	3
Benzo(b)fluoranthene	1	1.7	4.5
Benzo(k)fluoranthene	0.8	1.7	1.6
Chrysene	1	1	3.7
Dibenz(a,h)anthracene	0.33	1000	0.49
Indeno(1,2,3-cd)pyrene	0.5	8.2	2.8
Metals:			
Aluminum	10000	--	14800
Calcium	10000	--	15500
Chromium	30	--	33.2
Copper	50	1720	61.9
Iron	2000	--	21100
Lead	63	450	126
Mercury	0.18	0.73	0.28
Nickel	30	130	33.1
Vanadium	39	--	39.6
Zinc	109	2480	121

SB-19 (10.5'-11.5')	CRIT 1	CRIT 2	11/13
VOCs:			
Xylene (total)	0.26	1.6	0.75
SVOCs:			
2-Methylnaphthalene	0.41	36.4	7.8
Benzo(a)anthracene	1	1	1.6
Benzo(a)pyrene	1	22	2
Benzo(b)fluoranthene	1	1.7	1.4
Benzo(k)fluoranthene	0.8	1.7	0.85
Chrysene	1	1	1.8
Indeno(1,2,3-cd)pyrene	0.5	8.2	1.1
Naphthalene	12	12	22
Metals:			
Aluminum	10000	--	11100
Iron	2000	--	17200

SB-19 (21.6'-22.7')	CRIT 1	CRIT 2	11/13
Metals:			
Aluminum	10000	--	42900
Calcium	10000	--	25700
Chromium	30	--	403
Cobalt	20	--	31.1
Iron	2000	--	38200
Nickel	30	130	408
Thallium	5	--	5.6

MW-09 (8.2'-8.8')	CRIT 1	CRIT 2	10/13
Metals:			
Iron	2000	--	14500

MW-09 (14.8'-15.5')	CRIT 1	CRIT 2	10/13
Metals:			
Chromium	30	--	36.4
Iron	2000	--	14000

SB-16 (3.2'-3.6')	CRIT 1	CRIT 2	11/13
Metals:			
Aluminum	10000	--	12000
Calcium	10000	--	30300
Iron	2000	--	16700
Mercury	0.18	0.73	0.25

SB-16 (4.5'-5')	CRIT 1	CRIT 2	11/13
SVOCs:			
2-Methylnaphthalene	0.41	36.4	2.1
Benzo(a)anthracene	1	1	13
Benzo(a)pyrene	1	22	24
Benzo(b)fluoranthene	1	1.7	22
Benzo(k)fluoranthene	0.8	1.7	5.9
Chrysene	1	1	15
Dibenz(a,h)anthracene	0.33	1000	2.7
Indeno(1,2,3-cd)pyrene	0.5	8.2	19
Metals:			
Iron	2000	--	8840

SB-16 (9'-10')	CRIT 1	CRIT 2	11/13
SVOCs:			
Benzo(a)anthracene	1	1	4.9
Benzo(a)pyrene	1	22	4
Benzo(b)fluoranthene	1	1.7	2.7
Benzo(k)fluoranthene	0.8	1.7	1.9
Chrysene	1	1	4.6
Dibenz(a,h)anthracene	0.33	1000	0.36
Indeno(1,2,3-cd)pyrene	0.5	8.2	1.8
Metals:			
Aluminum	10000	--	39500
Chromium	30	--	46
Copper	50	1720	79
Iron	2000	--	23900
Nickel	30	130	38.9
Vanadium	39	--	56.6

SB-16 (13'-14')	CRIT 1	CRIT 2	11/13
Metals:			
Iron	2000	--	14100

SB-16 (18'-19')	CRIT 1	CRIT 2	11/13
VOCs:			
Benzene	0.06	0.06	0.084
Ethylbenzene	1	1	1.2
Xylene (total)	0.26	1.6	5.5
SVOCs:			
2-Methylnaphthalene	0.41	36.4	6.7
Benzo(a)anthracene	1	1	2.5
Benzo(a)pyrene	1	22	2.4
Benzo(b)fluoranthene	1	1.7	1.4
Benzo(k)fluoranthene	0.8	1.7	1.5
Chrysene	1	1	2.7
Indeno(1,2,3-cd)pyrene	0.5	8.2	1.1
Naphthalene	12	12	22
Metals:			
Iron	2000	--	11300

SB-30 (3'-3.5')	CRIT 1	CRIT 2	11/13
SVOCs:			
Benzo(a)anthracene	1	1	1.4
Benzo(a)pyrene	1	22	1.5
Benzo(b)fluoranthene	1	1.7	1.8
Benzo(k)fluoranthene	0.8	1.7	1.3
Chrysene	1	1	1.5
Dibenz(a,h)anthracene	0.33	1000	0.43
Di-n-butylphthalate	0.014	8.1	0.081
Indeno(1,2,3-cd)pyrene	0.5	8.2	1.4
Metals:			
Aluminum	10000	--	10500
Arsenic	13	16	103
Chromium	30	--	36.7
Copper	50	1720	145
Iron	2000	--	20800
Lead	63	450	1010
Mercury	0.18	0.73	1.5
Nickel	30	130	62.4
Zinc	109	2480	361

SB-30 (5.8'-7')	CRIT 1	CRIT 2	11/13
Metals:			
Aluminum	10000	--	19400
Chromium	30	--	32.4
Iron	2000	--	13200
Vanadium	39	--	50.5

SB-18 (3'-3.5')	CRIT 1	CRIT 2	11/13
VOCs:			
Benzene	0.06	0.06	0.068
Xylene (total)	0.26	1.6	0.36
SVOCs:			
2-Methylnaphthalene	0.41	36.4	51
Benzo(a)anthracene	1	1	90
Benzo(a)pyrene	1	22	80
Benzo(b)fluoranthene	1	1.7	110
Benzo(k)fluoranthene	0.8	1.7	40
Chrysene	1	1	100
Dibenz(a,h)anthracene	0.33	1000	12
Dibenzofuran	7	210	41
Fluoranthene	100	1000	220
Fluorene	30	386	57
Indeno(1,2,3-cd)pyrene	0.5	8.2	44
Naphthalene	12	12	140
Phenanthrene	100	1000	200
Pyrene	100	1000	170
Metals:			
Aluminum	10000	--	13400
Iron	2000	--	19200
Zinc	109	2480	204

SB-18 (8.5'-10')	CRIT 1	CRIT 2	11/13
VOCs:			
1,2,4-Trimethylbenzene	3.6	3.6	11
Benzene	0.06	0.06	1.1
Ethylbenzene	1	1	22
Xylene (total)	0.26	1.6	11.9
SVOCs:			
2-Methylnaphthalene	0.41	36.4	23
Acenaphthene	20	98	22
Benzo(a)anthracene	1	1	28
Benzo(a)pyrene	1	22	21
Benzo(b)fluoranthene	1	1.7	22
Benzo(k)fluoranthene	0.8	1.7	11
Chrysene	1	1	20
Dibenz(a,h)anthracene	0.33	1000	3.2
Dibenzofuran	7	210	12
Indeno(1,2,3-cd)pyrene	0.5	8.2	11
Naphthalene	12	12	130
Metals:			
Aluminum	10000	--	17200
Iron	2000	--	16400

SB-18 (12.5'-13.5')	CRIT 1	CRIT 2	11/13
VOCs:			
1,2,4-Trimethylbenzene	3.6	3.6	9.4
Benzene	0.06	0.06	1.1
Ethylbenzene	1	1	15
Xylene (total)	0.26	1.6	8.2
SVOCs:			
2-Methylnaphthalene	0.41	36.4	27
Acenaphthene	20	98	37
Benzo(a)anthracene	1	1	140
Benzo(a)pyrene	1	22	8.9
Benzo(b)fluoranthene	1	1.7	8
Benzo(k)fluoranthene	0.8	1.7	3.9
Chrysene	1	1	8.9
Dibenz(a,h)anthracene	0.33	1000	1.2
Dibenzofuran	7	210	9.5
Di-n-butylphthalate	0.014	8.1	0.12
Indeno(1,2,3-cd)pyrene	0.5	8.2	4.4
Naphthalene	12	12	93
Metals:			
Aluminum	10000	--	13700
Iron	2000	--	19600

SB-18 (15.8'-16.8')	CRIT 1	CRIT 2	11/13
VOCs:			
Ethylbenzene	1	1	1.6
Xylene (total)	0.26	1.6	1.41
SVOCs:			
2-Methylnaphthalene	0.41	36.4	180
Acenaphthene	20	98	540
Anthracene	100	1000	200
Benzo(a)anthracene	1	1	140
Benzo(a)pyrene	1	22	150
Benzo(b)fluoranthene	1	1.7	130
Benzo(k)fluoranthene	0.8	1.7	40
Chrysene	1	1	130
Dibenz(a,h)anthracene	0.33	1000	20
Dibenzofuran	7	210	92
Fluoranthene	100	1000	460
Fluorene	30	386	350
Indeno(1,2,3-cd)pyrene	0.5	8.2	62
Naphthalene	12	12	380
Phenanthrene	100	1000	960
Pyrene	100	1000	600
Metals:			
Iron	2000	--	20200

SB-17 (4'-4.5')	CRIT 1	CRIT 2	11/13
SVOCs:			
2-Methylnaphthalene	0.41	36.4	2.2
Benzo(a)anthracene	1	1	65
Benzo(a)pyrene	1	22	77
Benzo(b)fluoranthene	1	1.7	110
Benzo(k)fluoranthene	0.8	1.7	39
Chrysene	1	1	60
Dibenz(a,h)anthracene	0.33	1000	13
Fluoranthene	100	1000	120
Indeno(1,2,3-cd)pyrene	0.5	8.2	64
Metals:			
Calcium	10000	--	64100
Copper	50	1720	78.7
Iron	2000	--	12400
Lead	63	450	264
Mercury	0.18	0.73	0.99
Nickel	30	130	59.1
Miscellaneous:			
Cyanide, Total	27	40	46.6

SB-17 (10.5'-11.5')	CRIT 1	CRIT 2	11/13
Metals:			
Iron	2000	--	11400

SB-17 (12.5'-13.5')	CRIT 1	CRIT 2	11/13
SVOCs:			
Benzo(a)anthracene	1	1	2.4
Benzo(a)pyrene	1	22	1.7
Benzo(b)fluoranthene	1	1.7	1.5
Chrysene	1	1	2.4
Metals:			
Iron	2000	--	14900

SB-17 (15'-16')	CRIT 1	CRIT 2	11/13
SVOCs:			
Di-n-butylphthalate	0.014	8.1	0.088
Metals:			
Iron	2000	--	13400

SB-26 (2.3'-2.6')	CRIT 1	CRIT 2	11/14
SVOCs:			
2-Methylnaphthalene	0.41	36.4	4
Benzo(a)anthracene	1	1	50
Benzo(a)pyrene	1	22	56
Benzo(b)fluoranthene	1	1.7	71
Benzo(k)fluoranthene	0.8	1.7	18
Chrysene	1	1	53
Dibenz(a,h)anthracene	0.33	1000	7.2
Di-n-butylphthalate	0.014	8.1	0.093
Fluoranthene	100	1000	150
Indeno(1,2,3-cd)pyrene	0.5	8.2	63
Naphthalene	12	12	140
Phenanthrene	100	1000	190
Metals:			
Calcium	10000	--	34600
Chromium	30	--	42.1
Copper	50	1720	119
Iron	2000	--	40000
Lead	63	450	236
Mercury	0.18	0.73	1.7
Nickel	30	130	260
Zinc	109	2480	246

SB-26 (8'-10')	CRIT 1	CRIT 2	11/14
VOCs:			
1,2,4-Trimethylbenzene	3.6	3.6	76
1,3,5-Trimethylbenzene (Mesitylene)	8.4	8.4	36
Ethylbenzene	1	1	64
Isopropylbenzene	2.3	2.3	4
Toluene	0.7	0.7	19
Xylene (total)	0.26	1.6	134
SVOCs:			
2-Methylnaphthalene	0.41	36.4	4.4
Benzo(a)anthracene	1	1	2.3
Benzo(a)pyrene	1	22	1.8
Benzo(b)fluoranthene	1	1.7	2.2
Benzo(k)fluoranthene	0.8	1.7	1.8
Chrysene	1	1	2.3
Dibenz(a,h)anthracene	0.33	1000	0.82
Indeno(1,2,3-cd)pyrene	0.5	8.2	1.3
Naphthalene	12	12	20
Metals:			
Aluminum	10000	--	18700
Iron	2000	--	21100

SB-26 (12.5'-14.5')	CRIT 1	CRIT 2	11/14
VOCs:			
1,2,4-Trimethylbenzene	3.6	3.6	4.9
Xylene (total)	0.26	1.6	1.6
SVOCs:			
2-Methylnaphthalene	0.41	36.4	7
Acenaphthene	20	98	38
Benzo(a)anthracene	1	1	10
Benzo(a)pyrene	1	22	7.5
Benzo(b)fluoranthene	1	1.7	7.4
Benzo(k)fluoranthene	0.8	1.7	2.4
Chrysene	1	1	8.4
Dibenz(a,h)anthracene	0.33	1000	0.35
Di-n-butylphthalate	0.014	8.1	0.095
Indeno(1,2,3-cd)pyrene	0.5	8.2	1.6
Naphthalene	12	12	35
Metals:			
Aluminum	10000	--	12900
Chromium	30	--	35.6
Iron	2000	--	18200

SB-26 (17.5'-19.1')	CRIT 1	CRIT 2	11/14
Metals:			
Aluminum	10000	--	10500
Iron	2000	--	15600

SB-27 (4'-4.5')	CRIT 1	CRIT 2	11/14
SVOCs:			
Benzo(a)anthracene	1	1	3.7
Benzo(a)pyrene	1	22	3
Benzo(b)fluoranthene	1	1.7	4.5
Benzo(k)fluoranthene	0.8	1.7	1.6
Chrysene	1	1	3.7
Dibenz(a,h)anthracene	0.33	1000	0.49
Indeno(1,2,3-cd)pyrene	0.5	8.2	2.8
Metals:			
Aluminum	10000	--	14800
Calcium	10000	--	15500
Chromium	30	--	33.2
Copper	50	1720	61.9
Iron	2000	--	21100
Lead	63	450	126
Mercury	0.18	0.73	0.28
Nickel	30	130	33.1
Vanadium	39	--	39.6
Zinc	109	2480	121

SB-27 (9'-10')	CRIT 1	CRIT 2	11/14
SVOCs:			
Benzo(a)anthracene	1	1	15
Benzo(a)pyrene	1	22	12
Benzo(b)fluoranthene	1	1.7	16
Benzo(k)fluoranthene	0.8	1.7	4.2
Chrysene	1	1	13
Dibenz(a,h)anthracene	0.33	1000	1.5
Indeno(1,2,3-cd)pyrene	0.5	8.2	8
Metals:			
Aluminum	10000	--	18900
Chromium	30	--	38.5
Iron	2000	--	30800
Vanadium	39	--	46.1

SB-27 (11'-12.5')	CRIT 1	CRIT 2	11/14
SVOCs:			
2-Methylnaphthalene	0.41	36.4	5.8
Metals:			
Iron	2000	--	14400
Mercury	0.18	0.73	0.23

SB-27 (22'-23.5')	CRIT 1	CRIT 2	11/14
VOCs:			
Acetone	0.05	0.05	0.12
SVOCs:			
Benzo(a)anthracene	1	1	1.2
Benzo(a)pyrene	1	22	1.1
Benzo(b)fluoranthene	1	1.7	1.3
Chrysene	1	1	1.2
Indeno(1,2,3-cd)pyrene	0.5	8.2	0.89
Metals:			
Aluminum	10000	--	15400
Barium	150	820	719
Cadmium	2.5	7.5	3
Calcium	10000	--	12500
Chromium	30	--	89.1
Copper	50	1720	72.6
Iron	2000	--	63900
Lead	63	450	801
Nickel	30

N

CEDAR ST

SPRING ST

PALMER AVE

PALMER AVE

COMMERCE DR

CONCRETE CURB

CONCRETE SIDEWALK

CONCRETE RETAINING WALL

RIVER ST

CONCRETE APRON

1 STORY BLOCK BUILDING

SHED

1 STORY BRICK BUILDING

CONCRETE RETAINING WALL

CONCRETE RETAINING WALL

LOT

CONCRETE RAMP

2 STORY BRICK BUILDING

PARKING LOT

CEDAR ST

RIVER ST

CONCRETE APRON

CONCRETE SIDEWALK

CONCRETE CURB

RADISSON PLZ

MW-09

MW-08B

MW-08A

TP-09

SB-20

SB-24

MW-12A

SB-16 (4.5'-5') | CRIT | 11/13

SVOCs:

Benzo(a)anthracene	5.6	13
Benzo(a)pyrene	1	24
Benzo(b)fluoranthene	5.6	22
Dibenz(a,h)anthracene	0.56	2.7
Indeno(1,2,3-cd)pyrene	5.6	19

SB-16 (9'-10') | CRIT | 11/13

SVOCs:

Benzo(a)pyrene	1	4

SB-16 (18'-19') | CRIT | 11/13

SVOCs:

Benzo(a)pyrene	1	2.4

SB-30 (3'-3.5') | CRIT | 11/13

SVOCs:

Benzo(a)pyrene	1	1.5

Metals:

Arsenic	16	103
Lead	1000	1010

SB-19 (10.5'-11.5') | CRIT | 11/13

SVOCs:

Benzo(a)pyrene	1	2

SB-19 (21.6'-22.7') | CRIT | 11/13

Metals:

Nickel	310	408

SB-17 (4'-4.5') | CRIT | 11/13

SVOCs:

Benzo(a)anthracene	5.6	65
Benzo(a)pyrene	1	77
Benzo(b)fluoranthene	5.6	110
Chrysene	56	60
Dibenz(a,h)anthracene	0.56	13
Indeno(1,2,3-cd)pyrene	5.6	64

Miscellaneous:

Cyanide, Total	27	46.6

SB-17 (12.5'-13.5') | CRIT | 11/13

SVOCs:

Benzo(a)pyrene	1	1.7

SB-18 (3'-3.5') | CRIT | 11/13

SVOCs:

Benzo(a)anthracene	5.6	90
Benzo(a)pyrene	1	80
Benzo(b)fluoranthene	5.6	110
Chrysene	56	80
Dibenz(a,h)anthracene	0.56	12
Indeno(1,2,3-cd)pyrene	5.6	44

SB-18 (8.5'-10') | CRIT | 11/13

SVOCs:

Benzo(a)anthracene	5.6	28
Benzo(a)pyrene	1	21
Benzo(b)fluoranthene	5.6	22
Dibenz(a,h)anthracene	0.56	3.2
Indeno(1,2,3-cd)pyrene	5.6	11

SB-18 (12.5'-13.5') | CRIT | 11/13

SVOCs:

Benzo(a)anthracene	5.6	11
Benzo(a)pyrene	1	8.9
Benzo(b)fluoranthene	5.6	8
Dibenz(a,h)anthracene	0.56	1.2

SB-18 (15.8'-16.8') | CRIT | 11/13

SVOCs:

Acenaphthene	500	540
Benzo(a)anthracene	5.6	140
Benzo(a)pyrene	1	150
Benzo(b)fluoranthene	5.6	130
Chrysene	56	130
Dibenz(a,h)anthracene	0.56	20
Indeno(1,2,3-cd)pyrene	5.6	62
Phenanthrene	500	940
Pyrene	500	600

SB-21 (2.5'-3.5') | CRIT | 11/13

SVOCs:

Benzo(a)anthracene	5.6	22
Benzo(a)pyrene	1	18
Benzo(b)fluoranthene	5.6	20
Dibenz(a,h)anthracene	0.56	3.7
Indeno(1,2,3-cd)pyrene	5.6	12

SB-21 (9'-10') | CRIT | 11/13

SVOCs:

Benzo(a)anthracene	5.6	29
Benzo(a)pyrene	1	21
Benzo(b)fluoranthene	5.6	21
Dibenz(a,h)anthracene	0.56	3.6
Indeno(1,2,3-cd)pyrene	5.6	11

SB-21 (20.7'-21.1') | CRIT | 11/13

SVOCs:

Benzo(a)anthracene	5.6	7.7
Benzo(a)pyrene	1	4.6

SB-22 (2'-2.3') | CRIT | 10/13

SVOCs:

Benzo(a)anthracene	5.6	18
Benzo(a)pyrene	1	16
Benzo(b)fluoranthene	5.6	15
Dibenz(a,h)anthracene	0.56	2.2
Indeno(1,2,3-cd)pyrene	5.6	11

SB-23 (4.5'-5') | CRIT | 11/13

SVOCs:

Benzo(a)anthracene	5.6	18
Benzo(a)pyrene	1	15
Benzo(b)fluoranthene	5.6	17
Dibenz(a,h)anthracene	0.56	2.7
Indeno(1,2,3-cd)pyrene	5.6	9

SB-23 (13.5'-14') | CRIT | 11/13

SVOCs:

Benzo(a)anthracene	5.6	66
Benzo(a)pyrene	1	9.7
Benzo(b)fluoranthene	5.6	35
Indeno(1,2,3-cd)pyrene	5.6	20

Metals:

Cadmium	9.3	24.6
Lead	1000	1240

SB-01 (3.5'-4') | CRIT | 11/13

SVOCs:

Benzo(a)pyrene	1	1.5

SB-26 (2.5'-2.6') | CRIT | 1/14

SVOCs:

Benzo(a)anthracene	5.6	50
Benzo(a)pyrene	1	56
Benzo(b)fluoranthene	5.6	71
Dibenz(a,h)anthracene	0.56	7.2
Indeno(1,2,3-cd)pyrene	5.6	63

SB-26 (8'-10') | CRIT | 1/14

SVOCs:

Benzo(a)pyrene	1	1.8

SB-26 (12.5'-14.5') | CRIT | 1/14

SVOCs:

Benzo(a)anthracene	5.6	10
Benzo(a)pyrene	1	7.5
Benzo(b)fluoranthene	5.6	7.8
Dibenz(a,h)anthracene	0.56	0.82

SB-31 (4'-4.5') | CRIT | 11/13

SVOCs:

Benzo(a)pyrene	1	8.4
Benzo(b)fluoranthene	5.6	11
Dibenz(a,h)anthracene	0.56	1.5
Indeno(1,2,3-cd)pyrene	5.6	11

Metals:

Mercury	2.8	5

SB-31 (8.8'-9.5') | CRIT | 11/13

SVOCs:

Benzo(a)anthracene	5.6	21
Benzo(a)pyrene	1	22
Benzo(b)fluoranthene	5.6	27
Dibenz(a,h)anthracene	0.56	4.6
Indeno(1,2,3-cd)pyrene	5.6	16

SB-31 (11.5'-12.5') | CRIT | 11/13

SVOCs:

Benzo(a)anthracene	5.6	19
Benzo(a)pyrene	1	15
Benzo(b)fluoranthene	5.6	13
Dibenz(a,h)anthracene	0.56	1.5
Indeno(1,2,3-cd)pyrene	5.6	7

SB-31 (13'-14.5') | CRIT | 11/13

SVOCs:

Benzo(a)pyrene	1	3.9

SB-25 (7.2'-8.2') | CRIT | 11/13

SVOCs:

Benzo(a)anthracene	5.6	120
Benzo(a)pyrene	1	21
Benzo(b)fluoranthene	5.6	89
Chrysene	56	120
Dibenz(a,h)anthracene	0.56	15
Indeno(1,2,3-cd)pyrene	5.6	38
Naphthalene	500	840
Phenanthrene	500	510

SB-25 (9'-10') | CRIT | 11/13

SVOCs:

Benzo(a)pyrene	1	3

MW-02B (3.5'-4') | CRIT | 11/13

SVOCs:

Benzo(a)anthracene	5.6	16
Benzo(a)pyrene	1	20
Benzo(b)fluoranthene	5.6	22
Dibenz(a,h)anthracene	0.56	6.2
Indeno(1,2,3-cd)pyrene	5.6	15

SB-27 (4'-4.5') | CRIT | 1/14

SVOCs:

Benzo(a)pyrene	1	3

SB-27 (9'-10') | CRIT | 1/14

SVOCs:

Benzo(a)anthracene	5.6	15
Benzo(a)pyrene	1	12
Benzo(b)fluoranthene	5.6	16
Dibenz(a,h)anthracene	0.56	1.5
Indeno(1,2,3-cd)pyrene	5.6	8

SB-27 (22'-23.5') | CRIT | 1/14

SVOCs:

Benzo(a)pyrene	1	1.1

Metals:

Barium	400	719

SB-28 (22'-23') | CRIT | 1/14

SVOCs:

Benzo(a)anthracene	5.6	49
Benzo(a)pyrene	1	38
Benzo(b)fluoranthene	5.6	55
Dibenz(a,h)anthracene	0.56	5.7
Indeno(1,2,3-cd)pyrene	5.6	27

SB-29 (2.5'-3') | CRIT | 1/14

SVOCs:

Benzo(a)pyrene	1	1.6

SB-29 (20.8'-21.9') | CRIT | 1/14

SVOCs:

Benzo(a)pyrene	1	1.8

SB-32 (3'-3.5') | CRIT | 11/13

SVOCs:

Benzo(a)pyrene	1	2

Metals:

Arsenic	16	28.4

MW-11A (3'-3.5') | CRIT | 11/13

SVOCs:

Benzo(a)pyrene	1	1.4

Legend

- Bedrock Monitoring Well (RI)
- Overburden Monitoring Well (RI)
- Soil Boring (RI)
- Soil Boring and Rock Core (RI)
- Soil Boring (SC)
- Test Pit (RI)
- Former MGP Structure

Notes:
CRIT = Commercial Use Criteria
Units = mg/kg

50 0 50 Feet

CONSOLIDATED EDISON CEDAR STREET WORKS SITE REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS (COMMERCIAL USE CRITERIA)

conEdison URS

FIGURE 4-6

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TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-02B	MW-02B	MW-08A	MW-08A	MW-08A
Sample ID		111413-DUP-1	MW-02B (3.5-4)	MW-08A (2.7-2.9)	MW-08A (9.5-10)	MW-08A (15-16)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.5-4.0	3.5-4.0	2.7-2.9	9.5-10.0	15.0-16.0
Date Sampled		11/14/13	11/14/13	10/29/13	10/30/13	10/30/13
Parameter	Units	Field Duplicate (1-1)				
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,1,2,2-Tetrachloroethane	MG/KG	0.0066 UJ	0.0051 UJ	0.0051 U	0.0054 U	0.0049 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 UJ	0.0049 UJ
1,1,2-Trichloroethane	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,1-Dichloroethane	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,1-Dichloroethene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,2,3-Trichlorobenzene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,2,4-Trichlorobenzene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,2,4-Trimethylbenzene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,2-Dibromo-3-chloropropane	MG/KG	0.0066 UJ	0.0051 UJ	0.0051 U	0.0054 U	0.0049 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,2-Dichlorobenzene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,2-Dichloroethane	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,2-Dichloroethene (cis)	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,2-Dichloroethene (trans)	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,2-Dichloropropane	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,3-Dichlorobenzene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,3-Dichloropropene (cis)	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,3-Dichloropropene (trans)	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,4-Dichlorobenzene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
1,4-Dioxane	MG/KG	R	R	R	R	R
2-Butanone	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 UJ	0.0049 UJ
2-Hexanone	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
4-Methyl-2-pentanone	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 UJ	0.0049 UJ

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-02B	MW-02B	MW-08A	MW-08A	MW-08A
Sample ID		111413-DUP-1	MW-02B (3.5-4)	MW-08A (2.7-2.9)	MW-08A (9.5-10)	MW-08A (15-16)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.5-4.0	3.5-4.0	2.7-2.9	9.5-10.0	15.0-16.0
Date Sampled		11/14/13	11/14/13	10/29/13	10/30/13	10/30/13
Parameter	Units	Field Duplicate (1-1)				
Volatile Organic Compounds						
Acetone	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0044 J
Benzene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Bromochloromethane	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Bromodichloromethane	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Bromoform	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Bromomethane	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Carbon disulfide	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Carbon tetrachloride	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Chlorobenzene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Chloroethane	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Chloroform	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Chloromethane	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Cyclohexane	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Dibromochloromethane	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Dichlorodifluoromethane	MG/KG	0.0066 UJ	0.0051 UJ	0.0051 U	0.0054 U	0.0049 U
Ethylbenzene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Isopropylbenzene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Methyl acetate	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Methyl tert-butyl ether	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Methylcyclohexane	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Methylene chloride	MG/KG	0.0044 J	0.0021 J	0.0023 J	0.0054 U	0.0049 U
n-Butylbenzene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
n-Propylbenzene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
sec-Butylbenzene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Styrene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U

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Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-02B	MW-02B	MW-08A	MW-08A	MW-08A
Sample ID		111413-DUP-1	MW-02B (3.5-4)	MW-08A (2.7-2.9)	MW-08A (9.5-10)	MW-08A (15-16)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.5-4.0	3.5-4.0	2.7-2.9	9.5-10.0	15.0-16.0
Date Sampled		11/14/13	11/14/13	10/29/13	10/30/13	10/30/13
Parameter	**Units**	Field Duplicate (1-1)				
Volatile Organic Compounds						
tert-Butylbenzene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Tetrachloroethene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Toluene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Trichloroethene	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Trichlorofluoromethane	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Vinyl chloride	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Xylene (total)	MG/KG	0.0066 U	0.0051 U	0.0051 U	0.0054 U	0.0049 U
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
1,2,4,5-Tetrachlorobenzene	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
2,2'-oxybis(1-Chloropropane)	MG/KG	0.43 UJ	0.35 UJ	0.33 UJ	0.35 UJ	0.34 UJ
2,3,4,6-Tetrachlorophenol	MG/KG	0.43 UJ	0.35 UJ	0.33 U	0.35 U	0.34 U
2,4,5-Trichlorophenol	MG/KG	0.87 U	0.71 U	0.33 U	0.71 U	0.70 U
2,4,6-Trichlorophenol	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
2,4-Dichlorophenol	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
2,4-Dimethylphenol	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
2,4-Dinitrophenol	MG/KG	0.87 UJ	0.71 UJ	0.67 UJ	0.71 UJ	0.70 UJ
2,4-Dinitrotoluene	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
2,6-Dinitrotoluene	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
2-Chloronaphthalene	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
2-Chlorophenol	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
2-Methylnaphthalene	MG/KG	0.52	0.50	0.33 U	0.35 U	0.34 U
2-Methylphenol (o-cresol)	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
2-Nitroaniline	MG/KG	0.87 UJ	0.71 UJ	0.67 UJ	0.71 UJ	0.70 UJ
2-Nitrophenol	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-02B	MW-02B	MW-08A	MW-08A	MW-08A
Sample ID		111413-DUP-1	MW-02B (3.5-4)	MW-08A (2.7-2.9)	MW-08A (9.5-10)	MW-08A (15-16)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.5-4.0	3.5-4.0	2.7-2.9	9.5-10.0	15.0-16.0
Date Sampled		11/14/13	11/14/13	10/29/13	10/30/13	10/30/13
Parameter	**Units**	Field Duplicate (1-1)				
Semivolatile Organic Compounds						
3,3'-Dichlorobenzidine	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
3-Nitroaniline	MG/KG	0.87 U	0.71 U	0.67 U	0.35 U	0.70 U
4,6-Dinitro-2-methylphenol	MG/KG	0.87 U	0.35 U	0.67 U	0.71 U	0.70 U
4-Bromophenyl-phenylether	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
4-Chloro-3-methylphenol	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
4-Chloroaniline	MG/KG	0.43 U	0.35 U	0.33 U	0.71 U	0.34 U
4-Chlorophenyl-phenylether	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
4-Methylphenol (p-cresol)	MG/KG	0.12 J	0.35 U	0.33 U	0.35 U	0.34 U
4-Nitroaniline	MG/KG	0.87 U	0.71 U	0.67 U	0.71 U	0.70 U
4-Nitrophenol	MG/KG	0.87 U	0.71 U	0.67 U	0.71 U	0.70 U
Acenaphthene	MG/KG	0.20 J	0.35 U	0.33 U	0.35 U	0.34 U
Acenaphthylene	MG/KG	4.8	3.9	0.33 U	0.35 U	0.34 U
Acetophenone	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
Anthracene	MG/KG	3.4	2.3	0.10 J	0.35 U	0.34 U
Atrazine	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
Benzaldehyde	MG/KG	0.43 U	0.35 U	0.33 U	0.35 UJ	0.34 UJ
Benzo(a)anthracene	MG/KG	16 D	11 D	0.29 J	0.35 U	0.34 U
Benzo(a)pyrene	MG/KG	20 D	15 D	0.31 J	0.35 U	0.34 U
Benzo(b)fluoranthene	MG/KG	22 D	14 D	0.38	0.35 U	0.34 U
Benzo(g,h,i)perylene	MG/KG	17 D	14 D	0.24 J	0.35 U	0.34 U
Benzo(k)fluoranthene	MG/KG	10 D	5.4	0.19 J	0.35 U	0.34 U
bis(2-Chloroethoxy)methane	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
bis(2-Chloroethyl)ether	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
bis(2-Ethylhexyl)phthalate	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
Butylbenzylphthalate	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-02B	MW-02B	MW-08A	MW-08A	MW-08A
Sample ID		111413-DUP-1	MW-02B (3.5-4)	MW-08A (2.7-2.9)	MW-08A (9.5-10)	MW-08A (15-16)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.5-4.0	3.5-4.0	2.7-2.9	9.5-10.0	15.0-16.0
Date Sampled		11/14/13	11/14/13	10/29/13	10/30/13	10/30/13
Parameter	**Units**	Field Duplicate (1-1)				
Semivolatile Organic Compounds						
Caprolactam	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
Carbazole	MG/KG	0.44	0.23 J	0.33 U	0.35 U	0.34 U
Chrysene	MG/KG	17 D	11 D	0.32 J	0.35 U	0.34 U
Dibenz(a,h)anthracene	MG/KG	6.2	4.4	0.070 J	0.35 U	0.34 U
Dibenzofuran	MG/KG	0.23 J	0.17 J	0.33 U	0.35 U	0.34 U
Diethylphthalate	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
Dimethylphthalate	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
Di-n-butylphthalate	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
Di-n-octylphthalate	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
Fluoranthene	MG/KG	27 D	17 D	0.58	0.35 U	0.34 U
Fluorene	MG/KG	0.79	0.56	0.33 U	0.35 U	0.34 U
Hexachlorobenzene	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
Hexachlorobutadiene	MG/KG	0.43 UJ	0.35 UJ	0.33 U	0.35 U	0.34 U
Hexachlorocyclopentadiene	MG/KG	0.43 UJ	0.35 UJ	0.33 U	0.35 UJ	0.34 UJ
Hexachloroethane	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
Indeno(1,2,3-cd)pyrene	MG/KG	15 D	12 D	0.23 J	0.35 U	0.34 U
Isophorone	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
Naphthalene	MG/KG	0.39 J	0.42	0.33 U	0.35 U	0.34 U
Nitrobenzene	MG/KG	0.43 UJ	0.35 UJ	0.33 UJ	0.35 U	0.34 U
N-Nitroso-di-n-propylamine	MG/KG	0.43 UJ	0.35 UJ	0.33 U	0.35 UJ	0.34 UJ
N-Nitrosodiphenylamine	MG/KG	0.43 U	0.35 U	0.33 U	0.35 U	0.34 U
Pentachlorophenol	MG/KG	0.87 UJ	0.71 UJ	0.67 UJ	0.71 UJ	0.70 UJ
Phenanthrene	MG/KG	9.3 D	5.4	0.33	0.35 U	0.34 U
Phenol	MG/KG	0.11 J	0.35 U	0.33 U	0.35 U	0.34 U
Pyrene	MG/KG	32 D	23 D	0.54	0.35 U	0.34 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-02B	MW-02B	MW-08A	MW-08A	MW-08A
Sample ID		111413-DUP-1	MW-02B (3.5-4)	MW-08A (2.7-2.9)	MW-08A (9.5-10)	MW-08A (15-16)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.5-4.0	3.5-4.0	2.7-2.9	9.5-10.0	15.0-16.0
Date Sampled		11/14/13	11/14/13	10/29/13	10/30/13	10/30/13
Parameter	**Units**	Field Duplicate (1-1)				
Metals						
Aluminum	MG/KG	9,900	10,100	8,810	7,500	15,800
Antimony	MG/KG	0.36 U	0.37 U	0.31 U	0.34 U	0.38 U
Arsenic	MG/KG	4.1	4.0	1.6	1.1	0.88 J
Barium	MG/KG	93.7	100	67.7	66.0	183
Beryllium	MG/KG	0.28	0.28	0.24	0.27	0.073 J
Cadmium	MG/KG	0.014 U	0.015 U	0.012 U	0.013 U	0.015 U
Calcium	MG/KG	45,200 J	16,000 J	2,000	2,540	2,250
Chromium	MG/KG	21.6	23.1	16.9	16.0	25.4
Cobalt	MG/KG	7.4	9.4	7.1	6.2	9.0
Copper	MG/KG	33.2	32.4	22.6	20.3	23.6
Iron	MG/KG	16,400	18,300	13,300	14,700	33,100
Lead	MG/KG	127	118	18.4	3.9	5.1
Magnesium	MG/KG	3,550	3,900	3,130	2,390	7,030
Manganese	MG/KG	321	338	386	532	299
Mercury	MG/KG	1.1	0.94	0.17	0.0026 U	0.0022 U
Nickel	MG/KG	19.0	22.9	20.6	19.9	17.4
Potassium	MG/KG	3,700	3,780	2,500	2,330	11,400
Selenium	MG/KG	0.89 J	1.1 J	0.52 U	0.57 U	0.64 U
Silver	MG/KG	0.061 U	0.062 U	0.052 U	0.057 U	0.064 U
Sodium	MG/KG	148	124	109	128	171
Thallium	MG/KG	2.1	1.5	0.91	0.94	2.0
Vanadium	MG/KG	24.6	25.3	20.9	21.0	37.3
Zinc	MG/KG	51.9	57.1	31.8	21.2	48.5
Miscellaneous Parameters						
Cyanide, Total	MG/KG	0.56 U	0.45 U	0.45 U	0.44 U	0.45 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-08B	MW-08B	MW-08B	MW-09	MW-09
Sample ID		MW-08B (3-3.2)	MW-08B (9.5-10.5)	MW-08B (15-16)	MW-09 (8.2-8.8)	MW-09 (14.8-15.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.0-3.2	9.5-10.5	15.0-16.0	8.2-8.8	14.8-15.5
Date Sampled		10/29/13	10/30/13	10/30/13	10/30/13	10/30/13
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,1,2,2-Tetrachloroethane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.0049 U	0.0052 UJ	0.0052 UJ	0.0050 U	0.0046 U
1,1,2-Trichloroethane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,1-Dichloroethane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,1-Dichloroethene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,2,3-Trichlorobenzene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,2,4-Trichlorobenzene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,2,4-Trimethylbenzene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,2-Dibromo-3-chloropropane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,2-Dichlorobenzene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,2-Dichloroethane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,2-Dichloroethene (cis)	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,2-Dichloroethene (trans)	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,2-Dichloropropane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,3-Dichlorobenzene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,3-Dichloropropene (cis)	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,3-Dichloropropene (trans)	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,4-Dichlorobenzene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
1,4-Dioxane	MG/KG	R	R	R	R	R
2-Butanone	MG/KG	0.0049 U	0.0052 UJ	0.0052 UJ	0.0043 J	0.0046 U
2-Hexanone	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
4-Methyl-2-pentanone	MG/KG	0.0049 U	0.0052 UJ	0.0052 UJ	0.0050 U	0.0046 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-08B	MW-08B	MW-08B	MW-09	MW-09
Sample ID		MW-08B (3-3.2)	MW-08B (9.5-10.5)	MW-08B (15-16)	MW-09 (8.2-8.8)	MW-09 (14.8-15.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.0-3.2	9.5-10.5	15.0-16.0	8.2-8.8	14.8-15.5
Date Sampled		10/29/13	10/30/13	10/30/13	10/30/13	10/30/13
Parameter	**Units**					
Volatile Organic Compounds						
Acetone	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.021	0.0046 U
Benzene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Bromochloromethane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Bromodichloromethane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Bromoform	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Bromomethane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Carbon disulfide	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Carbon tetrachloride	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Chlorobenzene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Chloroethane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Chloroform	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Chloromethane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Cyclohexane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Dibromochloromethane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Dichlorodifluoromethane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Ethylbenzene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Isopropylbenzene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Methyl acetate	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Methyl tert-butyl ether	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Methylcyclohexane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Methylene chloride	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0020 J	0.0020 J
n-Butylbenzene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
n-Propylbenzene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
sec-Butylbenzene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Styrene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-08B	MW-08B	MW-08B	MW-09	MW-09
Sample ID		MW-08B (3-3.2)	MW-08B (9.5-10.5)	MW-08B (15-16)	MW-09 (8.2-8.8)	MW-09 (14.8-15.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.0-3.2	9.5-10.5	15.0-16.0	8.2-8.8	14.8-15.5
Date Sampled		10/29/13	10/30/13	10/30/13	10/30/13	10/30/13
Parameter	**Units**					
Volatile Organic Compounds						
tert-Butylbenzene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Tetrachloroethene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Toluene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Trichloroethene	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Trichlorofluoromethane	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Vinyl chloride	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Xylene (total)	MG/KG	0.0049 U	0.0052 U	0.0052 U	0.0050 U	0.0046 U
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
1,2,4,5-Tetrachlorobenzene	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
2,2'-oxybis(1-Chloropropane)	MG/KG	0.34 UJ	0.35 UJ	0.35 UJ	0.36 UJ	0.35 UJ
2,3,4,6-Tetrachlorophenol	MG/KG	0.34 U	0.35 UJ	0.35 U	0.36 U	0.35 U
2,4,5-Trichlorophenol	MG/KG	0.68 U	0.71 U	0.71 U	0.73 U	0.72 U
2,4,6-Trichlorophenol	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
2,4-Dichlorophenol	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
2,4-Dimethylphenol	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
2,4-Dinitrophenol	MG/KG	0.68 UJ	0.71 U	0.71 UJ	0.73 UJ	0.72 UJ
2,4-Dinitrotoluene	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
2,6-Dinitrotoluene	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
2-Chloronaphthalene	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
2-Chlorophenol	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
2-Methylnaphthalene	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
2-Methylphenol (o-cresol)	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
2-Nitroaniline	MG/KG	0.68 UJ	0.71 UJ	0.71 UJ	0.73 UJ	0.72 UJ
2-Nitrophenol	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-08B	MW-08B	MW-08B	MW-09	MW-09
Sample ID		MW-08B (3-3.2)	MW-08B (9.5-10.5)	MW-08B (15-16)	MW-09 (8.2-8.8)	MW-09 (14.8-15.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.0-3.2	9.5-10.5	15.0-16.0	8.2-8.8	14.8-15.5
Date Sampled		10/29/13	10/30/13	10/30/13	10/30/13	10/30/13
Parameter	**Units**					
Semivolatile Organic Compounds						
3,3'-Dichlorobenzidine	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
3-Nitroaniline	MG/KG	0.68 U	0.71 U	0.71 U	0.73 U	0.72 U
4,6-Dinitro-2-methylphenol	MG/KG	0.68 U	0.71 U	0.71 U	0.73 U	0.72 U
4-Bromophenyl-phenylether	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
4-Chloro-3-methylphenol	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
4-Chloroaniline	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
4-Chlorophenyl-phenylether	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
4-Methylphenol (p-cresol)	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
4-Nitroaniline	MG/KG	0.68 U	0.71 U	0.71 U	0.73 U	0.72 U
4-Nitrophenol	MG/KG	0.68 U	0.71 U	0.71 U	0.73 U	0.72 U
Acenaphthene	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Acenaphthylene	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Acetophenone	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Anthracene	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Atrazine	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Benzaldehyde	MG/KG	0.34 U	0.35 UJ	0.35 UJ	0.36 U	0.35 U
Benzo(a)anthracene	MG/KG	0.19 J	0.35 U	0.35 U	0.36 U	0.35 U
Benzo(a)pyrene	MG/KG	0.22 J	0.35 U	0.35 U	0.36 U	0.35 U
Benzo(b)fluoranthene	MG/KG	0.25 J	0.35 U	0.35 U	0.36 U	0.35 U
Benzo(g,h,i)perylene	MG/KG	0.16 J	0.35 U	0.35 U	0.36 U	0.35 U
Benzo(k)fluoranthene	MG/KG	0.14 J	0.35 U	0.35 U	0.36 U	0.35 U
bis(2-Chloroethoxy)methane	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
bis(2-Chloroethyl)ether	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
bis(2-Ethylhexyl)phthalate	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Butylbenzylphthalate	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-08B	MW-08B	MW-08B	MW-09	MW-09
Sample ID		MW-08B (3-3.2)	MW-08B (9.5-10.5)	MW-08B (15-16)	MW-09 (8.2-8.8)	MW-09 (14.8-15.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.0-3.2	9.5-10.5	15.0-16.0	8.2-8.8	14.8-15.5
Date Sampled		10/29/13	10/30/13	10/30/13	10/30/13	10/30/13
Parameter	**Units**					
Semivolatile Organic Compounds						
Caprolactam	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Carbazole	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Chrysene	MG/KG	0.22 J	0.35 U	0.35 U	0.36 U	0.35 U
Dibenz(a,h)anthracene	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Dibenzofuran	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Diethylphthalate	MG/KG	0.34 U	0.071 J	0.35 U	0.36 U	0.35 U
Dimethylphthalate	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Di-n-butylphthalate	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Di-n-octylphthalate	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Fluoranthene	MG/KG	0.36	0.35 U	0.35 U	0.36 U	0.35 U
Fluorene	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Hexachlorobenzene	MG/KG	0.34 U	0.35 UJ	0.35 U	0.36 U	0.35 U
Hexachlorobutadiene	MG/KG	0.34 U	0.35 UJ	0.35 U	0.36 U	0.35 U
Hexachlorocyclopentadiene	MG/KG	0.34 U	0.35 UJ	0.35 UJ	0.36 U	0.35 U
Hexachloroethane	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Indeno(1,2,3-cd)pyrene	MG/KG	0.16 J	0.35 U	0.35 U	0.36 U	0.35 U
Isophorone	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Naphthalene	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Nitrobenzene	MG/KG	0.34 UJ	0.35 UJ	0.35 U	0.36 UJ	0.35 UJ
N-Nitroso-di-n-propylamine	MG/KG	0.34 U	0.35 U	0.35 UJ	0.36 U	0.35 U
N-Nitrosodiphenylamine	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Pentachlorophenol	MG/KG	0.68 UJ	0.71 UJ	0.71 UJ	0.73 UJ	0.72 UJ
Phenanthrene	MG/KG	0.15 J	0.35 U	0.35 U	0.36 U	0.35 U
Phenol	MG/KG	0.34 U	0.35 U	0.35 U	0.36 U	0.35 U
Pyrene	MG/KG	0.35	0.35 U	0.35 U	0.36 U	0.35 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-08B	MW-08B	MW-08B	MW-09	MW-09
Sample ID		MW-08B (3-3.2)	MW-08B (9.5-10.5)	MW-08B (15-16)	MW-09 (8.2-8.8)	MW-09 (14.8-15.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.0-3.2	9.5-10.5	15.0-16.0	8.2-8.8	14.8-15.5
Date Sampled		10/29/13	10/30/13	10/30/13	10/30/13	10/30/13
Parameter	**Units**					
Metals						
Aluminum	MG/KG	9,380	10,200	11,800	8,230	6,930
Antimony	MG/KG	0.33 U	0.35 U	0.28 U	0.31 U	0.35 U
Arsenic	MG/KG	1.7	0.57 J	0.83	1.0	1.3
Barium	MG/KG	79.4	118	139	76.8	42.5
Beryllium	MG/KG	0.29	0.25	0.23	0.22	0.21 J
Cadmium	MG/KG	0.074 J	0.014 U	0.011 U	0.012 U	0.014 U
Calcium	MG/KG	1,520	3,240	3,150	2,130	1,540
Chromium	MG/KG	19.0	28.8	32.5	27.3	36.4
Cobalt	MG/KG	7.5	8.0	9.5	7.4	6.5
Copper	MG/KG	32.9	15.8	22.4	17.1	28.0
Iron	MG/KG	14,100	16,200	18,000	14,500	14,000
Lead	MG/KG	15.5	4.2	4.7	4.9	3.5
Magnesium	MG/KG	3,100	6,030	6,650	3,840	3,310
Manganese	MG/KG	541	215	251	262	252
Mercury	MG/KG	0.025 J	0.0031 J	0.0024 J	0.020 J	0.0026 U
Nickel	MG/KG	22.6	21.6	24.3	19.5	14.6
Potassium	MG/KG	2,730	6,200	7,280	3,300	2,320
Selenium	MG/KG	0.56 U	0.59 U	0.53 J	0.53 U	0.59 U
Silver	MG/KG	0.056 U	0.059 U	0.048 U	0.053 U	0.059 U
Sodium	MG/KG	87.1	104	112	110	88.1
Thallium	MG/KG	1.3	1.3	1.5	0.74 J	0.76 J
Vanadium	MG/KG	21.0	25.3	31.4	21.2	25.7
Zinc	MG/KG	33.9	38.5	45.0	45.4	25.6
Miscellaneous Parameters						
Cyanide, Total	MG/KG	0.40 U	0.48 U	0.45 U	0.50 U	0.46 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-10	MW-10	MW-11A	MW-11A	MW-11A
Sample ID		MW-10 (7-8.5)	MW-10 (21-22)	MW-11A (3-3.5)	MW-11A (8.5-9.5)	MW-11A (11.5-12.7)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		7.0-8.5	21.0-22.0	3.0-3.5	8.5-9.5	11.5-12.7
Date Sampled		10/31/13	10/31/13	11/18/13	11/19/13	11/19/13
Parameter	**Units**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,1,2,2-Tetrachloroethane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.0056 UJ	0.0052 UJ	0.0058 U	0.0058 U	0.0053 U
1,1,2-Trichloroethane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,1-Dichloroethane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,1-Dichloroethene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,2,3-Trichlorobenzene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,2,4-Trichlorobenzene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,2,4-Trimethylbenzene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,2-Dibromo-3-chloropropane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,2-Dichlorobenzene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,2-Dichloroethane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,2-Dichloroethene (cis)	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,2-Dichloroethene (trans)	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,2-Dichloropropane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,3-Dichlorobenzene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,3-Dichloropropene (cis)	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,3-Dichloropropene (trans)	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,4-Dichlorobenzene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
1,4-Dioxane	MG/KG	R	R	R	R	R
2-Butanone	MG/KG	0.0056 UJ	0.0052 UJ	0.0071	0.0058 U	0.0053 U
2-Hexanone	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
4-Methyl-2-pentanone	MG/KG	0.0056 UJ	0.0052 UJ	0.0058 U	0.0058 U	0.0053 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-10	MW-10	MW-11A	MW-11A	MW-11A
Sample ID		MW-10 (7-8.5)	MW-10 (21-22)	MW-11A (3-3.5)	MW-11A (8.5-9.5)	MW-11A (11.5-12.7)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		7.0-8.5	21.0-22.0	3.0-3.5	8.5-9.5	11.5-12.7
Date Sampled		10/31/13	10/31/13	11/18/13	11/19/13	11/19/13
Parameter	**Units**					
Volatile Organic Compounds						
Acetone	MG/KG	0.0064	0.0039 J	0.029	0.011	0.0053 U
Benzene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Bromochloromethane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Bromodichloromethane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Bromoform	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Bromomethane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Carbon disulfide	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Carbon tetrachloride	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Chlorobenzene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Chloroethane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Chloroform	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Chloromethane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Cyclohexane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Dibromochloromethane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Dichlorodifluoromethane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Ethylbenzene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Isopropylbenzene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Methyl acetate	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Methyl tert-butyl ether	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Methylcyclohexane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Methylene chloride	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
n-Butylbenzene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
n-Propylbenzene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
sec-Butylbenzene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Styrene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-10	MW-10	MW-11A	MW-11A	MW-11A
Sample ID		MW-10 (7-8.5)	MW-10 (21-22)	MW-11A (3-3.5)	MW-11A (8.5-9.5)	MW-11A (11.5-12.7)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		7.0-8.5	21.0-22.0	3.0-3.5	8.5-9.5	11.5-12.7
Date Sampled		10/31/13	10/31/13	11/18/13	11/19/13	11/19/13
Parameter	**Units**					
Volatile Organic Compounds						
tert-Butylbenzene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Tetrachloroethene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Toluene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Trichloroethene	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Trichlorofluoromethane	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Vinyl chloride	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Xylene (total)	MG/KG	0.0056 U	0.0052 U	0.0058 U	0.0058 U	0.0053 U
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
1,2,4,5-Tetrachlorobenzene	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
2,2'-oxybis(1-Chloropropane)	MG/KG	0.38 UJ	0.36 UJ	0.38 U	0.37 U	0.37 U
2,3,4,6-Tetrachlorophenol	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
2,4,5-Trichlorophenol	MG/KG	0.77 U	0.74 U	0.78 U	0.76 U	0.76 U
2,4,6-Trichlorophenol	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
2,4-Dichlorophenol	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
2,4-Dimethylphenol	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
2,4-Dinitrophenol	MG/KG	0.77 UJ	0.74 UJ	0.78 UJ	0.76 UJ	0.76 UJ
2,4-Dinitrotoluene	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
2,6-Dinitrotoluene	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
2-Chloronaphthalene	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
2-Chlorophenol	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
2-Methylnaphthalene	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
2-Methylphenol (o-cresol)	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
2-Nitroaniline	MG/KG	0.77 UJ	0.74 UJ	0.78 U	0.76 U	0.76 U
2-Nitrophenol	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-10	MW-10	MW-11A	MW-11A	MW-11A
Sample ID		MW-10 (7-8.5)	MW-10 (21-22)	MW-11A (3-3.5)	MW-11A (8.5-9.5)	MW-11A (11.5-12.7)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		7.0-8.5	21.0-22.0	3.0-3.5	8.5-9.5	11.5-12.7
Date Sampled		10/31/13	10/31/13	11/18/13	11/19/13	11/19/13
Parameter	**Units**					
Semivolatile Organic Compounds						
3,3'-Dichlorobenzidine	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
3-Nitroaniline	MG/KG	0.77 U	0.74 U	0.78 U	0.76 U	0.76 U
4,6-Dinitro-2-methylphenol	MG/KG	0.77 U	0.74 U	0.78 UJ	0.76 UJ	0.76 UJ
4-Bromophenyl-phenylether	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
4-Chloro-3-methylphenol	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
4-Chloroaniline	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
4-Chlorophenyl-phenylether	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
4-Methylphenol (p-cresol)	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
4-Nitroaniline	MG/KG	0.77 U	0.74 U	0.78 U	0.76 U	0.76 U
4-Nitrophenol	MG/KG	0.77 U	0.74 U	0.78 U	0.76 U	0.76 U
Acenaphthene	MG/KG	0.38 U	0.36 U	0.087 J	0.37 U	0.37 U
Acenaphthylene	MG/KG	0.38 U	0.36 U	0.16 J	0.37 U	0.37 U
Acetophenone	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
Anthracene	MG/KG	0.38 U	0.36 U	0.30 J	0.37 U	0.37 U
Atrazine	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
Benzaldehyde	MG/KG	0.38 UJ	0.36 UJ	0.38 U	0.37 U	0.37 U
Benzo(a)anthracene	MG/KG	0.38 U	0.36 U	1.4	0.37 U	0.37 U
Benzo(a)pyrene	MG/KG	0.38 U	0.36 U	1.4	0.37 U	0.37 U
Benzo(b)fluoranthene	MG/KG	0.38 U	0.36 U	1.8	0.37 U	0.37 U
Benzo(g,h,i)perylene	MG/KG	0.38 U	0.36 U	1.1 J	0.37 UJ	0.37 UJ
Benzo(k)fluoranthene	MG/KG	0.38 U	0.36 U	0.71	0.37 U	0.37 U
bis(2-Chloroethoxy)methane	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
bis(2-Chloroethyl)ether	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
bis(2-Ethylhexyl)phthalate	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
Butylbenzylphthalate	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-10	MW-10	MW-11A	MW-11A	MW-11A
Sample ID		MW-10 (7-8.5)	MW-10 (21-22)	MW-11A (3-3.5)	MW-11A (8.5-9.5)	MW-11A (11.5-12.7)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		7.0-8.5	21.0-22.0	3.0-3.5	8.5-9.5	11.5-12.7
Date Sampled		10/31/13	10/31/13	11/18/13	11/19/13	11/19/13
Parameter	**Units**					
Semivolatile Organic Compounds						
Caprolactam	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
Carbazole	MG/KG	0.38 U	0.36 U	0.088 J	0.37 U	0.37 U
Chrysene	MG/KG	0.38 U	0.36 U	1.4	0.37 U	0.37 U
Dibenz(a,h)anthracene	MG/KG	0.38 U	0.36 U	0.17 J	0.37 U	0.37 U
Dibenzofuran	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
Diethylphthalate	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
Dimethylphthalate	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
Di-n-butylphthalate	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
Di-n-octylphthalate	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
Fluoranthene	MG/KG	0.38 U	0.36 U	2.4	0.37 U	0.37 U
Fluorene	MG/KG	0.38 U	0.36 U	0.13 J	0.37 U	0.37 U
Hexachlorobenzene	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
Hexachlorobutadiene	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
Hexachlorocyclopentadiene	MG/KG	0.38 UJ	0.36 UJ	0.38 UJ	0.37 UJ	0.37 UJ
Hexachloroethane	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
Indeno(1,2,3-cd)pyrene	MG/KG	0.38 U	0.36 U	1.0	0.37 U	0.37 U
Isophorone	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
Naphthalene	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
Nitrobenzene	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
N-Nitroso-di-n-propylamine	MG/KG	0.38 UJ	0.36 UJ	0.38 U	0.37 U	0.37 U
N-Nitrosodiphenylamine	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
Pentachlorophenol	MG/KG	0.38 UJ	0.74 UJ	0.78 UJ	0.76 UJ	0.76 UJ
Phenanthrene	MG/KG	0.38 U	0.36 U	1.1	0.37 U	0.37 U
Phenol	MG/KG	0.38 U	0.36 U	0.38 U	0.37 U	0.37 U
Pyrene	MG/KG	0.38 U	0.36 U	2.7	0.37 U	0.081 J

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-10	MW-10	MW-11A	MW-11A	MW-11A
Sample ID		MW-10 (7-8.5)	MW-10 (21-22)	MW-11A (3-3.5)	MW-11A (8.5-9.5)	MW-11A (11.5-12.7)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		7.0-8.5	21.0-22.0	3.0-3.5	8.5-9.5	11.5-12.7
Date Sampled		10/31/13	10/31/13	11/18/13	11/19/13	11/19/13
Parameter	**Units**					
Metals						
Aluminum	MG/KG	11,900	4,790	16,600	12,100	6,220
Antimony	MG/KG	0.43 U	0.29 U	0.44 U	0.25 U	0.31 U
Arsenic	MG/KG	1.2	0.94	5.6	2.0	0.67 J
Barium	MG/KG	90.4	45.2	244	58.2	67.4
Beryllium	MG/KG	0.38	0.13 J	0.29 U	0.24	0.0012 U
Cadmium	MG/KG	0.017 U	0.011 U	0.74	0.0098 U	0.012 U
Calcium	MG/KG	1,130	3,970	5,150	1,170	1,520
Chromium	MG/KG	33.6	12.6	36.1	19.7	15.2
Cobalt	MG/KG	6.8	4.9	10.2	7.3	6.5
Copper	MG/KG	17.5	11.7	60.5	17.2	18.9
Iron	MG/KG	17,000	8,940	23,900	21,200	11,100
Lead	MG/KG	4.8	2.5	352	8.0	2.8
Magnesium	MG/KG	4,240	3,440	5,090	2,610	2,690
Manganese	MG/KG	223	120	343	293	263
Mercury	MG/KG	0.0028 U	0.0025 U	0.64	0.040 U	0.0025 U
Nickel	MG/KG	22.2	12.4	22.7	11.7	17.6
Potassium	MG/KG	4,030	2,280	3,700	1,460	3,360
Selenium	MG/KG	0.73 U	0.48 U	1.2 J	0.50 J	0.52 U
Silver	MG/KG	0.073 U	0.048 U	0.13 J	0.042 U	0.052 U
Sodium	MG/KG	75.0	117	432	85.4	77.5
Thallium	MG/KG	1.2	0.22 J	1.1 J	0.88	0.78 J
Vanadium	MG/KG	24.3	13.4	36.7	23.4	16.3
Zinc	MG/KG	34.7	15.2	330	30.1	22.6
Miscellaneous Parameters						
Cyanide, Total	MG/KG	0.46 U	0.47 U	0.53 U	0.51 U	0.48 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-12A	MW-12A	MW-12A	MW-12A	MW-12A
Sample ID		MW-12A (2.8-3.2)	SBMW12A (7-8)	SBMW12A (7-10)	SBMW12A (10-11)	SBMW12A (10-12)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		2.8-3.2	7.0-8.0	7.0-10.0	10.0-11.0	10.0-12.0
Date Sampled		11/20/13	01/24/14	01/24/14	01/24/14	01/24/14
Parameter	**Units**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,1,2,2-Tetrachloroethane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,1,2-Trichloroethane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,1-Dichloroethane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,1-Dichloroethene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,2,3-Trichlorobenzene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,2,4-Trichlorobenzene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,2,4-Trimethylbenzene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,2-Dibromo-3-chloropropane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,2-Dichlorobenzene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,2-Dichloroethane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,2-Dichloroethene (cis)	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,2-Dichloroethene (trans)	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,2-Dichloropropane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,3-Dichlorobenzene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,3-Dichloropropene (cis)	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,3-Dichloropropene (trans)	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,4-Dichlorobenzene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
1,4-Dioxane	MG/KG	R	R	NA	R	NA
2-Butanone	MG/KG	0.0052 J	0.0056 U	NA	0.0053 U	NA
2-Hexanone	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
4-Methyl-2-pentanone	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-12A	MW-12A	MW-12A	MW-12A	MW-12A
Sample ID		MW-12A (2.8-3.2)	SBMW12A (7-8)	SBMW12A (7-10)	SBMW12A (10-11)	SBMW12A (10-12)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		2.8-3.2	7.0-8.0	7.0-10.0	10.0-11.0	10.0-12.0
Date Sampled		11/20/13	01/24/14	01/24/14	01/24/14	01/24/14
Parameter	**Units**					
Volatile Organic Compounds						
Acetone	MG/KG	0.026	0.0056 U	NA	0.0053 U	NA
Benzene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Bromochloromethane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Bromodichloromethane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Bromoform	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Bromomethane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Carbon disulfide	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Carbon tetrachloride	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Chlorobenzene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Chloroethane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Chloroform	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Chloromethane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Cyclohexane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Dibromochloromethane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Dichlorodifluoromethane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Ethylbenzene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Isopropylbenzene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Methyl acetate	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Methyl tert-butyl ether	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Methylcyclohexane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Methylene chloride	MG/KG	0.0049 J	0.0056 U	NA	0.0053 U	NA
n-Butylbenzene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
n-Propylbenzene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
sec-Butylbenzene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Styrene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-12A	MW-12A	MW-12A	MW-12A	MW-12A
Sample ID		MW-12A (2.8-3.2)	SBMW12A (7-8)	SBMW12A (7-10)	SBMW12A (10-11)	SBMW12A (10-12)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		2.8-3.2	7.0-8.0	7.0-10.0	10.0-11.0	10.0-12.0
Date Sampled		11/20/13	01/24/14	01/24/14	01/24/14	01/24/14
Parameter	**Units**					
Volatile Organic Compounds						
tert-Butylbenzene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Tetrachloroethene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Toluene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Trichloroethene	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Trichlorofluoromethane	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Vinyl chloride	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Xylene (total)	MG/KG	0.0052 U	0.0056 U	NA	0.0053 U	NA
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
1,2,4,5-Tetrachlorobenzene	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
2,2'-oxybis(1-Chloropropane)	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
2,3,4,6-Tetrachlorophenol	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
2,4,5-Trichlorophenol	MG/KG	0.77 U	NA	0.77 U	NA	0.72 U
2,4,6-Trichlorophenol	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
2,4-Dichlorophenol	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
2,4-Dimethylphenol	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
2,4-Dinitrophenol	MG/KG	0.77 UJ	NA	0.77 U	NA	0.72 U
2,4-Dinitrotoluene	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
2,6-Dinitrotoluene	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
2-Chloronaphthalene	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
2-Chlorophenol	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
2-Methylnaphthalene	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
2-Methylphenol (o-cresol)	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
2-Nitroaniline	MG/KG	0.77 U	NA	0.77 U	NA	0.72 U
2-Nitrophenol	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-12A	MW-12A	MW-12A	MW-12A	MW-12A
Sample ID		MW-12A (2.8-3.2)	SBMW12A (7-8)	SBMW12A (7-10)	SBMW12A (10-11)	SBMW12A (10-12)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		2.8-3.2	7.0-8.0	7.0-10.0	10.0-11.0	10.0-12.0
Date Sampled		11/20/13	01/24/14	01/24/14	01/24/14	01/24/14
Parameter	**Units**					
Semivolatile Organic Compounds						
3,3'-Dichlorobenzidine	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
3-Nitroaniline	MG/KG	0.77 U	NA	0.77 U	NA	0.72 U
4,6-Dinitro-2-methylphenol	MG/KG	0.77 UJ	NA	0.77 U	NA	0.72 U
4-Bromophenyl-phenylether	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
4-Chloro-3-methylphenol	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
4-Chloroaniline	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
4-Chlorophenyl-phenylether	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
4-Methylphenol (p-cresol)	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
4-Nitroaniline	MG/KG	0.77 U	NA	0.77 U	NA	0.72 U
4-Nitrophenol	MG/KG	0.77 U	NA	0.77 U	NA	0.72 U
Acenaphthene	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Acenaphthylene	MG/KG	0.11 J	NA	0.38 U	NA	0.36 U
Acetophenone	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Anthracene	MG/KG	0.16 J	NA	0.38 U	NA	0.36 U
Atrazine	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Benzaldehyde	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Benzo(a)anthracene	MG/KG	0.83	NA	0.38 U	NA	0.36 U
Benzo(a)pyrene	MG/KG	0.89	NA	0.38 U	NA	0.36 U
Benzo(b)fluoranthene	MG/KG	1.2	NA	0.38 U	NA	0.36 U
Benzo(g,h,i)perylene	MG/KG	0.68 J	NA	0.38 U	NA	0.36 U
Benzo(k)fluoranthene	MG/KG	0.46	NA	0.38 U	NA	0.36 U
bis(2-Chloroethoxy)methane	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
bis(2-Chloroethyl)ether	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
bis(2-Ethylhexyl)phthalate	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Butylbenzylphthalate	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-12A	MW-12A	MW-12A	MW-12A	MW-12A
Sample ID		MW-12A (2.8-3.2)	SBMW12A (7-8)	SBMW12A (7-10)	SBMW12A (10-11)	SBMW12A (10-12)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		2.8-3.2	7.0-8.0	7.0-10.0	10.0-11.0	10.0-12.0
Date Sampled		11/20/13	01/24/14	01/24/14	01/24/14	01/24/14
Parameter	**Units**					
Semivolatile Organic Compounds						
Caprolactam	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Carbazole	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Chrysene	MG/KG	0.92	NA	0.38 U	NA	0.36 U
Dibenz(a,h)anthracene	MG/KG	0.14 J	NA	0.38 U	NA	0.36 U
Dibenzofuran	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Diethylphthalate	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Dimethylphthalate	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Di-n-butylphthalate	MG/KG	0.38 U	NA	0.12 J	NA	0.36 U
Di-n-octylphthalate	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Fluoranthene	MG/KG	1.3	NA	0.38 U	NA	0.36 U
Fluorene	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Hexachlorobenzene	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Hexachlorobutadiene	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Hexachlorocyclopentadiene	MG/KG	0.38 UJ	NA	0.38 U	NA	0.36 U
Hexachloroethane	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Indeno(1,2,3-cd)pyrene	MG/KG	0.70	NA	0.38 U	NA	0.36 U
Isophorone	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Naphthalene	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Nitrobenzene	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
N-Nitroso-di-n-propylamine	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
N-Nitrosodiphenylamine	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Pentachlorophenol	MG/KG	0.77 UJ	NA	0.77 U	NA	0.72 U
Phenanthrene	MG/KG	0.53	NA	0.38 U	NA	0.36 U
Phenol	MG/KG	0.38 U	NA	0.38 U	NA	0.36 U
Pyrene	MG/KG	1.5	NA	0.38 U	NA	0.36 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-12A	MW-12A	MW-12A	MW-12A	MW-12A
Sample ID		MW-12A (2.8-3.2)	SBMW12A (7-8)	SBMW12A (7-10)	SBMW12A (10-11)	SBMW12A (10-12)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		2.8-3.2	7.0-8.0	7.0-10.0	10.0-11.0	10.0-12.0
Date Sampled		11/20/13	01/24/14	01/24/14	01/24/14	01/24/14
Parameter	**Units**					
Metals						
Aluminum	MG/KG	11,500	NA	8,400	NA	14,500
Antimony	MG/KG	0.46 J	NA	0.38 U	NA	0.39 J
Arsenic	MG/KG	5.2	NA	1.7	NA	1.2
Barium	MG/KG	119	NA	60.6	NA	155
Beryllium	MG/KG	0.24 U	NA	0.25 U	NA	0.22 UJ
Cadmium	MG/KG	0.34	NA	0.015 U	NA	0.013 U
Calcium	MG/KG	13,400	NA	1,420	NA	1,200
Chromium	MG/KG	23.8	NA	19.0	NA	31.1
Cobalt	MG/KG	7.1	NA	5.4	NA	11.7
Copper	MG/KG	66.0	NA	33.4	NA	50.2
Iron	MG/KG	17,000	NA	14,400	NA	25,700
Lead	MG/KG	211	NA	2.9	NA	2.3
Magnesium	MG/KG	3,270	NA	2,410	NA	6,180
Manganese	MG/KG	349	NA	278	NA	377
Mercury	MG/KG	0.31	NA	0.0049 J	NA	0.0026 U
Nickel	MG/KG	17.9	NA	20.2	NA	24.8
Potassium	MG/KG	2,130	NA	2,350	NA	9,630
Selenium	MG/KG	0.61 U	NA	0.65 U	NA	0.56 U
Silver	MG/KG	0.061 U	NA	1.51 U	NA	1.32 U
Sodium	MG/KG	231	NA	157	NA	201
Thallium	MG/KG	0.76 J	NA	0.22 U	NA	0.23 J
Vanadium	MG/KG	25.4	NA	19.1	NA	39.7
Zinc	MG/KG	204	NA	26.4	NA	58.3
Miscellaneous Parameters						
Cyanide, Total	MG/KG	0.51 U	NA	0.48 U	NA	0.48 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-01	SB-16	SB-16	SB-16	SB-16
Sample ID		SB-1 (3.5-4)	110113-DUP-1	SB-16 (3.2-3.6)	SB-16 (4.5-5)	SB-16 (9-10)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.5-4.0	3.2-3.6	3.2-3.6	4.5-5.0	9.0-10.0
Date Sampled		11/14/13	11/01/13	11/01/13	11/01/13	11/07/13
Parameter	Units		Field Duplicate (1-1)			
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,1,2,2-Tetrachloroethane	MG/KG	0.0052 UJ	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.0052 U	0.0052 UJ	0.0055 UJ	0.0056 UJ	0.014 U
1,1,2-Trichloroethane	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,1-Dichloroethane	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,1-Dichloroethene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,2,3-Trichlorobenzene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,2,4-Trichlorobenzene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,2,4-Trimethylbenzene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.029
1,2-Dibromo-3-chloropropane	MG/KG	0.0052 UJ	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,2-Dichlorobenzene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,2-Dichloroethane	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,2-Dichloroethene (cis)	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,2-Dichloroethene (trans)	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,2-Dichloropropane	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.031
1,3-Dichlorobenzene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,3-Dichloropropene (cis)	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,3-Dichloropropene (trans)	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,4-Dichlorobenzene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
1,4-Dioxane	MG/KG	R	R	R	R	R
2-Butanone	MG/KG	0.0052 U	0.0052 UJ	0.0055 UJ	0.0056 UJ	0.0066 J
2-Hexanone	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
4-Methyl-2-pentanone	MG/KG	0.0052 U	0.0052 UJ	0.0055 UJ	0.0056 UJ	0.014 U

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Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-01	SB-16	SB-16	SB-16	SB-16
Sample ID		SB-1 (3.5-4)	110113-DUP-1	SB-16 (3.2-3.6)	SB-16 (4.5-5)	SB-16 (9-10)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.5-4.0	3.2-3.6	3.2-3.6	4.5-5.0	9.0-10.0
Date Sampled		11/14/13	11/01/13	11/01/13	11/01/13	11/07/13
Parameter	Units		Field Duplicate (1-1)			
Volatile Organic Compounds						
Acetone	MG/KG	0.0052 U	0.015	0.017	0.0056 U	0.048
Benzene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Bromochloromethane	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Bromodichloromethane	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Bromoform	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Bromomethane	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Carbon disulfide	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Carbon tetrachloride	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Chlorobenzene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Chloroethane	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Chloroform	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Chloromethane	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Cyclohexane	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Dibromochloromethane	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 UJ
Dichlorodifluoromethane	MG/KG	0.0052 UJ	0.0052 U	0.0055 U	0.0056 U	0.014 U
Ethylbenzene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.0043 J
Isopropylbenzene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.032
Methyl acetate	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Methyl tert-butyl ether	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Methylcyclohexane	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.017
Methylene chloride	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
n-Butylbenzene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.033
n-Propylbenzene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.041
sec-Butylbenzene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.019
Styrene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U

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Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-01	SB-16	SB-16	SB-16	SB-16
Sample ID		SB-1 (3.5-4)	110113-DUP-1	SB-16 (3.2-3.6)	SB-16 (4.5-5)	SB-16 (9-10)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.5-4.0	3.2-3.6	3.2-3.6	4.5-5.0	9.0-10.0
Date Sampled		11/14/13	11/01/13	11/01/13	11/01/13	11/07/13
Parameter	Units		Field Duplicate (1-1)			
Volatile Organic Compounds						
tert-Butylbenzene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Tetrachloroethene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Toluene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Trichloroethene	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.0034 J
Trichlorofluoromethane	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Vinyl chloride	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.014 U
Xylene (total)	MG/KG	0.0052 U	0.0052 U	0.0055 U	0.0056 U	0.0036 J
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
1,2,4,5-Tetrachlorobenzene	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
2,2'-oxybis(1-Chloropropane)	MG/KG	0.35 UJ	0.36 UJ	0.37 UJ	1.5 UJ	0.39 UJ
2,3,4,6-Tetrachlorophenol	MG/KG	0.35 UJ	0.36 U	0.37 U	1.5 U	0.39 U
2,4,5-Trichlorophenol	MG/KG	0.70 U	0.74 U	0.75 U	3.0 U	0.79 U
2,4,6-Trichlorophenol	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
2,4-Dichlorophenol	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
2,4-Dimethylphenol	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
2,4-Dinitrophenol	MG/KG	0.70 UJ	0.74 UJ	0.75 UJ	0.30 UJ	7.9 U
2,4-Dinitrotoluene	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
2,6-Dinitrotoluene	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
2-Chloronaphthalene	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
2-Chlorophenol	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
2-Methylnaphthalene	MG/KG	0.35 U	0.36 U	0.37 U	2.1	0.39 U
2-Methylphenol (o-cresol)	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
2-Nitroaniline	MG/KG	0.70 UJ	0.36 UJ	0.75 UJ	3.0 UJ	0.79 UJ
2-Nitrophenol	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U

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TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-01	SB-16	SB-16	SB-16	SB-16
Sample ID		SB-1 (3.5-4)	110113-DUP-1	SB-16 (3.2-3.6)	SB-16 (4.5-5)	SB-16 (9-10)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.5-4.0	3.2-3.6	3.2-3.6	4.5-5.0	9.0-10.0
Date Sampled		11/14/13	11/01/13	11/01/13	11/01/13	11/07/13
Parameter	Units		Field Duplicate (1-1)			
Semivolatile Organic Compounds						
3,3'-Dichlorobenzidine	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
3-Nitroaniline	MG/KG	0.70 U	0.74 U	0.75 U	3.0 U	0.79 U
4,6-Dinitro-2-methylphenol	MG/KG	0.70 U	0.74 U	0.75 U	0.30 U	0.79 U
4-Bromophenyl-phenylether	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
4-Chloro-3-methylphenol	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
4-Chloroaniline	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
4-Chlorophenyl-phenylether	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
4-Methylphenol (p-cresol)	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
4-Nitroaniline	MG/KG	0.70 U	0.74 U	0.75 U	3.0 U	0.79 U
4-Nitrophenol	MG/KG	0.70 U	0.74 U	0.75 U	3.0 U	0.79 U
Acenaphthene	MG/KG	0.35 U	0.088 J	0.37 U	1.5 U	6.3
Acenaphthylene	MG/KG	0.40	0.36 U	0.12 J	16	2.9
Acetophenone	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
Anthracene	MG/KG	0.18 J	0.18 J	0.090 J	2.8	6.6 D
Atrazine	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
Benzaldehyde	MG/KG	0.35 U	0.36 UJ	0.37 UJ	1.5 UJ	0.39 U
Benzo(a)anthracene	MG/KG	0.99	0.55	0.34 J	13	4.9
Benzo(a)pyrene	MG/KG	1.5	0.58	0.44	24	4.0
Benzo(b)fluoranthene	MG/KG	1.6	0.60	0.44	22	2.7
Benzo(g,h,i)perylene	MG/KG	0.93	0.43	0.39	30 D	2.2
Benzo(k)fluoranthene	MG/KG	0.81	0.42	0.31 J	5.9	1.9
bis(2-Chloroethoxy)methane	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
bis(2-Chloroethyl)ether	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
bis(2-Ethylhexyl)phthalate	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
Butylbenzylphthalate	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U

Flags assigned during chemistry validation are shown.

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Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-01	SB-16	SB-16	SB-16	SB-16
Sample ID		SB-1 (3.5-4)	110113-DUP-1	SB-16 (3.2-3.6)	SB-16 (4.5-5)	SB-16 (9-10)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.5-4.0	3.2-3.6	3.2-3.6	4.5-5.0	9.0-10.0
Date Sampled		11/14/13	11/01/13	11/01/13	11/01/13	11/07/13
Parameter	Units		Field Duplicate (1-1)			
Semivolatile Organic Compounds						
Caprolactam	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
Carbazole	MG/KG	0.35 U	0.11 J	0.37 U	1.5 U	0.39 U
Chrysene	MG/KG	0.99	0.56	0.41	15	4.6
Dibenz(a,h)anthracene	MG/KG	0.22 J	0.11 J	0.094 J	2.7	0.36 J
Dibenzofuran	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
Diethylphthalate	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
Dimethylphthalate	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
Di-n-butylphthalate	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
Di-n-octylphthalate	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
Fluoranthene	MG/KG	1.0	1.1	0.62	18	9.6 D
Fluorene	MG/KG	0.35 U	0.082 J	0.37 U	0.98 J	4.0
Hexachlorobenzene	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
Hexachlorobutadiene	MG/KG	0.35 UJ	0.36 U	0.37 U	1.5 U	0.39 U
Hexachlorocyclopentadiene	MG/KG	0.35 UJ	0.36 UJ	0.37 UJ	1.5 UJ	0.39 UJ
Hexachloroethane	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
Indeno(1,2,3-cd)pyrene	MG/KG	0.95	0.43	0.35 J	19	1.8
Isophorone	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
Naphthalene	MG/KG	0.35 U	0.36 U	0.37 U	0.47 J	0.39 U
Nitrobenzene	MG/KG	0.35 UJ	0.36 U	0.37 U	1.5 U	0.39 UJ
N-Nitroso-di-n-propylamine	MG/KG	0.35 UJ	0.36 UJ	0.37 UJ	1.5 UJ	0.39 UJ
N-Nitrosodiphenylamine	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
Pentachlorophenol	MG/KG	0.70 UJ	0.74 UJ	0.75 UJ	3.0 UJ	0.79 UJ
Phenanthrene	MG/KG	0.27 J	0.75	0.30 J	5.7	22 D
Phenol	MG/KG	0.35 U	0.36 U	0.37 U	1.5 U	0.39 U
Pyrene	MG/KG	1.2	1.1	0.81	31 D	12 D

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-01	SB-16	SB-16	SB-16	SB-16
Sample ID		SB-1 (3.5-4)	110113-DUP-1	SB-16 (3.2-3.6)	SB-16 (4.5-5)	SB-16 (9-10)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.5-4.0	3.2-3.6	3.2-3.6	4.5-5.0	9.0-10.0
Date Sampled		11/14/13	11/01/13	11/01/13	11/01/13	11/07/13
Parameter	Units		Field Duplicate (1-1)			
Metals						
Aluminum	MG/KG	14,200	7,670	12,000	5,700	39,500
Antimony	MG/KG	0.35 U	0.34 J	0.40 U	0.32 U	0.41 U
Arsenic	MG/KG	2.3	2.6	3.0	2.2	3.3
Barium	MG/KG	102	90.1	82.3	52.6	189
Beryllium	MG/KG	0.34	0.27	0.37	0.28	0.73
Cadmium	MG/KG	0.014 U	0.013 U	0.016 U	0.013 U	0.016 U
Calcium	MG/KG	1,980	7,250 J	30,300 J	2,020	1,780
Chromium	MG/KG	32.5	14.3	21.3	10.7	46.0
Cobalt	MG/KG	7.8	5.0 J	10.1 J	5.2	9.7
Copper	MG/KG	24.2	21.6	29.1	19.0	79.0
Iron	MG/KG	19,400	13,300	16,700	8,840	23,900
Lead	MG/KG	13.9	41.2	49.2	31.4	9.9
Magnesium	MG/KG	4,550	3,900	3,590	1,430	7,180
Manganese	MG/KG	302	249	315	176	585
Mercury	MG/KG	0.037	0.088	0.25	0.14	0.032 J
Nickel	MG/KG	24.1	10.7	15.3	13.5	38.9
Potassium	MG/KG	3,640	1,650	2,410	1,020	2,240
Selenium	MG/KG	0.90 J	2.6	0.67 U	0.65 J	1.2 J
Silver	MG/KG	0.059 U	0.057 U	0.067 U	0.054 U	0.070 U
Sodium	MG/KG	92.7	75.8	126	72.6	126
Thallium	MG/KG	1.7	0.55 J	0.49 J	0.26 J	2.8
Vanadium	MG/KG	30.6	19.1	25.5	13.7	56.6
Zinc	MG/KG	40.9	34.8	48.6	61.4	60.2
Miscellaneous Parameters						
Cyanide, Total	MG/KG	0.46 U	0.46 U	0.49 U	0.50 U	0.50 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-16	SB-16	SB-17	SB-17	SB-17
Sample ID		SB-16 (13-14)	SB-16 (18-19)	SB-17 (4-4.5)	SB-17 (10.5-11.5)	SB-17 (12.5-13.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		13.0-14.0	18.0-19.0	4.0-4.5	10.5-11.5	12.5-13.5
Date Sampled		11/07/13	11/07/13	11/20/13	11/22/13	11/22/13
Parameter	**Units**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,1,2,2-Tetrachloroethane	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,1,2-Trichloroethane	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,1-Dichloroethane	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,1-Dichloroethene	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,2,3-Trichlorobenzene	MG/KG	0.0025 J	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,2,4-Trichlorobenzene	MG/KG	0.0020 J	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,2,4-Trimethylbenzene	MG/KG	0.0062 U	3.5 D	0.0054 U	0.0051 U	0.019
1,2-Dibromo-3-chloropropane	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,2-Dichlorobenzene	MG/KG	0.0062 U	0.37 D	0.0054 U	0.0051 U	0.0051 U
1,2-Dichloroethane	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,2-Dichloroethene (cis)	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,2-Dichloroethene (trans)	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,2-Dichloropropane	MG/KG	0.0062 U	0.018 J	0.0054 U	0.0051 U	0.0051 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.0062 U	1.1 D	0.0054 U	0.0051 U	0.0051 U
1,3-Dichlorobenzene	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,3-Dichloropropene (cis)	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,3-Dichloropropene (trans)	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,4-Dichlorobenzene	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
1,4-Dioxane	MG/KG	R	R	R	R	R
2-Butanone	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0075	0.0051 U
2-Hexanone	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
4-Methyl-2-pentanone	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-16	SB-16	SB-17	SB-17	SB-17
Sample ID		SB-16 (13-14)	SB-16 (18-19)	SB-17 (4-4.5)	SB-17 (10.5-11.5)	SB-17 (12.5-13.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		13.0-14.0	18.0-19.0	4.0-4.5	10.5-11.5	12.5-13.5
Date Sampled		11/07/13	11/07/13	11/20/13	11/22/13	11/22/13
Parameter	**Units**					
Volatile Organic Compounds						
Acetone	MG/KG	0.012	0.020 J	0.0054 U	0.027	0.0078
Benzene	MG/KG	0.0062 U	0.084 J	0.0052 J	0.0051 U	0.0051 U
Bromochloromethane	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Bromodichloromethane	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Bromoform	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Bromomethane	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Carbon disulfide	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Carbon tetrachloride	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Chlorobenzene	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Chloroethane	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Chloroform	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Chloromethane	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Cyclohexane	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Dibromochloromethane	MG/KG	0.0062 UJ	0.013 UJ	0.0054 U	0.0051 U	0.0051 U
Dichlorodifluoromethane	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Ethylbenzene	MG/KG	0.0062 U	1.2 D	0.0054 U	0.0051 U	0.0051 U
Isopropylbenzene	MG/KG	0.0062 U	0.17 DJ	0.0054 U	0.0051 U	0.0042 J
Methyl acetate	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Methyl tert-butyl ether	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Methylcyclohexane	MG/KG	0.0062 U	0.23 DJ	0.0054 U	0.0034 J	0.0051 U
Methylene chloride	MG/KG	0.0062 U	0.013 U	0.010	0.0031 J	0.0039 J
n-Butylbenzene	MG/KG	0.0062 U	0.33 J	0.0054 U	0.0037 J	0.021
n-Propylbenzene	MG/KG	0.0062 U	0.44 D	0.0054 U	0.0051 U	0.0046 J
sec-Butylbenzene	MG/KG	0.0062 U	0.057 J	0.0054 U	0.0051 U	0.0037 J
Styrene	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-16	SB-16	SB-17	SB-17	SB-17
Sample ID		SB-16 (13-14)	SB-16 (18-19)	SB-17 (4-4.5)	SB-17 (10.5-11.5)	SB-17 (12.5-13.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		13.0-14.0	18.0-19.0	4.0-4.5	10.5-11.5	12.5-13.5
Date Sampled		11/07/13	11/07/13	11/20/13	11/22/13	11/22/13
Parameter	**Units**					
Volatile Organic Compounds						
tert-Butylbenzene	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Tetrachloroethene	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Toluene	MG/KG	0.0062 U	0.14 J	0.0026 J	0.0051 U	0.0051 U
Trichloroethene	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Trichlorofluoromethane	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Vinyl chloride	MG/KG	0.0062 U	0.013 U	0.0054 U	0.0051 U	0.0051 U
Xylene (total)	MG/KG	0.0062 U	5.5 D	0.0054 U	0.0051 U	0.0051 U
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	0.37 U	4.4	0.38 J	0.38 U	0.80
1,2,4,5-Tetrachlorobenzene	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
2,2'-oxybis(1-Chloropropane)	MG/KG	0.37 UJ	0.36 UJ	1.9 UJ	0.38 U	0.37 U
2,3,4,6-Tetrachlorophenol	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
2,4,5-Trichlorophenol	MG/KG	0.74 U	0.73 U	3.8 U	0.77 U	0.75 U
2,4,6-Trichlorophenol	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
2,4-Dichlorophenol	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
2,4-Dimethylphenol	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
2,4-Dinitrophenol	MG/KG	0.74 U	0.73 U	3.8 U	0.77 UJ	0.75 UJ
2,4-Dinitrotoluene	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
2,6-Dinitrotoluene	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
2-Chloronaphthalene	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
2-Chlorophenol	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
2-Methylnaphthalene	MG/KG	0.14 J	6.7 D	2.2	0.38 U	0.21 J
2-Methylphenol (o-cresol)	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
2-Nitroaniline	MG/KG	0.74 UJ	0.73 UJ	3.8 U	0.77 U	0.75 U
2-Nitrophenol	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-16	SB-16	SB-17	SB-17	SB-17
Sample ID		SB-16 (13-14)	SB-16 (18-19)	SB-17 (4-4.5)	SB-17 (10.5-11.5)	SB-17 (12.5-13.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		13.0-14.0	18.0-19.0	4.0-4.5	10.5-11.5	12.5-13.5
Date Sampled		11/07/13	11/07/13	11/20/13	11/22/13	11/22/13
Parameter	**Units**					
Semivolatile Organic Compounds						
3,3'-Dichlorobenzidine	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
3-Nitroaniline	MG/KG	0.74 U	0.73 U	3.8 U	0.77 U	0.75 U
4,6-Dinitro-2-methylphenol	MG/KG	0.74 U	0.73 U	3.8 U	0.77 UJ	0.75 UJ
4-Bromophenyl-phenylether	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
4-Chloro-3-methylphenol	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
4-Chloroaniline	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
4-Chlorophenyl-phenylether	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
4-Methylphenol (p-cresol)	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
4-Nitroaniline	MG/KG	0.74 U	0.73 U	3.8 U	0.77 U	0.75 U
4-Nitrophenol	MG/KG	0.74 U	0.73 U	3.8 U	0.77 U	0.75 U
Acenaphthene	MG/KG	0.37 U	16 D	1.7 J	0.38 U	3.3
Acenaphthylene	MG/KG	0.12 J	2.9	12	0.091 J	1.1
Acetophenone	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
Anthracene	MG/KG	0.17 J	3.6	16	0.38 U	2.9
Atrazine	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
Benzaldehyde	MG/KG	0.37 U	0.36 UJ	1.9 UJ	0.38 U	0.37 U
Benzo(a)anthracene	MG/KG	0.13 J	2.5	65 D	0.66	2.4
Benzo(a)pyrene	MG/KG	0.096 J	2.4	77 D	0.56	1.7
Benzo(b)fluoranthene	MG/KG	0.099 J	1.4	110 D	0.61	1.5
Benzo(g,h,i)perylene	MG/KG	0.37 U	1.5	51 D	0.37 J	0.73 J
Benzo(k)fluoranthene	MG/KG	0.056 J	1.5	39 D	0.18 J	0.56
bis(2-Chloroethoxy)methane	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
bis(2-Chloroethyl)ether	MG/KG	0.37 U	0.36 U	1.9 UJ	0.38 U	0.37 U
bis(2-Ethylhexyl)phthalate	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
Butylbenzylphthalate	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-16	SB-16	SB-17	SB-17	SB-17
Sample ID		SB-16 (13-14)	SB-16 (18-19)	SB-17 (4-4.5)	SB-17 (10.5-11.5)	SB-17 (12.5-13.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		13.0-14.0	18.0-19.0	4.0-4.5	10.5-11.5	12.5-13.5
Date Sampled		11/07/13	11/07/13	11/20/13	11/22/13	11/22/13
Parameter	**Units**					
Semivolatile Organic Compounds						
Caprolactam	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
Carbazole	MG/KG	0.37 U	0.21 J	4.2	0.38 U	0.37 U
Chrysene	MG/KG	0.12 J	2.7	60 D	0.62	2.4
Dibenz(a,h)anthracene	MG/KG	0.37 U	0.21 J	13	0.38 U	0.20 J
Dibenzofuran	MG/KG	0.11 J	0.41	4.5	0.38 U	0.37 U
Diethylphthalate	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
Dimethylphthalate	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
Di-n-butylphthalate	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
Di-n-octylphthalate	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
Fluoranthene	MG/KG	0.28 J	4.8	120 D	0.70	4.6
Fluorene	MG/KG	0.19 J	4.4	6.3	0.38 U	2.5
Hexachlorobenzene	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
Hexachlorobutadiene	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
Hexachlorocyclopentadiene	MG/KG	0.37 UJ	0.36 UJ	1.9 U	0.38 UJ	0.37 UJ
Hexachloroethane	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
Indeno(1,2,3-cd)pyrene	MG/KG	0.37 U	1.1	64 D	0.34 J	0.37 U
Isophorone	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
Naphthalene	MG/KG	0.26 J	22 D	3.5	0.38 U	0.37 U
Nitrobenzene	MG/KG	0.37 UJ	0.36 U	1.9 U	0.38 U	0.37 U
N-Nitroso-di-n-propylamine	MG/KG	0.37 UJ	0.36 UJ	1.9 U	0.38 U	0.37 U
N-Nitrosodiphenylamine	MG/KG	0.37 U	0.36 U	1.9 U	0.38 U	0.37 U
Pentachlorophenol	MG/KG	0.74 UJ	0.73 UJ	3.8 U	0.77 UJ	0.75 UJ
Phenanthrene	MG/KG	0.54	14 D	51 D	0.10 J	11 D
Phenol	MG/KG	0.37 U	0.36 U	1.9 UJ	0.38 U	0.37 U
Pyrene	MG/KG	0.24 J	6.9 D	100 D	1.1	6.9 D

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-16	SB-16	SB-17	SB-17	SB-17
Sample ID		SB-16 (13-14)	SB-16 (18-19)	SB-17 (4-4.5)	SB-17 (10.5-11.5)	SB-17 (12.5-13.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		13.0-14.0	18.0-19.0	4.0-4.5	10.5-11.5	12.5-13.5
Date Sampled		11/07/13	11/07/13	11/20/13	11/22/13	11/22/13
Parameter	**Units**					
Metals						
Aluminum	MG/KG	9,220	6,710	8,120	6,350	9,480
Antimony	MG/KG	0.42 UJ	0.27 U	0.44 J	0.30 U	0.28 U
Arsenic	MG/KG	1.0 J	1.1	4.9	2.2	0.87
Barium	MG/KG	90.0	68.7	79.7	45.7	94.8
Beryllium	MG/KG	0.28 U	0.18 U	0.25 U	0.19 U	0.0011 U
Cadmium	MG/KG	0.017 U	0.011 U	0.11 J	0.012 U	0.011 U
Calcium	MG/KG	1,480	1,030	64,100	858	1,550
Chromium	MG/KG	24.5	17.9	16.7	15.5	24.1
Cobalt	MG/KG	6.4 J	6.6	5.0	4.0	7.2 J
Copper	MG/KG	16.3	19.8	78.7	15.9	18.7
Iron	MG/KG	14,100	11,300	12,400	11,400	14,900 J
Lead	MG/KG	3.6	2.9	264	4.3	4.1
Magnesium	MG/KG	3,620	2,980	2,380	2,030	3,880
Manganese	MG/KG	277	150	156	83.7	190
Mercury	MG/KG	0.0025 U	0.0026 U	0.99	0.011 J	0.0026 U
Nickel	MG/KG	18.6	16.4	59.1	9.9	21.0 J
Potassium	MG/KG	3,950	3,080	1,300	1,420	4,260
Selenium	MG/KG	0.71 U	0.46 U	0.64 U	0.50 U	0.86 J
Silver	MG/KG	0.071 U	0.046 U	0.064 U	0.050 U	0.048 U
Sodium	MG/KG	71.6	77.0	256	28.0 J	51.0
Thallium	MG/KG	1.4	0.98	1.2	0.38 J	1.0
Vanadium	MG/KG	23.4	16.2	22.9	26.7	22.7
Zinc	MG/KG	29.3	23.9	99.4	20.6	31.0 J
Miscellaneous Parameters						
Cyanide, Total	MG/KG	0.47 U	0.51 U	46.6	3.8	0.50 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-17	SB-18	SB-18	SB-18	SB-18
Sample ID		SB-17 (15-16)	SB-18 (3-3.5)	SB-18 (8.5-10)	SB-18 (12.5-13.5)	SB-18 (15.8-16.8)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		15.0-16.0	3.0-3.5	8.5-10.0	12.5-13.5	15.8-16.8
Date Sampled		11/22/13	11/20/13	11/22/13	11/22/13	11/22/13
Parameter	**Units**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,1,2,2-Tetrachloroethane	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,1,2-Trichloroethane	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,1-Dichloroethane	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,1-Dichloroethene	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,2,3-Trichlorobenzene	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,2,4-Trichlorobenzene	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,2,4-Trimethylbenzene	MG/KG	0.026 U	0.12	11	9.4	3.4
1,2-Dibromo-3-chloropropane	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,2-Dichlorobenzene	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,2-Dichloroethane	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,2-Dichloroethene (cis)	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,2-Dichloroethene (trans)	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,2-Dichloropropane	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.026 U	0.0052 U	3.9	3.0	1.7
1,3-Dichlorobenzene	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,3-Dichloropropene (cis)	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,3-Dichloropropene (trans)	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,4-Dichlorobenzene	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
1,4-Dioxane	MG/KG	R	R	R	R	R
2-Butanone	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
2-Hexanone	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
4-Methyl-2-pentanone	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-17	SB-18	SB-18	SB-18	SB-18
Sample ID		SB-17 (15-16)	SB-18 (3-3.5)	SB-18 (8.5-10)	SB-18 (12.5-13.5)	SB-18 (15.8-16.8)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		15.0-16.0	3.0-3.5	8.5-10.0	12.5-13.5	15.8-16.8
Date Sampled		11/22/13	11/20/13	11/22/13	11/22/13	11/22/13
Parameter	**Units**					
Volatile Organic Compounds						
Acetone	MG/KG	0.026 U	0.0073	1.9 UJ	1.5 UJ	0.30 U
Benzene	MG/KG	0.026 U	0.068	1.1 J	1.1 J	0.30 U
Bromochloromethane	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
Bromodichloromethane	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
Bromoform	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
Bromomethane	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 UJ
Carbon disulfide	MG/KG	0.026 U	0.012	1.9 U	1.5 U	0.30 U
Carbon tetrachloride	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
Chlorobenzene	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
Chloroethane	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
Chloroform	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
Chloromethane	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 UJ
Cyclohexane	MG/KG	0.026 U	0.0052 U	4.4	6.2	0.30 U
Dibromochloromethane	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
Dichlorodifluoromethane	MG/KG	0.026 U	0.0052 U	1.9 UJ	1.5 UJ	0.30 UJ
Ethylbenzene	MG/KG	0.026 U	0.015	22	15	1.6
Isopropylbenzene	MG/KG	0.026 U	0.0052 U	1.4 J	1.6	0.83
Methyl acetate	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
Methyl tert-butyl ether	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
Methylcyclohexane	MG/KG	0.026 U	0.0052 U	17	21	4.4
Methylene chloride	MG/KG	0.026 UJ	0.0028 J	1.9 U	1.5 U	0.30 U
n-Butylbenzene	MG/KG	0.026 U	0.0052 U	0.96 J	1.1 J	0.30 U
n-Propylbenzene	MG/KG	0.026 U	0.0052 U	1.4 J	1.6	0.77
sec-Butylbenzene	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.23 J
Styrene	MG/KG	0.026 U	0.087	1.9 U	1.5 U	0.30 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-17	SB-18	SB-18	SB-18	SB-18
Sample ID		SB-17 (15-16)	SB-18 (3-3.5)	SB-18 (8.5-10)	SB-18 (12.5-13.5)	SB-18 (15.8-16.8)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		15.0-16.0	3.0-3.5	8.5-10.0	12.5-13.5	15.8-16.8
Date Sampled		11/22/13	11/20/13	11/22/13	11/22/13	11/22/13
Parameter	**Units**					
Volatile Organic Compounds						
tert-Butylbenzene	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
Tetrachloroethene	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
Toluene	MG/KG	0.026 U	0.19	1.9 U	1.5 U	0.30 U
Trichloroethene	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
Trichlorofluoromethane	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
Vinyl chloride	MG/KG	0.026 U	0.0052 U	1.9 U	1.5 U	0.30 U
Xylene (total)	MG/KG	0.026 U	0.36	11.9	8.2	1.41
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	0.37 U	7.6	5.7	6.4 DJ	150 D
1,2,4,5-Tetrachlorobenzene	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
2,2'-oxybis(1-Chloropropane)	MG/KG	0.37 UJ	1.8 U	1.6 UJ	0.38 UJ	1.8 UJ
2,3,4,6-Tetrachlorophenol	MG/KG	0.37 UJ	1.8 U	1.6 UJ	0.38 UJ	1.8 UJ
2,4,5-Trichlorophenol	MG/KG	0.75 U	3.7 U	3.3 U	0.76 U	1.8 U
2,4,6-Trichlorophenol	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
2,4-Dichlorophenol	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
2,4-Dimethylphenol	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
2,4-Dinitrophenol	MG/KG	0.75 UJ	3.7 UJ	3.3 UJ	0.76 UJ	1.8 UJ
2,4-Dinitrotoluene	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
2,6-Dinitrotoluene	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
2-Chloronaphthalene	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
2-Chlorophenol	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
2-Methylnaphthalene	MG/KG	0.37 U	51 D	23	27 D	180 D
2-Methylphenol (o-cresol)	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
2-Nitroaniline	MG/KG	0.75 UJ	3.7 U	3.3 UJ	0.76 UJ	1.8 UJ
2-Nitrophenol	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-17	SB-18	SB-18	SB-18	SB-18
Sample ID		SB-17 (15-16)	SB-18 (3-3.5)	SB-18 (8.5-10)	SB-18 (12.5-13.5)	SB-18 (15.8-16.8)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		15.0-16.0	3.0-3.5	8.5-10.0	12.5-13.5	15.8-16.8
Date Sampled		11/22/13	11/20/13	11/22/13	11/22/13	11/22/13
Parameter	**Units**					
Semivolatile Organic Compounds						
3,3'-Dichlorobenzidine	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
3-Nitroaniline	MG/KG	0.75 U	3.7 U	3.3 U	0.76 U	1.8 U
4,6-Dinitro-2-methylphenol	MG/KG	0.75 U	3.7 UJ	3.3 U	0.76 U	1.8 U
4-Bromophenyl-phenylether	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
4-Chloro-3-methylphenol	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
4-Chloroaniline	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
4-Chlorophenyl-phenylether	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
4-Methylphenol (p-cresol)	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
4-Nitroaniline	MG/KG	0.75 U	3.7 U	3.3 U	0.76 U	1.8 U
4-Nitrophenol	MG/KG	0.75 U	3.7 U	3.3 U	0.76 U	1.8 U
Acenaphthene	MG/KG	0.37 U	13	22	37 D	540 D
Acenaphthylene	MG/KG	0.37 U	50 D	6.4	3.5	58 DJ
Acetophenone	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
Anthracene	MG/KG	0.37 U	70 D	20	15 D	200 D
Atrazine	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
Benzaldehyde	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
Benzo(a)anthracene	MG/KG	0.37 U	90 D	28 D	11 D	140 D
Benzo(a)pyrene	MG/KG	0.37 U	80 D	21	8.9 D	150 D
Benzo(b)fluoranthene	MG/KG	0.37 U	110 D	22	8.0 D	130 D
Benzo(g,h,i)perylene	MG/KG	0.37 U	37 D	9.3	4.5	77 D
Benzo(k)fluoranthene	MG/KG	0.37 U	40 D	11	3.9	40 DJ
bis(2-Chloroethoxy)methane	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
bis(2-Chloroethyl)ether	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
bis(2-Ethylhexyl)phthalate	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
Butylbenzylphthalate	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U

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Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-17	SB-18	SB-18	SB-18	SB-18
Sample ID		SB-17 (15-16)	SB-18 (3-3.5)	SB-18 (8.5-10)	SB-18 (12.5-13.5)	SB-18 (15.8-16.8)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		15.0-16.0	3.0-3.5	8.5-10.0	12.5-13.5	15.8-16.8
Date Sampled		11/22/13	11/20/13	11/22/13	11/22/13	11/22/13
Parameter	**Units**					
Semivolatile Organic Compounds						
Caprolactam	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
Carbazole	MG/KG	0.37 U	23	4.9	2.6	19
Chrysene	MG/KG	0.37 U	80 D	20	8.9 D	130 D
Dibenz(a,h)anthracene	MG/KG	0.37 U	12	3.2	1.2	20
Dibenzofuran	MG/KG	0.37 U	41 D	12	9.5 D	92 D
Diethylphthalate	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
Dimethylphthalate	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
Di-n-butylphthalate	MG/KG	0.088 J	1.8 U	1.6 U	0.12 J	1.8 U
Di-n-octylphthalate	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
Fluoranthene	MG/KG	0.37 U	220 D	62 D	29 D	460 D
Fluorene	MG/KG	0.37 U	57 D	18	18 D	350 D
Hexachlorobenzene	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
Hexachlorobutadiene	MG/KG	0.37 UJ	1.8 U	1.6 UJ	0.38 UJ	1.8 UJ
Hexachlorocyclopentadiene	MG/KG	0.37 UJ	1.8 UJ	1.6 UJ	0.38 UJ	1.8 UJ
Hexachloroethane	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
Indeno(1,2,3-cd)pyrene	MG/KG	0.37 U	44 D	11	4.4	62 DJ
Isophorone	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
Naphthalene	MG/KG	0.37 U	140 D	130 D	93 D	380 D
Nitrobenzene	MG/KG	0.37 UJ	1.8 U	1.6 UJ	0.38 UJ	1.8 UJ
N-Nitroso-di-n-propylamine	MG/KG	0.37 UJ	1.8 U	1.6 UJ	0.38 UJ	1.8 UJ
N-Nitrosodiphenylamine	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
Pentachlorophenol	MG/KG	0.75 UJ	3.7 UJ	3.3 UJ	0.76 UJ	1.8 UJ
Phenanthrene	MG/KG	0.37 U	200 D	63 D	55 D	940 D
Phenol	MG/KG	0.37 U	1.8 U	1.6 U	0.38 U	1.8 U
Pyrene	MG/KG	0.37 U	170 D	53 D	30 D	600 D

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-17	SB-18	SB-18	SB-18	SB-18
Sample ID		SB-17 (15-16)	SB-18 (3-3.5)	SB-18 (8.5-10)	SB-18 (12.5-13.5)	SB-18 (15.8-16.8)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		15.0-16.0	3.0-3.5	8.5-10.0	12.5-13.5	15.8-16.8
Date Sampled		11/22/13	11/20/13	11/22/13	11/22/13	11/22/13
Parameter	**Units**					
Metals						
Aluminum	MG/KG	8,470	13,400	17,200	13,700	8,150
Antimony	MG/KG	0.24 U	0.39 U	0.39 U	0.36 U	0.25 U
Arsenic	MG/KG	1.0	2.8	3.8	2.6	2.6
Barium	MG/KG	85.5	106	88.5	62.2	59.9
Beryllium	MG/KG	0.00093 U	0.26 U	0.52	0.24 U	0.0010 U
Cadmium	MG/KG	0.0093 U	0.16 J	0.015 U	0.014 U	0.010 U
Calcium	MG/KG	1,550	2,580	6,880	1,220	947
Chromium	MG/KG	23.0	25.4	24.0	23.4	16.7
Cobalt	MG/KG	6.7	9.3	7.2	7.7	11.3
Copper	MG/KG	19.5	28.1	12.4	19.1	21.1
Iron	MG/KG	13,400	19,200	16,400	19,600	20,200
Lead	MG/KG	3.6	26.2	26.2	6.3	4.8
Magnesium	MG/KG	3,730	3,750	3,230	3,430	3,240
Manganese	MG/KG	292	498	244	213	161
Mercury	MG/KG	0.0026 U	0.12	0.13	0.011 J	0.0026 U
Nickel	MG/KG	19.0	21.6	14.6	15.2	19.0
Potassium	MG/KG	4,310	2,860	952	2,040	2,170
Selenium	MG/KG	0.48 J	0.92 J	1.3 J	0.65 J	0.43 U
Silver	MG/KG	0.040 U	0.066 U	0.066 U	0.061 U	0.043 U
Sodium	MG/KG	57.1	132	116	63.0	64.0
Thallium	MG/KG	1.1	1.3	0.76 J	0.99	0.58 J
Vanadium	MG/KG	21.2	27.1	29.5	29.9	17.3
Zinc	MG/KG	29.2	204	41.5	29.1	27.0
Miscellaneous Parameters						
Cyanide, Total	MG/KG	2.2	2.1	0.55 U	0.47 U	0.46 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-18	SB-19	SB-19	SB-19	SB-20
Sample ID		SB-18 (23-25)	SB-19 (9-10)	SB-19 (10.5-11.5)	SB-19 (21.6-22.7)	SB-20 (3-3.3)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		23.0-25.0	9.0-10.0	10.5-11.5	21.6-22.7	3.0-3.3
Date Sampled		11/22/13	11/07/13	11/07/13	11/07/13	10/31/13
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,1,2,2-Tetrachloroethane	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 UJ
1,1,2-Trichloroethane	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,1-Dichloroethane	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,1-Dichloroethene	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,2,3-Trichlorobenzene	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,2,4-Trichlorobenzene	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,2,4-Trimethylbenzene	MG/KG	0.0036 J	0.015 U	0.87 D	0.0047 J	0.0051 U
1,2-Dibromo-3-chloropropane	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,2-Dichlorobenzene	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,2-Dichloroethane	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,2-Dichloroethene (cis)	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,2-Dichloroethene (trans)	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,2-Dichloropropane	MG/KG	0.0068 U	0.015 U	0.036 J	0.0055 U	0.0051 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.0068 U	0.17	0.63 D	0.0029 J	0.0051 U
1,3-Dichlorobenzene	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,3-Dichloropropene (cis)	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,3-Dichloropropene (trans)	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,4-Dichlorobenzene	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
1,4-Dioxane	MG/KG	R	R	R	R	R
2-Butanone	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0026 J
2-Hexanone	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
4-Methyl-2-pentanone	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 UJ

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-18	SB-19	SB-19	SB-19	SB-20
Sample ID		SB-18 (23-25)	SB-19 (9-10)	SB-19 (10.5-11.5)	SB-19 (21.6-22.7)	SB-20 (3-3.3)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		23.0-25.0	9.0-10.0	10.5-11.5	21.6-22.7	3.0-3.3
Date Sampled		11/22/13	11/07/13	11/07/13	11/07/13	10/31/13
Parameter	**Units**					
Volatile Organic Compounds						
Acetone	MG/KG	0.0068 U	0.015 U	0.0084 J	0.0055 U	0.026
Benzene	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Bromochloromethane	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Bromodichloromethane	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Bromoform	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Bromomethane	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Carbon disulfide	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Carbon tetrachloride	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Chlorobenzene	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Chloroethane	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Chloroform	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Chloromethane	MG/KG	0.0068 U	0.015 UJ	0.010 UJ	0.0055 UJ	0.0051 U
Cyclohexane	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Dibromochloromethane	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Dichlorodifluoromethane	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Ethylbenzene	MG/KG	0.0068 U	0.049	0.16 DJ	0.0055 U	0.0051 U
Isopropylbenzene	MG/KG	0.0068 U	0.027	0.15 J	0.0055 U	0.0051 U
Methyl acetate	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Methyl tert-butyl ether	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Methylcyclohexane	MG/KG	0.0068 U	0.12	1.6 D	0.0055 U	0.0051 U
Methylene chloride	MG/KG	0.0068 UJ	0.015 U	0.010 U	0.0055 U	0.0051 U
n-Butylbenzene	MG/KG	0.0068 U	0.013 J	0.010 U	0.0055 U	0.0051 U
n-Propylbenzene	MG/KG	0.0068 U	0.051	0.19 DJ	0.0055 U	0.0051 U
sec-Butylbenzene	MG/KG	0.0068 U	0.015 U	0.031 J	0.0055 U	0.0051 U
Styrene	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-18	SB-19	SB-19	SB-19	SB-20
Sample ID		SB-18 (23-25)	SB-19 (9-10)	SB-19 (10.5-11.5)	SB-19 (21.6-22.7)	SB-20 (3-3.3)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		23.0-25.0	9.0-10.0	10.5-11.5	21.6-22.7	3.0-3.3
Date Sampled		11/22/13	11/07/13	11/07/13	11/07/13	10/31/13
Parameter	**Units**					
Volatile Organic Compounds						
tert-Butylbenzene	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Tetrachloroethene	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Toluene	MG/KG	0.0068 U	0.015 U	0.011 J	0.0055 U	0.0051 U
Trichloroethene	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Trichlorofluoromethane	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Vinyl chloride	MG/KG	0.0068 U	0.015 U	0.010 U	0.0055 U	0.0051 U
Xylene (total)	MG/KG	0.0068 U	0.159	0.75 D	0.0037 J	0.0051 U
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	0.37 U	0.84	5.1	0.36 U	0.35 U
1,2,4,5-Tetrachlorobenzene	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
2,2'-oxybis(1-Chloropropane)	MG/KG	0.37 UJ	0.36 UJ	0.36 UJ	0.36 UJ	0.35 UJ
2,3,4,6-Tetrachlorophenol	MG/KG	0.37 UJ	0.36 U	0.36 U	0.36 U	0.35 U
2,4,5-Trichlorophenol	MG/KG	0.75 U	0.74 U	0.73 U	0.73 U	0.71 U
2,4,6-Trichlorophenol	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
2,4-Dichlorophenol	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
2,4-Dimethylphenol	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
2,4-Dinitrophenol	MG/KG	0.75 UJ	0.74 U	0.73 U	0.73 U	0.71 UJ
2,4-Dinitrotoluene	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
2,6-Dinitrotoluene	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
2-Chloronaphthalene	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
2-Chlorophenol	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
2-Methylnaphthalene	MG/KG	0.37 U	0.92	7.8 D	0.36 U	0.35 U
2-Methylphenol (o-cresol)	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
2-Nitroaniline	MG/KG	0.75 UJ	0.74 UJ	0.73 UJ	0.73 UJ	0.71 UJ
2-Nitrophenol	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-18	SB-19	SB-19	SB-19	SB-20
Sample ID		SB-18 (23-25)	SB-19 (9-10)	SB-19 (10.5-11.5)	SB-19 (21.6-22.7)	SB-20 (3-3.3)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		23.0-25.0	9.0-10.0	10.5-11.5	21.6-22.7	3.0-3.3
Date Sampled		11/22/13	11/07/13	11/07/13	11/07/13	10/31/13
Parameter	**Units**					
Semivolatile Organic Compounds						
3,3'-Dichlorobenzidine	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
3-Nitroaniline	MG/KG	0.75 U	0.74 U	0.73 U	0.73 U	0.71 U
4,6-Dinitro-2-methylphenol	MG/KG	0.75 U	0.74 U	0.73 U	0.73 U	0.71 U
4-Bromophenyl-phenylether	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
4-Chloro-3-methylphenol	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
4-Chloroaniline	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
4-Chlorophenyl-phenylether	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
4-Methylphenol (p-cresol)	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
4-Nitroaniline	MG/KG	0.75 U	0.74 U	0.73 U	0.73 U	0.71 U
4-Nitrophenol	MG/KG	0.75 U	0.74 U	0.73 U	0.73 U	0.71 U
Acenaphthene	MG/KG	0.080 J	0.51	1.5	0.36 U	0.35 U
Acenaphthylene	MG/KG	0.37 U	1.8	13 D	0.36 U	0.35 U
Acetophenone	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
Anthracene	MG/KG	0.086 J	0.71	2.7	0.36 U	0.076 J
Atrazine	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
Benzaldehyde	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 UJ
Benzo(a)anthracene	MG/KG	0.075 J	0.40	1.6	0.36 U	0.086 J
Benzo(a)pyrene	MG/KG	0.37 U	0.44	2.0	0.36 U	0.090 J
Benzo(b)fluoranthene	MG/KG	0.37 U	0.37	1.4	0.36 U	0.11 J
Benzo(g,h,i)perylene	MG/KG	0.37 U	0.35 J	1.6	0.36 U	0.35 U
Benzo(k)fluoranthene	MG/KG	0.37 U	0.18 J	0.85	0.36 U	0.35 U
bis(2-Chloroethoxy)methane	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
bis(2-Chloroethyl)ether	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
bis(2-Ethylhexyl)phthalate	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
Butylbenzylphthalate	MG/KG	0.076 J	0.36 U	0.36 U	0.36 U	0.35 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-18	SB-19	SB-19	SB-19	SB-20
Sample ID		SB-18 (23-25)	SB-19 (9-10)	SB-19 (10.5-11.5)	SB-19 (21.6-22.7)	SB-20 (3-3.3)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		23.0-25.0	9.0-10.0	10.5-11.5	21.6-22.7	3.0-3.3
Date Sampled		11/22/13	11/07/13	11/07/13	11/07/13	10/31/13
Parameter	**Units**					
Semivolatile Organic Compounds						
Caprolactam	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
Carbazole	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
Chrysene	MG/KG	0.37 U	0.43	1.8	0.36 U	0.084 J
Dibenz(a,h)anthracene	MG/KG	0.37 U	0.36 U	0.13 J	0.36 U	0.35 U
Dibenzofuran	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
Diethylphthalate	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
Dimethylphthalate	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
Di-n-butylphthalate	MG/KG	0.090 J	0.36 U	0.36 U	0.36 U	0.35 U
Di-n-octylphthalate	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
Fluoranthene	MG/KG	0.19 J	1.4	5.2	0.36 U	0.18 J
Fluorene	MG/KG	0.37 U	1.0	4.6	0.36 U	0.35 U
Hexachlorobenzene	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
Hexachlorobutadiene	MG/KG	0.37 UJ	0.36 U	0.36 U	0.36 U	0.35 U
Hexachlorocyclopentadiene	MG/KG	0.37 UJ	0.36 UJ	0.36 UJ	0.36 UJ	0.35 UJ
Hexachloroethane	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
Indeno(1,2,3-cd)pyrene	MG/KG	0.37 U	0.26 J	1.1	0.36 U	0.35 U
Isophorone	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
Naphthalene	MG/KG	0.37 U	1.0	22 D	0.36 U	0.35 U
Nitrobenzene	MG/KG	0.37 UJ	0.36 UJ	0.36 UJ	0.36 UJ	0.35 U
N-Nitroso-di-n-propylamine	MG/KG	0.37 UJ	0.36 UJ	0.36 UJ	0.36 UJ	0.35 UJ
N-Nitrosodiphenylamine	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
Pentachlorophenol	MG/KG	0.75 UJ	0.74 UJ	0.73 UJ	0.73 UJ	0.71 UJ
Phenanthrene	MG/KG	0.31 J	3.2	14 D	0.36 U	0.19 J
Phenol	MG/KG	0.37 U	0.36 U	0.36 U	0.36 U	0.35 U
Pyrene	MG/KG	0.21 J	2.0	8.0 D	0.36 U	0.17 J

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-18	SB-19	SB-19	SB-19	SB-20
Sample ID		SB-18 (23-25)	SB-19 (9-10)	SB-19 (10.5-11.5)	SB-19 (21.6-22.7)	SB-20 (3-3.3)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		23.0-25.0	9.0-10.0	10.5-11.5	21.6-22.7	3.0-3.3
Date Sampled		11/22/13	11/07/13	11/07/13	11/07/13	10/31/13
Parameter	**Units**					
Metals						
Aluminum	MG/KG	6,130	12,600	11,100	42,900	8,100
Antimony	MG/KG	0.38 U	0.27 U	0.32 U	0.33 U	0.30 U
Arsenic	MG/KG	0.95 J	1.2	1.4	1.6	2.1
Barium	MG/KG	54.9	136	100	139	39.3
Beryllium	MG/KG	0.0015 U	0.26	0.21 U	1.0	0.27
Cadmium	MG/KG	0.015 U	0.011 U	0.013 U	0.12 J	0.012 U
Calcium	MG/KG	1,130	2,070	1,980	25,700	17,700
Chromium	MG/KG	17.4	31.9	27.4	403	23.3
Cobalt	MG/KG	5.4	9.9	8.1	31.1	4.0
Copper	MG/KG	19.5	28.5	26.2	0.095 U	8.1
Iron	MG/KG	12,100	22,600	17,200	38,200	10,800
Lead	MG/KG	3.0	4.6	4.0	3.0	9.7
Magnesium	MG/KG	2,480	5,360	4,920	67,000	2,270
Manganese	MG/KG	167	397	413	1,380	153
Mercury	MG/KG	0.0027 U	0.0049 J	0.0028 U	0.0027 U	0.018 J
Nickel	MG/KG	17.3	27.9	22.1	408	8.4
Potassium	MG/KG	2,380	5,710	5,300	17,700	706
Selenium	MG/KG	0.63 U	0.68 J	0.60 J	0.55 U	0.50 U
Silver	MG/KG	0.063 U	0.046 U	0.055 U	0.055 U	0.050 U
Sodium	MG/KG	47.0 J	469	385	635	417
Thallium	MG/KG	0.49 J	2.0	2.2	5.6	0.17 U
Vanadium	MG/KG	15.5	33.0	27.2	37.2	17.4
Zinc	MG/KG	19.1	41.4	35.6	74.3	20.4
Miscellaneous Parameters						
Cyanide, Total	MG/KG	0.51 U	0.51 U	0.42 U	0.47 U	0.43 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-20	SB-20	SB-21	SB-21	SB-21
Sample ID		SB-20 (7-8)	SB-20 (14.5-15.5)	SB-21 (2.5-3.5)	SB-21 (9-10)	SB-21 (20.7-21.1)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		7.0-8.0	14.5-15.5	2.5-3.5	9.0-10.0	20.7-21.1
Date Sampled		10/31/13	10/31/13	11/04/13	11/07/13	11/07/13
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,1,2,2-Tetrachloroethane	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.0052 UJ	0.0051 UJ	0.013 U	0.021 U	0.010 U
1,1,2-Trichloroethane	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,1-Dichloroethane	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,1-Dichloroethene	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,2,3-Trichlorobenzene	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,2,4-Trichlorobenzene	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,2,4-Trimethylbenzene	MG/KG	0.0052 U	0.0051 U	0.013 U	3.0	0.16
1,2-Dibromo-3-chloropropane	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,2-Dichlorobenzene	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,2-Dichloroethane	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,2-Dichloroethene (cis)	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,2-Dichloroethene (trans)	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,2-Dichloropropane	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.0052 U	0.0051 U	0.013 U	1.4	0.0077 J
1,3-Dichlorobenzene	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,3-Dichloropropene (cis)	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,3-Dichloropropene (trans)	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,4-Dichlorobenzene	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
1,4-Dioxane	MG/KG	R	R	R	R	R
2-Butanone	MG/KG	0.0034 J	0.0051 UJ	0.017	0.021 U	0.010 U
2-Hexanone	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
4-Methyl-2-pentanone	MG/KG	0.0052 UJ	0.0051 UJ	0.013 U	0.021 U	0.010 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-20	SB-20	SB-21	SB-21	SB-21
Sample ID		SB-20 (7-8)	SB-20 (14.5-15.5)	SB-21 (2.5-3.5)	SB-21 (9-10)	SB-21 (20.7-21.1)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		7.0-8.0	14.5-15.5	2.5-3.5	9.0-10.0	20.7-21.1
Date Sampled		10/31/13	10/31/13	11/04/13	11/07/13	11/07/13
Parameter	**Units**					
Volatile Organic Compounds						
Acetone	MG/KG	0.023	0.0044 J	0.079	0.017 J	0.012
Benzene	MG/KG	0.0052 U	0.0051 U	0.0035 J	0.11	0.010 U
Bromochloromethane	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Bromodichloromethane	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Bromoform	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Bromomethane	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Carbon disulfide	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Carbon tetrachloride	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Chlorobenzene	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Chloroethane	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Chloroform	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Chloromethane	MG/KG	0.0052 U	0.0051 U	0.013 UJ	0.021 UJ	0.010 U
Cyclohexane	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Dibromochloromethane	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 UJ
Dichlorodifluoromethane	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Ethylbenzene	MG/KG	0.0052 U	0.0051 U	0.013 U	1.1	0.0070 J
Isopropylbenzene	MG/KG	0.0052 U	0.0051 U	0.013 U	0.15	0.024
Methyl acetate	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Methyl tert-butyl ether	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Methylcyclohexane	MG/KG	0.0052 U	0.0051 U	0.013 U	0.081	0.0037 J
Methylene chloride	MG/KG	0.0021 J	0.0051 U	0.013 U	0.021 U	0.010 U
n-Butylbenzene	MG/KG	0.0052 U	0.0051 U	0.013 U	0.063	0.032
n-Propylbenzene	MG/KG	0.0052 U	0.0051 U	0.013 U	0.10	0.018
sec-Butylbenzene	MG/KG	0.0052 U	0.0051 U	0.013 U	0.0087 J	0.0059 J
Styrene	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-20	SB-20	SB-21	SB-21	SB-21
Sample ID		SB-20 (7-8)	SB-20 (14.5-15.5)	SB-21 (2.5-3.5)	SB-21 (9-10)	SB-21 (20.7-21.1)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		7.0-8.0	14.5-15.5	2.5-3.5	9.0-10.0	20.7-21.1
Date Sampled		10/31/13	10/31/13	11/04/13	11/07/13	11/07/13
Parameter	**Units**					
Volatile Organic Compounds						
tert-Butylbenzene	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Tetrachloroethene	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Toluene	MG/KG	0.0052 U	0.0051 U	0.013 U	0.46	0.010 U
Trichloroethene	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Trichlorofluoromethane	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Vinyl chloride	MG/KG	0.0052 U	0.0051 U	0.013 U	0.021 U	0.010 U
Xylene (total)	MG/KG	0.0052 U	0.0051 U	0.013 U	9.3	0.0031 J
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	0.38 U	0.37 U	0.37 J	10	2.3
1,2,4,5-Tetrachlorobenzene	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
2,2'-oxybis(1-Chloropropane)	MG/KG	0.38 UJ	0.37 UJ	1.4 UJ	1.4 UJ	0.36 UJ
2,3,4,6-Tetrachlorophenol	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
2,4,5-Trichlorophenol	MG/KG	0.78 U	0.75 U	2.9 U	2.9 U	0.73 U
2,4,6-Trichlorophenol	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
2,4-Dichlorophenol	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
2,4-Dimethylphenol	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
2,4-Dinitrophenol	MG/KG	0.78 UJ	0.75 UJ	2.9 U	2.9 U	0.73 U
2,4-Dinitrotoluene	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
2,6-Dinitrotoluene	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
2-Chloronaphthalene	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
2-Chlorophenol	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
2-Methylnaphthalene	MG/KG	0.38 U	0.37 U	1.3 J	62 D	0.36 U
2-Methylphenol (o-cresol)	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
2-Nitroaniline	MG/KG	0.78 UJ	0.75 UJ	2.9 UJ	2.9 UJ	0.73 UJ
2-Nitrophenol	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-20	SB-20	SB-21	SB-21	SB-21
Sample ID		SB-20 (7-8)	SB-20 (14.5-15.5)	SB-21 (2.5-3.5)	SB-21 (9-10)	SB-21 (20.7-21.1)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		7.0-8.0	14.5-15.5	2.5-3.5	9.0-10.0	20.7-21.1
Date Sampled		10/31/13	10/31/13	11/04/13	11/07/13	11/07/13
Parameter	**Units**					
Semivolatile Organic Compounds						
3,3'-Dichlorobenzidine	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
3-Nitroaniline	MG/KG	0.78 U	0.75 U	2.9 U	2.9 U	0.73 U
4,6-Dinitro-2-methylphenol	MG/KG	0.78 U	0.75 U	2.9 U	2.9 U	0.73 U
4-Bromophenyl-phenylether	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
4-Chloro-3-methylphenol	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
4-Chloroaniline	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
4-Chlorophenyl-phenylether	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
4-Methylphenol (p-cresol)	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
4-Nitroaniline	MG/KG	0.78 U	0.75 U	2.9 U	2.9 U	0.73 U
4-Nitrophenol	MG/KG	0.78 U	0.75 U	2.9 U	2.9 U	0.73 U
Acenaphthene	MG/KG	0.38 U	0.37 U	9.0	18	22 D
Acenaphthylene	MG/KG	0.38 U	0.37 U	1.7	8.5	2.7
Acetophenone	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
Anthracene	MG/KG	0.38 U	0.37 U	14	34 D	13 D
Atrazine	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
Benzaldehyde	MG/KG	0.38 UJ	0.37 UJ	1.4 UJ	1.4 UJ	0.36 UJ
Benzo(a)anthracene	MG/KG	0.38 U	0.37 U	22	29 D	7.7 D
Benzo(a)pyrene	MG/KG	0.38 U	0.37 U	18	21	4.6
Benzo(b)fluoranthene	MG/KG	0.38 U	0.37 U	20	21	0.36 U
Benzo(g,h,i)perylene	MG/KG	0.38 U	0.37 U	11	9.6	2.1
Benzo(k)fluoranthene	MG/KG	0.38 U	0.37 U	11	13	2.1
bis(2-Chloroethoxy)methane	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
bis(2-Chloroethyl)ether	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
bis(2-Ethylhexyl)phthalate	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.73
Butylbenzylphthalate	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.13 J

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-20	SB-20	SB-21	SB-21	SB-21
Sample ID		SB-20 (7-8)	SB-20 (14.5-15.5)	SB-21 (2.5-3.5)	SB-21 (9-10)	SB-21 (20.7-21.1)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		7.0-8.0	14.5-15.5	2.5-3.5	9.0-10.0	20.7-21.1
Date Sampled		10/31/13	10/31/13	11/04/13	11/07/13	11/07/13
Parameter	**Units**					
Semivolatile Organic Compounds						
Caprolactam	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
Carbazole	MG/KG	0.38 U	0.37 U	5.5	14	0.22 J
Chrysene	MG/KG	0.38 U	0.37 U	18	20	5.8
Dibenz(a,h)anthracene	MG/KG	0.38 U	0.37 U	3.7	3.6	0.45
Dibenzofuran	MG/KG	0.38 U	0.37 U	5.9	32 D	0.42
Diethylphthalate	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
Dimethylphthalate	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
Di-n-butylphthalate	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
Di-n-octylphthalate	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
Fluoranthene	MG/KG	0.38 U	0.37 U	50 D	75 D	14 D
Fluorene	MG/KG	0.38 U	0.37 U	9.3	39 D	10 D
Hexachlorobenzene	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
Hexachlorobutadiene	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
Hexachlorocyclopentadiene	MG/KG	0.38 UJ	0.37 UJ	1.4 UJ	1.4 UJ	0.36 UJ
Hexachloroethane	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
Indeno(1,2,3-cd)pyrene	MG/KG	0.38 U	0.37 U	12	11	1.8
Isophorone	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
Naphthalene	MG/KG	0.38 U	0.37 U	3.3	220 D	0.21 J
Nitrobenzene	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
N-Nitroso-di-n-propylamine	MG/KG	0.38 UJ	0.37 UJ	1.4 UJ	1.4 UJ	0.36 UJ
N-Nitrosodiphenylamine	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
Pentachlorophenol	MG/KG	0.78 UJ	0.75 UJ	2.9 UJ	2.9 UJ	0.73 UJ
Phenanthrene	MG/KG	0.38 U	0.37 U	44 D	120 D	40 D
Phenol	MG/KG	0.38 U	0.37 U	1.4 U	1.4 U	0.36 U
Pyrene	MG/KG	0.38 U	0.37 U	40 D	58 D	20 D

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-20	SB-20	SB-21	SB-21	SB-21
Sample ID		SB-20 (7-8)	SB-20 (14.5-15.5)	SB-21 (2.5-3.5)	SB-21 (9-10)	SB-21 (20.7-21.1)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		7.0-8.0	14.5-15.5	2.5-3.5	9.0-10.0	20.7-21.1
Date Sampled		10/31/13	10/31/13	11/04/13	11/07/13	11/07/13
Parameter	**Units**					
Metals						
Aluminum	MG/KG	14,400	7,050	10,400	9,390	17,800
Antimony	MG/KG	0.42 U	0.40 U	0.25 UJ	0.30 U	0.28 U
Arsenic	MG/KG	3.7	1.0 J	2.8	1.2	1.4
Barium	MG/KG	117	64.2	75.8 J	93.3	162
Beryllium	MG/KG	0.47	0.23 J	0.36	0.20 U	0.43
Cadmium	MG/KG	0.016 U	0.016 U	0.0099 U	0.012 U	0.011 U
Calcium	MG/KG	2,530	1,540	28,000 J	1,400	2,550
Chromium	MG/KG	59.1	18.3	20.8	22.3	140
Cobalt	MG/KG	10.1	7.3	6.0 J	6.9	11.6
Copper	MG/KG	27.9	18.7	28.0	17.4	16.5
Iron	MG/KG	21,300	13,100	13,200 J	13,600	23,800
Lead	MG/KG	8.2	3.3	67.4 J	3.6	5.7
Magnesium	MG/KG	5,860	2,590	12,300 J	3,560	11,500
Manganese	MG/KG	260	196	287 J	236	373
Mercury	MG/KG	0.0045 J	0.0027 U	0.21	0.0026 U	0.0025 U
Nickel	MG/KG	23.8	20.2	15.8	19.3	89.1
Potassium	MG/KG	4,570	2,710	2,100	4,090	11,300
Selenium	MG/KG	0.70 U	0.67 U	0.42 U	0.61 J	0.71 J
Silver	MG/KG	0.070 U	0.067 U	0.042 U	0.051 U	0.046 U
Sodium	MG/KG	713	120	550	197	275
Thallium	MG/KG	1.5	0.85 J	0.86	1.2	2.6
Vanadium	MG/KG	38.7	19.6	23.6 J	22.6	32.0
Zinc	MG/KG	48.7	22.1	61.9 J	28.9	55.7
Miscellaneous Parameters						
Cyanide, Total	MG/KG	0.52 U	0.48 U	0.47 U	0.42 U	0.43 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-21	SB-21	SB-22	SB-22	SB-22
Sample ID		110713-DUP-1	SB-21 (21.5-22.5)	SB-22 (2-2.3)	SB-22 (10-11.5)	SB-22 (18.5-19.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		21.5-22.5	21.5-22.5	2.0-2.3	10.0-11.5	18.5-19.5
Date Sampled		11/07/13	11/07/13	10/31/13	10/31/13	10/31/13
Parameter	**Units**	Field Duplicate (1-1)				
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.0098 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,1,2,2-Tetrachloroethane	MG/KG	0.0013 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.0059 U	0.012 U	0.0053 UJ	0.0047 UJ	0.0050 UJ
1,1,2-Trichloroethane	MG/KG	0.00095 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,1-Dichloroethane	MG/KG	0.0013 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,1-Dichloroethene	MG/KG	0.0019 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,2,3-Trichlorobenzene	MG/KG	0.0013 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,2,4-Trichlorobenzene	MG/KG	0.0012 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,2,4-Trimethylbenzene	MG/KG	0.0011 U	0.0053 J	0.0053 U	0.0047 U	0.0050 U
1,2-Dibromo-3-chloropropane	MG/KG	0.0026 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.0015 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,2-Dichlorobenzene	MG/KG	0.0012 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,2-Dichloroethane	MG/KG	0.0011 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,2-Dichloroethene (cis)	MG/KG	0.0015 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,2-Dichloroethene (trans)	MG/KG	0.0098 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,2-Dichloropropane	MG/KG	0.0014 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.0012 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,3-Dichlorobenzene	MG/KG	0.0014 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,3-Dichloropropene (cis)	MG/KG	0.0013 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,3-Dichloropropene (trans)	MG/KG	0.0013 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,4-Dichlorobenzene	MG/KG	0.0016 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
1,4-Dioxane	MG/KG	R	R	R	R	R
2-Butanone	MG/KG	0.0039 U	0.012 U	0.0058 J	0.0047 UJ	0.0050 UJ
2-Hexanone	MG/KG	0.0016 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
4-Methyl-2-pentanone	MG/KG	0.0014 U	0.012 U	0.0053 UJ	0.0047 UJ	0.0050 UJ

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-21	SB-21	SB-22	SB-22	SB-22
Sample ID		110713-DUP-1	SB-21 (21.5-22.5)	SB-22 (2-2.3)	SB-22 (10-11.5)	SB-22 (18.5-19.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		21.5-22.5	21.5-22.5	2.0-2.3	10.0-11.5	18.5-19.5
Date Sampled		11/07/13	11/07/13	10/31/13	10/31/13	10/31/13
Parameter	**Units**	Field Duplicate (1-1)				
Volatile Organic Compounds						
Acetone	MG/KG	0.0032 U	0.012 U	0.041	0.0080	0.0050 U
Benzene	MG/KG	0.0012 U	0.012 U	0.0041 J	0.0047 U	0.0050 U
Bromochloromethane	MG/KG	0.0015 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Bromodichloromethane	MG/KG	0.0019 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Bromoform	MG/KG	0.0039 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Bromomethane	MG/KG	0.0022 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Carbon disulfide	MG/KG	0.00059 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Carbon tetrachloride	MG/KG	0.00065 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Chlorobenzene	MG/KG	0.0098 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Chloroethane	MG/KG	0.0020 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Chloroform	MG/KG	0.0013 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Chloromethane	MG/KG	0.0016 UJ	0.012 UJ	0.0053 U	0.0047 U	0.0050 U
Cyclohexane	MG/KG	0.0033 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Dibromochloromethane	MG/KG	0.0013 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Dichlorodifluoromethane	MG/KG	0.0019 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Ethylbenzene	MG/KG	0.00098 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Isopropylbenzene	MG/KG	0.0011 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Methyl acetate	MG/KG	0.0028 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Methyl tert-butyl ether	MG/KG	0.0012 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Methylcyclohexane	MG/KG	0.0035 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Methylene chloride	MG/KG	0.0026 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
n-Butylbenzene	MG/KG	0.0013 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
n-Propylbenzene	MG/KG	0.00087 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
sec-Butylbenzene	MG/KG	0.0012 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Styrene	MG/KG	0.0098 U	0.012 U	0.0053 U	0.0047 U	0.0050 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-21	SB-21	SB-22	SB-22	SB-22
Sample ID		110713-DUP-1	SB-21 (21.5-22.5)	SB-22 (2-2.3)	SB-22 (10-11.5)	SB-22 (18.5-19.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		21.5-22.5	21.5-22.5	2.0-2.3	10.0-11.5	18.5-19.5
Date Sampled		11/07/13	11/07/13	10/31/13	10/31/13	10/31/13
Parameter	**Units**	Field Duplicate (1-1)				
Volatile Organic Compounds						
tert-Butylbenzene	MG/KG	0.0098 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Tetrachloroethene	MG/KG	0.0012 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Toluene	MG/KG	0.00093 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Trichloroethene	MG/KG	0.0012 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Trichlorofluoromethane	MG/KG	0.00083 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Vinyl chloride	MG/KG	0.0012 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Xylene (total)	MG/KG	0.0032 U	0.012 U	0.0053 U	0.0047 U	0.0050 U
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
1,2,4,5-Tetrachlorobenzene	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
2,2'-oxybis(1-Chloropropane)	MG/KG	0.39 UJ	0.36 UJ	1.5 UJ	0.37 UJ	0.36 UJ
2,3,4,6-Tetrachlorophenol	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
2,4,5-Trichlorophenol	MG/KG	0.79 U	0.73 U	3.0 U	0.75 U	0.73 U
2,4,6-Trichlorophenol	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
2,4-Dichlorophenol	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
2,4-Dimethylphenol	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
2,4-Dinitrophenol	MG/KG	0.79 U	0.73 U	3.0 UJ	0.75 UJ	0.73 UJ
2,4-Dinitrotoluene	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
2,6-Dinitrotoluene	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
2-Chloronaphthalene	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
2-Chlorophenol	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
2-Methylnaphthalene	MG/KG	0.39 U	0.36 U	0.38 J	0.37 U	0.36 U
2-Methylphenol (o-cresol)	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
2-Nitroaniline	MG/KG	0.79 UJ	0.73 UJ	3.0 UJ	0.75 UJ	0.73 UJ
2-Nitrophenol	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-21	SB-21	SB-22	SB-22	SB-22
Sample ID		110713-DUP-1	SB-21 (21.5-22.5)	SB-22 (2-2.3)	SB-22 (10-11.5)	SB-22 (18.5-19.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		21.5-22.5	21.5-22.5	2.0-2.3	10.0-11.5	18.5-19.5
Date Sampled		11/07/13	11/07/13	10/31/13	10/31/13	10/31/13
Parameter	**Units**	Field Duplicate (1-1)				
Semivolatile Organic Compounds						
3,3'-Dichlorobenzidine	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
3-Nitroaniline	MG/KG	0.79 U	0.73 U	3.0 U	0.75 U	0.73 U
4,6-Dinitro-2-methylphenol	MG/KG	0.79 U	0.73 U	3.0 U	0.75 U	0.73 U
4-Bromophenyl-phenylether	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
4-Chloro-3-methylphenol	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
4-Chloroaniline	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
4-Chlorophenyl-phenylether	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
4-Methylphenol (p-cresol)	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
4-Nitroaniline	MG/KG	0.79 U	0.73 U	3.0 U	0.75 U	0.73 U
4-Nitrophenol	MG/KG	0.79 U	0.73 U	3.0 U	0.75 U	0.73 U
Acenaphthene	MG/KG	0.52	0.34 J	3.8	0.37 U	0.36 U
Acenaphthylene	MG/KG	0.39 U	0.36 U	3.3	0.37 U	0.36 U
Acetophenone	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
Anthracene	MG/KG	0.55	0.34 J	9.2	0.37 U	0.36 U
Atrazine	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
Benzaldehyde	MG/KG	0.39 U	0.36 U	1.5 UJ	0.37 UJ	0.36 UJ
Benzo(a)anthracene	MG/KG	0.40	0.22 J	18	0.37 U	0.36 U
Benzo(a)pyrene	MG/KG	0.29 J	0.17 J	18	0.37 U	0.36 U
Benzo(b)fluoranthene	MG/KG	0.21 J	0.13 J	15	0.37 U	0.36 U
Benzo(g,h,i)perylene	MG/KG	0.14 J	0.085 J	9.7	0.37 U	0.36 U
Benzo(k)fluoranthene	MG/KG	0.15 J	0.36 U	14	0.37 U	0.36 U
bis(2-Chloroethoxy)methane	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
bis(2-Chloroethyl)ether	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
bis(2-Ethylhexyl)phthalate	MG/KG	0.39 U	1.4	1.5 U	0.37 U	0.36 U
Butylbenzylphthalate	MG/KG	0.39 U	0.073 J	1.5 U	0.37 U	0.36 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-21	SB-21	SB-22	SB-22	SB-22
Sample ID		110713-DUP-1	SB-21 (21.5-22.5)	SB-22 (2-2.3)	SB-22 (10-11.5)	SB-22 (18.5-19.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		21.5-22.5	21.5-22.5	2.0-2.3	10.0-11.5	18.5-19.5
Date Sampled		11/07/13	11/07/13	10/31/13	10/31/13	10/31/13
Parameter	**Units**	Field Duplicate (1-1)				
Semivolatile Organic Compounds						
Caprolactam	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
Carbazole	MG/KG	0.39 U	0.36 U	1.3 J	0.37 U	0.36 U
Chrysene	MG/KG	0.37 J	0.25 J	17	0.37 U	0.36 U
Dibenz(a,h)anthracene	MG/KG	0.39 U	0.36 U	2.2	0.37 U	0.36 U
Dibenzofuran	MG/KG	0.39 U	0.36 U	2.7	0.37 U	0.36 U
Diethylphthalate	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
Dimethylphthalate	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
Di-n-butylphthalate	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
Di-n-octylphthalate	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
Fluoranthene	MG/KG	0.71	0.41	35 D	0.37 U	0.36 U
Fluorene	MG/KG	0.39 J	0.23 J	4.9	0.37 U	0.36 U
Hexachlorobenzene	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
Hexachlorobutadiene	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
Hexachlorocyclopentadiene	MG/KG	0.39 UJ	0.36 UJ	1.5 UJ	0.37 UJ	0.36 UJ
Hexachloroethane	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
Indeno(1,2,3-cd)pyrene	MG/KG	0.12 J	0.36 U	11	0.37 U	0.36 U
Isophorone	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
Naphthalene	MG/KG	0.39 U	0.36 U	0.57 J	0.37 U	0.36 U
Nitrobenzene	MG/KG	0.39 UJ	0.36 UJ	1.5 U	0.37 U	0.36 U
N-Nitroso-di-n-propylamine	MG/KG	0.39 UJ	0.36 UJ	1.5 UJ	0.37 UJ	0.36 UJ
N-Nitrosodiphenylamine	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
Pentachlorophenol	MG/KG	0.79 UJ	0.73 UJ	3.0 UJ	0.75 UJ	0.73 UJ
Phenanthrene	MG/KG	1.8	1.2	20	0.37 U	0.36 U
Phenol	MG/KG	0.39 U	0.36 U	1.5 U	0.37 U	0.36 U
Pyrene	MG/KG	0.97	0.61	29 D	0.37 U	0.36 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-21	SB-21	SB-22	SB-22	SB-22
Sample ID		110713-DUP-1	SB-21 (21.5-22.5)	SB-22 (2-2.3)	SB-22 (10-11.5)	SB-22 (18.5-19.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		21.5-22.5	21.5-22.5	2.0-2.3	10.0-11.5	18.5-19.5
Date Sampled		11/07/13	11/07/13	10/31/13	10/31/13	10/31/13
Parameter	**Units**	Field Duplicate (1-1)				
Metals						
Aluminum	MG/KG	23,900	30,200	10,100	11,600	8,820
Antimony	MG/KG	0.43 U	0.35 U	0.41 U	0.34 U	0.34 U
Arsenic	MG/KG	1.5	2.2	2.7	1.2	1.1
Barium	MG/KG	106	118	68.4	114	111
Beryllium	MG/KG	0.69	0.86	0.33	0.26	0.21 J
Cadmium	MG/KG	0.017 U	0.024 J	0.016 U	0.013 U	0.013 U
Calcium	MG/KG	4,050	5,060	5,660	1,210	1,900
Chromium	MG/KG	218	203	20.5	28.1	40.7
Cobalt	MG/KG	18.9	22.1	6.4	8.3	7.2
Copper	MG/KG	4.7	2.8	21.3	20.8	14.4
Iron	MG/KG	22,700	33,200	14,700	17,000	16,100
Lead	MG/KG	4.4	4.6	53.5	4.7	3.4
Magnesium	MG/KG	24,600 J	35,600 J	3,500	4,320	5,580
Manganese	MG/KG	461 J	842 J	265	220	442
Mercury	MG/KG	0.0029 U	0.0027 U	0.19	0.0025 U	0.0024 U
Nickel	MG/KG	277	300	19.9	24.1	35.8
Potassium	MG/KG	9,080	10,200	1,680	4,910	4,720
Selenium	MG/KG	1.4 J	1.2 J	0.69 U	0.57 U	0.57 U
Silver	MG/KG	0.073 U	0.058 U	0.075 J	0.057 U	0.057 U
Sodium	MG/KG	474	608	455	171	136
Thallium	MG/KG	2.8	3.6	0.73 J	1.3	1.2
Vanadium	MG/KG	34.6	44.7	22.6	27.2	22.9
Zinc	MG/KG	87.5	107	56.5	35.8	29.6
Miscellaneous Parameters						
Cyanide, Total	MG/KG	0.52 U	0.45 U	0.44 U	0.48 U	0.42 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-23	SB-23	SB-24	SB-24	SB-25
Sample ID		SB-23 (4.5-5)	SB-23 (13.5-14)	SB-24 (9-10)	SB-24 (14-15)	SB-25 (7.2-8.2)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		4.5-5.0	13.5-14.0	9.0-10.0	14.0-15.0	7.2-8.2
Date Sampled		11/04/13	11/06/13	11/07/13	11/07/13	11/07/13
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,1,2,2-Tetrachloroethane	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,1,2-Trichloroethane	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,1-Dichloroethane	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,1-Dichloroethene	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,2,3-Trichlorobenzene	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,2,4-Trichlorobenzene	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,2,4-Trimethylbenzene	MG/KG	0.010 UJ	64	0.0016 J	0.0055 U	4.0
1,2-Dibromo-3-chloropropane	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,2-Dichlorobenzene	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,2-Dichloroethane	MG/KG	0.010 UJ	0.34	0.0076 U	0.0055 U	0.0099 U
1,2-Dichloroethene (cis)	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,2-Dichloroethene (trans)	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,2-Dichloropropane	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.010 UJ	18	0.0076 U	0.0055 U	0.39
1,3-Dichlorobenzene	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,3-Dichloropropene (cis)	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,3-Dichloropropene (trans)	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
1,4-Dichlorobenzene	MG/KG	0.010 UJ	1.3	0.0076 U	0.0055 U	0.0099 U
1,4-Dioxane	MG/KG	R	R	R	R	R
2-Butanone	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0047 J
2-Hexanone	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
4-Methyl-2-pentanone	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-23	SB-23	SB-24	SB-24	SB-25
Sample ID		SB-23 (4.5-5)	SB-23 (13.5-14)	SB-24 (9-10)	SB-24 (14-15)	SB-25 (7.2-8.2)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		4.5-5.0	13.5-14.0	9.0-10.0	14.0-15.0	7.2-8.2
Date Sampled		11/04/13	11/06/13	11/07/13	11/07/13	11/07/13
Parameter	**Units**					
Volatile Organic Compounds						
Acetone	MG/KG	0.031 J	0.091	0.017	0.0037 J	0.012
Benzene	MG/KG	0.010 UJ	26	0.0076 U	0.0055 U	0.37
Bromochloromethane	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Bromodichloromethane	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Bromoform	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Bromomethane	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Carbon disulfide	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Carbon tetrachloride	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Chlorobenzene	MG/KG	0.010 UJ	0.59	0.0076 U	0.0055 U	0.0099 U
Chloroethane	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Chloroform	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Chloromethane	MG/KG	0.010 UJ	0.089 UJ	0.0076 UJ	0.0055 UJ	0.0099 UJ
Cyclohexane	MG/KG	0.010 UJ	0.068 J	0.0076 U	0.0055 U	0.0046 J
Dibromochloromethane	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Dichlorodifluoromethane	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Ethylbenzene	MG/KG	0.010 UJ	74	0.0076 U	0.0055 U	0.99
Isopropylbenzene	MG/KG	0.010 UJ	1.9	0.0076 U	0.0055 U	0.027
Methyl acetate	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Methyl tert-butyl ether	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Methylcyclohexane	MG/KG	0.010 UJ	0.22	0.0076 U	0.0055 U	0.013
Methylene chloride	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
n-Butylbenzene	MG/KG	0.010 UJ	1.6	0.0076 U	0.0055 U	0.032
n-Propylbenzene	MG/KG	0.010 UJ	1.1	0.0076 U	0.0055 U	0.043
sec-Butylbenzene	MG/KG	0.010 UJ	0.19	0.0076 U	0.0055 U	0.0099 U
Styrene	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-23	SB-23	SB-24	SB-24	SB-25
Sample ID		SB-23 (4.5-5)	SB-23 (13.5-14)	SB-24 (9-10)	SB-24 (14-15)	SB-25 (7.2-8.2)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		4.5-5.0	13.5-14.0	9.0-10.0	14.0-15.0	7.2-8.2
Date Sampled		11/04/13	11/06/13	11/07/13	11/07/13	11/07/13
Parameter	**Units**					
Volatile Organic Compounds						
tert-Butylbenzene	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Tetrachloroethene	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Toluene	MG/KG	0.010 UJ	1.0	0.0076 U	0.0055 U	3.6
Trichloroethene	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Trichlorofluoromethane	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Vinyl chloride	MG/KG	0.010 UJ	0.089 U	0.0076 U	0.0055 U	0.0099 U
Xylene (total)	MG/KG	0.010 UJ	66	0.0076 U	0.0055 U	9.6
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	1.4 U	22	0.34 U	0.35 U	45 DJ
1,2,4,5-Tetrachlorobenzene	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
2,2'-oxybis(1-Chloropropane)	MG/KG	1.4 UJ	2.9 UJ	0.34 UJ	0.35 UJ	1.7 UJ
2,3,4,6-Tetrachlorophenol	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
2,4,5-Trichlorophenol	MG/KG	2.9 U	5.9 U	0.69 U	0.72 U	3.5 U
2,4,6-Trichlorophenol	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
2,4-Dichlorophenol	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
2,4-Dimethylphenol	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
2,4-Dinitrophenol	MG/KG	2.9 U	5.9 U	0.69 U	0.72 U	3.5 U
2,4-Dinitrotoluene	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
2,6-Dinitrotoluene	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
2-Chloronaphthalene	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
2-Chlorophenol	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
2-Methylnaphthalene	MG/KG	0.39 J	230 D	0.34 U	0.35 U	340 D
2-Methylphenol (o-cresol)	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
2-Nitroaniline	MG/KG	2.9 UJ	5.9 UJ	0.69 UJ	0.72 UJ	3.5 UJ
2-Nitrophenol	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-23	SB-23	SB-24	SB-24	SB-25
Sample ID		SB-23 (4.5-5)	SB-23 (13.5-14)	SB-24 (9-10)	SB-24 (14-15)	SB-25 (7.2-8.2)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		4.5-5.0	13.5-14.0	9.0-10.0	14.0-15.0	7.2-8.2
Date Sampled		11/04/13	11/06/13	11/07/13	11/07/13	11/07/13
Parameter	Units					
Semivolatile Organic Compounds						
3,3'-Dichlorobenzidine	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
3-Nitroaniline	MG/KG	2.9 U	5.9 U	0.69 U	0.72 U	3.5 U
4,6-Dinitro-2-methylphenol	MG/KG	2.9 U	5.9 U	0.69 U	0.72 U	3.5 U
4-Bromophenyl-phenylether	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
4-Chloro-3-methylphenol	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
4-Chloroaniline	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
4-Chlorophenyl-phenylether	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
4-Methylphenol (p-cresol)	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
4-Nitroaniline	MG/KG	2.9 U	5.9 U	0.69 U	0.72 U	3.5 U
4-Nitrophenol	MG/KG	2.9 U	5.9 U	0.69 U	0.72 U	3.5 U
Acenaphthene	MG/KG	9.4	170 D	0.084 J	0.35 U	41 DJ
Acenaphthylene	MG/KG	2.0	30	0.34 U	0.35 U	150 D
Acetophenone	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
Anthracene	MG/KG	15	84 D	0.25 J	0.35 U	180 D
Atrazine	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
Benzaldehyde	MG/KG	1.4 UJ	2.9 UJ	0.34 U	0.35 U	1.7 UJ
Benzo(a)anthracene	MG/KG	18	66 D	0.34 U	0.35 U	120 D
Benzo(a)pyrene	MG/KG	15	9.7 DJ	0.34 U	0.35 U	21 DJ
Benzo(b)fluoranthene	MG/KG	17	35	0.34 U	0.35 U	89 D
Benzo(g,h,i)perylene	MG/KG	8.3	22	0.34 U	0.35 U	17
Benzo(k)fluoranthene	MG/KG	6.8	20	0.34 U	0.35 U	23
bis(2-Chloroethoxy)methane	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
bis(2-Chloroethyl)ether	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
bis(2-Ethylhexyl)phthalate	MG/KG	1.4 U	87 D	0.35	0.35 U	1.7 U
Butylbenzylphthalate	MG/KG	1.4 U	2.9 U	0.075 J	0.35 U	1.7 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-23	SB-23	SB-24	SB-24	SB-25
Sample ID		SB-23 (4.5-5)	SB-23 (13.5-14)	SB-24 (9-10)	SB-24 (14-15)	SB-25 (7.2-8.2)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		4.5-5.0	13.5-14.0	9.0-10.0	14.0-15.0	7.2-8.2
Date Sampled		11/04/13	11/06/13	11/07/13	11/07/13	11/07/13
Parameter	**Units**					
Semivolatile Organic Compounds						
Caprolactam	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
Carbazole	MG/KG	5.5	2.9 U	0.97	0.35 U	77 DJ
Chrysene	MG/KG	14	36	0.34 U	0.35 U	120 D
Dibenz(a,h)anthracene	MG/KG	2.7	2.9 U	0.34 U	0.35 U	15
Dibenzofuran	MG/KG	6.6	2.9 U	0.15 J	0.35 U	150 D
Diethylphthalate	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
Dimethylphthalate	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
Di-n-butylphthalate	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
Di-n-octylphthalate	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
Fluoranthene	MG/KG	45 D	100 D	0.18 J	0.35 U	280 D
Fluorene	MG/KG	9.7	78 D	0.36	0.35 U	230 D
Hexachlorobenzene	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
Hexachlorobutadiene	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
Hexachlorocyclopentadiene	MG/KG	1.4 UJ	2.9 UJ	0.34 UJ	0.35 UJ	1.7 UJ
Hexachloroethane	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
Indeno(1,2,3-cd)pyrene	MG/KG	9.0	20	0.34 U	0.35 U	30 DJ
Isophorone	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
Naphthalene	MG/KG	0.94 J	380 D	0.34 U	0.35 U	840 D
Nitrobenzene	MG/KG	1.4 U	2.9 U	0.34 UJ	0.35 UJ	1.7 U
N-Nitroso-di-n-propylamine	MG/KG	1.4 UJ	2.9 UJ	0.34 UJ	0.35 UJ	1.7 UJ
N-Nitrosodiphenylamine	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
Pentachlorophenol	MG/KG	2.9 UJ	5.9 UJ	0.69 UJ	0.72 UJ	3.5 UJ
Phenanthrene	MG/KG	47 D	260 D	0.27 J	0.35 U	510 D
Phenol	MG/KG	1.4 U	2.9 U	0.34 U	0.35 U	1.7 U
Pyrene	MG/KG	36 D	150 D	0.17 J	0.35 U	220 D

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-23	SB-23	SB-24	SB-24	SB-25
Sample ID		SB-23 (4.5-5)	SB-23 (13.5-14)	SB-24 (9-10)	SB-24 (14-15)	SB-25 (7.2-8.2)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		4.5-5.0	13.5-14.0	9.0-10.0	14.0-15.0	7.2-8.2
Date Sampled		11/04/13	11/06/13	11/07/13	11/07/13	11/07/13
Parameter	**Units**					
Metals						
Aluminum	MG/KG	7,960	5,180	8,030	6,170	13,500
Antimony	MG/KG	0.39 U	2.3	0.30 U	0.34 U	0.33 U
Arsenic	MG/KG	4.5	13.4	2.0	1.1	1.9
Barium	MG/KG	62.6	137	47.0	60.9	121
Beryllium	MG/KG	0.32	0.36 U	0.20	0.22 U	0.24
Cadmium	MG/KG	0.016 U	24.6	0.012 U	0.013 U	0.013 U
Calcium	MG/KG	56,900	9,560	912	1,330	1,570
Chromium	MG/KG	15.6	269	15.2	29.6	23.9
Cobalt	MG/KG	6.1	5.6	6.1	6.3	9.8
Copper	MG/KG	24.6	222	22.0	22.6	36.5
Iron	MG/KG	13,000	41,200	12,400	12,300	18,100
Lead	MG/KG	67.9	1,240	5.3	3.3	4.3
Magnesium	MG/KG	8,640	2,510	3,350	3,260	4,650
Manganese	MG/KG	267	260	163	146	337
Mercury	MG/KG	0.15	1.9	0.0024 U	0.0029 J	0.0056 J
Nickel	MG/KG	11.9	74.1	16.7	16.6	34.7
Potassium	MG/KG	1,830	1,040	1,970	2,860	4,570
Selenium	MG/KG	0.66 U	2.5	0.60 J	0.57 U	0.81 J
Silver	MG/KG	0.066 U	0.85 J	0.051 U	0.057 U	0.056 U
Sodium	MG/KG	561	1,770	115	89.5	321
Thallium	MG/KG	0.23 U	0.23 U	0.76 J	1.3	1.6
Vanadium	MG/KG	22.7	18.5	17.0	16.3	30.2
Zinc	MG/KG	44.5	7,040	24.9	24.3	35.9
Miscellaneous Parameters						
Cyanide, Total	MG/KG	0.47 U	0.74 U	0.45 U	0.44 U	0.45 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-25	SB-25	SB-26	SB-26	SB-26
Sample ID		SB-25 (9-10)	SB-25 (13-14)	SB-26 (2.3-2.6)	SB-26 (8-10)	SB-26 (12.5-14.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		9.0-10.0	13.0-14.0	2.3-2.6	8.0-10.0	12.5-14.5
Date Sampled		11/07/13	11/07/13	01/11/14	01/12/14	01/12/14
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,1,2,2-Tetrachloroethane	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.0052 U	0.0056 U	0.0057 UJ	7.2 U	0.0052 U
1,1,2-Trichloroethane	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,1-Dichloroethane	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,1-Dichloroethene	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,2,3-Trichlorobenzene	MG/KG	0.0012 J	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,2,4-Trichlorobenzene	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,2,4-Trimethylbenzene	MG/KG	0.073	0.0056 U	0.0057 U	76	4.9
1,2-Dibromo-3-chloropropane	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,2-Dichlorobenzene	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,2-Dichloroethane	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,2-Dichloroethene (cis)	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,2-Dichloroethene (trans)	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,2-Dichloropropane	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.023	0.0056 U	0.0057 U	36	2.0
1,3-Dichlorobenzene	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,3-Dichloropropene (cis)	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,3-Dichloropropene (trans)	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,4-Dichlorobenzene	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
1,4-Dioxane	MG/KG	R	R	R	R	R
2-Butanone	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
2-Hexanone	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	5.3
4-Methyl-2-pentanone	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-25	SB-25	SB-26	SB-26	SB-26
Sample ID		SB-25 (9-10)	SB-25 (13-14)	SB-26 (2.3-2.6)	SB-26 (8-10)	SB-26 (12.5-14.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		9.0-10.0	13.0-14.0	2.3-2.6	8.0-10.0	12.5-14.5
Date Sampled		11/07/13	11/07/13	01/11/14	01/12/14	01/12/14
Parameter	**Units**					
Volatile Organic Compounds						
Acetone	MG/KG	0.0070	0.0069	0.017	7.2 U	0.0052 U
Benzene	MG/KG	0.056	0.0056 U	0.0023 J	7.2 U	0.0052 U
Bromochloromethane	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
Bromodichloromethane	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
Bromoform	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
Bromomethane	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
Carbon disulfide	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
Carbon tetrachloride	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
Chlorobenzene	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
Chloroethane	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 UJ	0.0052 UJ
Chloroform	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
Chloromethane	MG/KG	0.0052 U	0.0056 UJ	0.0057 U	7.2 U	0.0052 U
Cyclohexane	MG/KG	0.0052 U	0.0056 U	0.0057 UJ	7.2 U	0.0052 U
Dibromochloromethane	MG/KG	0.0052 UJ	0.0056 U	0.0057 U	7.2 U	0.0052 U
Dichlorodifluoromethane	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
Ethylbenzene	MG/KG	0.025	0.0056 U	0.0057 U	44	0.74
Isopropylbenzene	MG/KG	0.0021 J	0.0056 U	0.0057 U	4.0 J	0.60
Methyl acetate	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
Methyl tert-butyl ether	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
Methylcyclohexane	MG/KG	0.0052 U	0.0056 U	0.0050 J	23 J	0.84 J
Methylene chloride	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
n-Butylbenzene	MG/KG	0.0029 J	0.0056 U	0.0057 U	7.2 U	1.5
n-Propylbenzene	MG/KG	0.0026 J	0.0056 U	0.0057 U	2.1 J	0.98
sec-Butylbenzene	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.36
Styrene	MG/KG	0.025	0.0056 U	0.0057 U	8.6	0.0052 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-25	SB-25	SB-26	SB-26	SB-26
Sample ID		SB-25 (9-10)	SB-25 (13-14)	SB-26 (2.3-2.6)	SB-26 (8-10)	SB-26 (12.5-14.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		9.0-10.0	13.0-14.0	2.3-2.6	8.0-10.0	12.5-14.5
Date Sampled		11/07/13	11/07/13	01/11/14	01/12/14	01/12/14
Parameter	**Units**					
Volatile Organic Compounds						
tert-Butylbenzene	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
Tetrachloroethene	MG/KG	0.0052 U	0.0056 U	0.0025 J	7.2 U	0.0052 U
Toluene	MG/KG	0.085	0.0014 J	0.0026 J	19	0.0052 U
Trichloroethene	MG/KG	0.0016 J	0.0056 U	0.0057 U	7.2 U	0.0052 U
Trichlorofluoromethane	MG/KG	0.0052 U	0.0056 U	0.0057 UJ	7.2 U	0.0052 U
Vinyl chloride	MG/KG	0.0052 U	0.0056 U	0.0057 U	7.2 U	0.0052 U
Xylene (total)	MG/KG	0.203	0.0044 J	0.0057 U	134	1.6
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	1.8	0.35 U	4.2	0.94	12 D
1,2,4,5-Tetrachlorobenzene	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
2,2'-oxybis(1-Chloropropane)	MG/KG	0.35 UJ	0.35 UJ	0.41 U	0.39 U	0.35 U
2,3,4,6-Tetrachlorophenol	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
2,4,5-Trichlorophenol	MG/KG	0.71 U	0.72 U	0.84 U	0.79 U	0.71 U
2,4,6-Trichlorophenol	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
2,4-Dichlorophenol	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
2,4-Dimethylphenol	MG/KG	1.8	0.35 U	0.41 U	0.39 U	0.35 U
2,4-Dinitrophenol	MG/KG	0.71 U	0.72 U	0.84 U	0.79 U	0.71 U
2,4-Dinitrotoluene	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
2,6-Dinitrotoluene	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
2-Chloronaphthalene	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
2-Chlorophenol	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
2-Methylnaphthalene	MG/KG	12 D	0.35 U	4.0	4.4	7.0 D
2-Methylphenol (o-cresol)	MG/KG	0.31 J	0.35 U	0.41 U	0.39 U	0.35 U
2-Nitroaniline	MG/KG	0.71 UJ	0.72 UJ	0.84 U	0.79 U	0.71 U
2-Nitrophenol	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-25	SB-25	SB-26	SB-26	SB-26
Sample ID		SB-25 (9-10)	SB-25 (13-14)	SB-26 (2.3-2.6)	SB-26 (8-10)	SB-26 (12.5-14.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		9.0-10.0	13.0-14.0	2.3-2.6	8.0-10.0	12.5-14.5
Date Sampled		11/07/13	11/07/13	01/11/14	01/12/14	01/12/14
Parameter	**Units**					
Semivolatile Organic Compounds						
3,3'-Dichlorobenzidine	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
3-Nitroaniline	MG/KG	0.71 U	0.72 U	0.84 U	0.79 U	0.71 U
4,6-Dinitro-2-methylphenol	MG/KG	0.71 U	0.72 U	0.84 U	0.79 U	0.71 U
4-Bromophenyl-phenylether	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
4-Chloro-3-methylphenol	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
4-Chloroaniline	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
4-Chlorophenyl-phenylether	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
4-Methylphenol (p-cresol)	MG/KG	0.63	0.35 U	0.41 U	0.39 U	0.35 U
4-Nitroaniline	MG/KG	0.71 U	0.72 U	0.84 U	0.79 U	0.71 U
4-Nitrophenol	MG/KG	0.71 U	0.72 U	0.84 U	0.79 U	0.71 U
Acenaphthene	MG/KG	1.6	0.35 U	4.2	4.5	38 D
Acenaphthylene	MG/KG	3.2	0.35 U	39 D	1.2	3.7
Acetophenone	MG/KG	0.35 U	0.35 U	0.18 J	0.39 U	0.35 U
Anthracene	MG/KG	6.5 D	0.35 U	23 D	3.0	16 D
Atrazine	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
Benzaldehyde	MG/KG	0.35 UJ	0.35 U	0.22 J	0.39 U	0.35 U
Benzo(a)anthracene	MG/KG	4.3	0.35 U	50 D	2.3	10 D
Benzo(a)pyrene	MG/KG	3.0	0.35 U	56 D	1.8	7.5 D
Benzo(b)fluoranthene	MG/KG	3.1	0.35 U	71 D	2.2	7.8 D
Benzo(g,h,i)perylene	MG/KG	1.2	0.35 U	72 D	0.98	3.4
Benzo(k)fluoranthene	MG/KG	1.5	0.35 U	18 D	0.80	2.4
bis(2-Chloroethoxy)methane	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
bis(2-Chloroethyl)ether	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
bis(2-Ethylhexyl)phthalate	MG/KG	0.43	0.35 U	0.41 U	0.39 U	0.35 U
Butylbenzylphthalate	MG/KG	0.089 J	0.35 U	0.41 U	0.39 U	0.35 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-25	SB-25	SB-26	SB-26	SB-26
Sample ID		SB-25 (9-10)	SB-25 (13-14)	SB-26 (2.3-2.6)	SB-26 (8-10)	SB-26 (12.5-14.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		9.0-10.0	13.0-14.0	2.3-2.6	8.0-10.0	12.5-14.5
Date Sampled		11/07/13	11/07/13	01/11/14	01/12/14	01/12/14
Parameter	**Units**					
Semivolatile Organic Compounds						
Caprolactam	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
Carbazole	MG/KG	3.8	0.35 U	0.84	1.2	0.68
Chrysene	MG/KG	3.3	0.35 U	53 D	1.9	8.6 D
Dibenz(a,h)anthracene	MG/KG	0.35 J	0.35 U	7.2 DJ	0.27 J	0.82
Dibenzofuran	MG/KG	5.1	0.35 U	0.66	2.6	12 D
Diethylphthalate	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
Dimethylphthalate	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
Di-n-butylphthalate	MG/KG	0.35 U	0.35 U	0.093 J	0.39 U	0.35 U
Di-n-octylphthalate	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
Fluoranthene	MG/KG	9.8 D	0.35 U	150 D	5.4	30 D
Fluorene	MG/KG	7.5 D	0.35 U	16 DJ	3.5	22 D
Hexachlorobenzene	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
Hexachlorobutadiene	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
Hexachlorocyclopentadiene	MG/KG	0.35 UJ	0.35 UJ	0.41 UJ	0.39 U	0.35 U
Hexachloroethane	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
Indeno(1,2,3-cd)pyrene	MG/KG	1.3	0.35 U	63 D	1.3	4.2
Isophorone	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
Naphthalene	MG/KG	29 D	0.35 U	5.5	20 D	17 D
Nitrobenzene	MG/KG	0.35 U	0.35 UJ	0.41 U	0.39 U	0.35 U
N-Nitroso-di-n-propylamine	MG/KG	0.35 UJ	0.35 UJ	0.41 U	0.39 U	0.35 U
N-Nitrosodiphenylamine	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
Pentachlorophenol	MG/KG	0.71 UJ	0.72 UJ	0.84 UJ	0.79 UJ	0.71 UJ
Phenanthrene	MG/KG	19 D	0.093 J	140 D	12 D	55 D
Phenol	MG/KG	0.35 U	0.35 U	0.41 U	0.39 U	0.35 U
Pyrene	MG/KG	7.9 D	0.35 U	190 D	5.5	34 D

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-25	SB-25	SB-26	SB-26	SB-26
Sample ID		SB-25 (9-10)	SB-25 (13-14)	SB-26 (2.3-2.6)	SB-26 (8-10)	SB-26 (12.5-14.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		9.0-10.0	13.0-14.0	2.3-2.6	8.0-10.0	12.5-14.5
Date Sampled		11/07/13	11/07/13	01/11/14	01/12/14	01/12/14
Parameter	**Units**					
Metals						
Aluminum	MG/KG	15,400	5,340	7,120	18,700	18,200
Antimony	MG/KG	0.34 U	0.38 U	0.39 U	0.40 U	0.38 U
Arsenic	MG/KG	1.8	0.84 J	11.5	2.6	3.3
Barium	MG/KG	151	62.0	205	79.9	102
Beryllium	MG/KG	0.27	0.25 U	0.32	0.42	0.30
Cadmium	MG/KG	0.013 U	0.015 U	0.11 J	0.016 U	0.015 U
Calcium	MG/KG	1,330	933	34,600	2,030	4,410
Chromium	MG/KG	34.1	14.8	42.1	29.5	49.9
Cobalt	MG/KG	10.6	4.7	15.8	6.1	14.3
Copper	MG/KG	31.8	16.8	219	16.7	37.2
Iron	MG/KG	20,600	9,760	40,000	21,100	29,400
Lead	MG/KG	5.3	3.4	236	8.0	3.3
Magnesium	MG/KG	5,580	2,550	2,040	4,070	8,060
Manganese	MG/KG	422	118	280	143	387
Mercury	MG/KG	0.0026 J	0.0024 U	1.7	0.050 U	0.040 U
Nickel	MG/KG	30.0	14.1	260	17.8	25.4
Potassium	MG/KG	6,100	2,570	1,190	1,380	3,690
Selenium	MG/KG	0.72 J	0.63 U	0.65 U	0.67 U	0.64 U
Silver	MG/KG	0.057 U	0.063 U	0.065 U	0.067 U	0.064 U
Sodium	MG/KG	291	91.7	239	218	190
Thallium	MG/KG	2.5	0.88 J	0.31 J	0.23 U	0.22 U
Vanadium	MG/KG	35.5	13.4	22.1	38.4	45.7
Zinc	MG/KG	44.7	20.4	246	36.5	58.1
Miscellaneous Parameters						
Cyanide, Total	MG/KG	0.41 U	0.45 U	22.5	0.54 U	0.47 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

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[SITEID] = '04' AND [MATRIX] = 'SO' AND [LOGDATE] >= #10/29/2013#

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-26	SB-27	SB-27	SB-27	SB-27
Sample ID		SB-26 (17.5-19.1)	011114-DUP-1	SB-27 (4-4.5)	SB-27 (9-10)	SB-27 (11-12.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		17.5-19.1	4.0-4.5	4.0-4.5	9.0-10.0	11.0-12.5
Date Sampled		01/12/14	01/11/14	01/11/14	01/12/14	01/12/14
Parameter	Units		Field Duplicate (1-1)			
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,1,2,2-Tetrachloroethane	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.0057 UJ	0.0053 UJ	0.0056 UJ	0.0059 UJ	0.0057 UJ
1,1,2-Trichloroethane	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,1-Dichloroethane	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,1-Dichloroethene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,2,3-Trichlorobenzene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,2,4-Trichlorobenzene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,2,4-Trimethylbenzene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0064	0.0057 U
1,2-Dibromo-3-chloropropane	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,2-Dichlorobenzene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,2-Dichloroethane	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,2-Dichloroethene (cis)	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,2-Dichloroethene (trans)	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,2-Dichloropropane	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0029 J	0.0057 U
1,3-Dichlorobenzene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,3-Dichloropropene (cis)	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,3-Dichloropropene (trans)	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,4-Dichlorobenzene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
1,4-Dioxane	MG/KG	R	R	R	R	R
2-Butanone	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0073	0.0034 J
2-Hexanone	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
4-Methyl-2-pentanone	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-26	SB-27	SB-27	SB-27	SB-27
Sample ID		SB-26 (17.5-19.1)	011114-DUP-1	SB-27 (4-4.5)	SB-27 (9-10)	SB-27 (11-12.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		17.5-19.1	4.0-4.5	4.0-4.5	9.0-10.0	11.0-12.5
Date Sampled		01/12/14	01/11/14	01/11/14	01/12/14	01/12/14
Parameter	Units		Field Duplicate (1-1)			
Volatile Organic Compounds						
Acetone	MG/KG	0.0038 J	0.0053 U	0.0065	0.032	0.013
Benzene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.014
Bromochloromethane	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Bromodichloromethane	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Bromoform	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Bromomethane	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Carbon disulfide	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Carbon tetrachloride	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Chlorobenzene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Chloroethane	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Chloroform	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Chloromethane	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Cyclohexane	MG/KG	0.0057 UJ	0.0053 UJ	0.0056 UJ	0.0059 UJ	0.012 J
Dibromochloromethane	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Dichlorodifluoromethane	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Ethylbenzene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0026 J	0.0052 J
Isopropylbenzene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0073
Methyl acetate	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Methyl tert-butyl ether	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Methylcyclohexane	MG/KG	0.0057 UJ	0.0053 UJ	0.0056 UJ	0.0057 J	0.025 J
Methylene chloride	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
n-Butylbenzene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0049 J
n-Propylbenzene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0053 J
sec-Butylbenzene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0050 J
Styrene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-26	SB-27	SB-27	SB-27	SB-27
Sample ID		SB-26 (17.5-19.1)	011114-DUP-1	SB-27 (4-4.5)	SB-27 (9-10)	SB-27 (11-12.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		17.5-19.1	4.0-4.5	4.0-4.5	9.0-10.0	11.0-12.5
Date Sampled		01/12/14	01/11/14	01/11/14	01/12/14	01/12/14
Parameter	Units		Field Duplicate (1-1)			
Volatile Organic Compounds						
tert-Butylbenzene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Tetrachloroethene	MG/KG	0.0057 U	0.0053 U	0.0026 J	0.0059 U	0.0057 U
Toluene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0063
Trichloroethene	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Trichlorofluoromethane	MG/KG	0.0057 UJ	0.0053 UJ	0.0056 UJ	0.0059 UJ	0.0057 UJ
Vinyl chloride	MG/KG	0.0057 U	0.0053 U	0.0056 U	0.0059 U	0.0057 U
Xylene (total)	MG/KG	0.0024 J	0.0053 U	0.0056 U	0.0107	0.0095
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
1,2,4,5-Tetrachlorobenzene	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
2,2'-oxybis(1-Chloropropane)	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 UJ
2,3,4,6-Tetrachlorophenol	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
2,4,5-Trichlorophenol	MG/KG	0.74 U	0.73 U	0.73 U	0.89 UJ	0.78 U
2,4,6-Trichlorophenol	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
2,4-Dichlorophenol	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
2,4-Dimethylphenol	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
2,4-Dinitrophenol	MG/KG	0.74 U	0.73 U	0.73 U	0.89 UJ	0.78 U
2,4-Dinitrotoluene	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
2,6-Dinitrotoluene	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
2-Chloronaphthalene	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
2-Chlorophenol	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 UJ
2-Methylnaphthalene	MG/KG	0.36 U	0.23 J	0.36 U	0.14 J	5.8
2-Methylphenol (o-cresol)	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 UJ
2-Nitroaniline	MG/KG	0.74 U	0.73 U	0.73 U	0.89 UJ	0.78 U
2-Nitrophenol	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-26	SB-27	SB-27	SB-27	SB-27
Sample ID		SB-26 (17.5-19.1)	011114-DUP-1	SB-27 (4-4.5)	SB-27 (9-10)	SB-27 (11-12.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		17.5-19.1	4.0-4.5	4.0-4.5	9.0-10.0	11.0-12.5
Date Sampled		01/12/14	01/11/14	01/11/14	01/12/14	01/12/14
Parameter	Units		Field Duplicate (1-1)			
Semivolatile Organic Compounds						
3,3'-Dichlorobenzidine	MG/KG	0.36 U	0.36 U	0.36 U	0.44 U	0.39 U
3-Nitroaniline	MG/KG	0.74 U	0.73 U	0.73 U	0.89 UJ	0.78 U
4,6-Dinitro-2-methylphenol	MG/KG	0.74 U	0.73 U	0.73 U	0.89 U	0.78 U
4-Bromophenyl-phenylether	MG/KG	0.36 U	0.36 U	0.36 U	0.44 U	0.39 U
4-Chloro-3-methylphenol	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
4-Chloroaniline	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
4-Chlorophenyl-phenylether	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
4-Methylphenol (p-cresol)	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 UJ
4-Nitroaniline	MG/KG	0.74 U	0.73 U	0.73 U	0.89 UJ	0.78 U
4-Nitrophenol	MG/KG	0.74 U	0.73 U	0.73 U	0.89 UJ	0.78 U
Acenaphthene	MG/KG	0.36 U	0.69	0.092 J	5.7 J	4.3
Acenaphthylene	MG/KG	0.36 U	0.30 J	1.9	0.44 UJ	0.39 U
Acetophenone	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 UJ
Anthracene	MG/KG	0.36 U	1.9	1.5	15 D	2.0
Atrazine	MG/KG	0.36 U	0.36 U	0.36 U	0.44 U	0.39 U
Benzaldehyde	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 UJ
Benzo(a)anthracene	MG/KG	0.36 U	3.7	3.0	15 D	0.55
Benzo(a)pyrene	MG/KG	0.36 U	2.7	3.0	12 D	0.38 J
Benzo(b)fluoranthene	MG/KG	0.36 U	3.9	4.5	16 D	0.51
Benzo(g,h,i)perylene	MG/KG	0.36 U	1.9	2.6	6.0	0.33 J
Benzo(k)fluoranthene	MG/KG	0.36 U	1.1	1.6	4.2	0.13 J
bis(2-Chloroethoxy)methane	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
bis(2-Chloroethyl)ether	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 UJ
bis(2-Ethylhexyl)phthalate	MG/KG	0.36 U	0.36 U	0.12 J	0.44 U	0.39 U
Butylbenzylphthalate	MG/KG	0.36 U	0.36 U	0.36 U	0.44 U	0.39 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-26	SB-27	SB-27	SB-27	SB-27
Sample ID		SB-26 (17.5-19.1)	011114-DUP-1	SB-27 (4-4.5)	SB-27 (9-10)	SB-27 (11-12.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		17.5-19.1	4.0-4.5	4.0-4.5	9.0-10.0	11.0-12.5
Date Sampled		01/12/14	01/11/14	01/11/14	01/12/14	01/12/14
Parameter	Units		Field Duplicate (1-1)			
Semivolatile Organic Compounds						
Caprolactam	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
Carbazole	MG/KG	0.36 U	0.70	0.36 U	1.7	1.9
Chrysene	MG/KG	0.36 U	3.7	3.0	13 D	0.95
Dibenz(a,h)anthracene	MG/KG	0.36 U	0.49	0.46	1.5	0.39 U
Dibenzofuran	MG/KG	0.36 U	0.38	0.36 U	6.6 J	4.3
Diethylphthalate	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
Dimethylphthalate	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
Di-n-butylphthalate	MG/KG	0.36 U	0.36 U	0.36 U	0.44 U	0.39 U
Di-n-octylphthalate	MG/KG	0.36 U	0.36 U	0.36 U	0.44 U	0.39 U
Fluoranthene	MG/KG	0.36 U	7.3 D	8.2 D	42 D	2.9
Fluorene	MG/KG	0.36 U	0.80	0.32 J	8.4 D	4.7
Hexachlorobenzene	MG/KG	0.36 U	0.36 U	0.36 U	0.44 U	0.39 U
Hexachlorobutadiene	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
Hexachlorocyclopentadiene	MG/KG	0.36 U	0.36 UJ	0.36 UJ	0.44 UJ	0.39 UJ
Hexachloroethane	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 UJ
Indeno(1,2,3-cd)pyrene	MG/KG	0.36 U	1.9	2.8	8.0 DJ	0.28 J
Isophorone	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
Naphthalene	MG/KG	0.36 U	0.20 J	0.36 U	0.16 J	9.7 DJ
Nitrobenzene	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 U
N-Nitroso-di-n-propylamine	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 UJ
N-Nitrosodiphenylamine	MG/KG	0.36 U	0.36 U	0.36 U	0.44 U	0.39 U
Pentachlorophenol	MG/KG	0.74 UJ	0.73 UJ	0.73 UJ	0.89 UJ	0.78 UJ
Phenanthrene	MG/KG	0.36 UJ	7.5 D	4.9	27 D	10 D
Phenol	MG/KG	0.36 U	0.36 U	0.36 U	0.44 UJ	0.39 UJ
Pyrene	MG/KG	0.36 U	6.7 D	9.5 D	29 D	2.7

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-26	SB-27	SB-27	SB-27	SB-27
Sample ID		SB-26 (17.5-19.1)	011114-DUP-1	SB-27 (4-4.5)	SB-27 (9-10)	SB-27 (11-12.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		17.5-19.1	4.0-4.5	4.0-4.5	9.0-10.0	11.0-12.5
Date Sampled		01/12/14	01/11/14	01/11/14	01/12/14	01/12/14
Parameter	Units		Field Duplicate (1-1)			
Metals						
Aluminum	MG/KG	10,500	14,800	10,700	18,900	9,260
Antimony	MG/KG	0.34 U	0.40 U	0.31 U	0.36 U	0.38 U
Arsenic	MG/KG	0.66 J	2.6 J	6.5 J	1.4	0.74 J
Barium	MG/KG	119	166 J	82.2 J	210	84.3
Beryllium	MG/KG	0.17 J	0.30	0.26	0.24	0.0015 U
Cadmium	MG/KG	0.014 U	0.016 U	0.012 U	0.014 U	0.015 U
Calcium	MG/KG	1,190	15,500 J	8,340 J	5,050	1,090
Chromium	MG/KG	27.2	33.2	23.0	38.5	19.5
Cobalt	MG/KG	7.6	11.3	7.2	13.2	5.4
Copper	MG/KG	18.2	61.9	41.4	31.6	15.6
Iron	MG/KG	15,600	21,100	15,800	30,800	14,400
Lead	MG/KG	2.2	126 J	51.4 J	19.0	5.9
Magnesium	MG/KG	4,520	7,950 J	4,020 J	7,930	3,990
Manganese	MG/KG	257	458	303	434	149
Mercury	MG/KG	0.0027 U	0.28	0.28	0.16	0.23
Nickel	MG/KG	24.8	33.1	26.6	29.8	11.6
Potassium	MG/KG	5,090	6,730 J	2,880 J	8,680	6,330
Selenium	MG/KG	0.58 U	0.67 U	0.53 U	0.60 U	0.64 U
Silver	MG/KG	0.058 U	0.13 J	0.053 U	0.060 U	0.064 U
Sodium	MG/KG	80.3	370	273	380	134
Thallium	MG/KG	0.20 U	0.40 J	0.18 U	0.22 J	0.48 J
Vanadium	MG/KG	26.9	39.6	29.4	46.1	30.8
Zinc	MG/KG	34.5	121 J	63.4 J	65.7	39.8
Miscellaneous Parameters						
Cyanide, Total	MG/KG	0.51 U	0.50 U	1.1	0.56 U	0.48 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-27	SB-28	SB-28	SB-28	SB-29
Sample ID		SB-27 (22-23.5)	SB-28 (10-12)	SB-28 (17-19)	SB-28 (22-23)	SB-29 (2.5-3)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		22.0-23.5	10.0-12.0	17.0-19.0	22.0-23.0	2.5-3.0
Date Sampled		01/12/14	01/12/14	01/12/14	01/12/14	01/11/14
Parameter	**Units**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,1,2,2-Tetrachloroethane	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.014 UJ	0.0057 UJ	0.0062 UJ	0.016 UJ	0.0056 UJ
1,1,2-Trichloroethane	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,1-Dichloroethane	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,1-Dichloroethene	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,2,3-Trichlorobenzene	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,2,4-Trichlorobenzene	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,2,4-Trimethylbenzene	MG/KG	0.0066 J	0.0076	0.019	0.10	0.0056 U
1,2-Dibromo-3-chloropropane	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,2-Dichlorobenzene	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,2-Dichloroethane	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,2-Dichloroethene (cis)	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,2-Dichloroethene (trans)	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,2-Dichloropropane	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.014 U	0.0026 J	0.0071	0.012 J	0.0056 U
1,3-Dichlorobenzene	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,3-Dichloropropene (cis)	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,3-Dichloropropene (trans)	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,4-Dichlorobenzene	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
1,4-Dioxane	MG/KG	R	R	R	R	R
2-Butanone	MG/KG	0.025	0.0057 U	0.0062 U	0.015 J	0.0056 U
2-Hexanone	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
4-Methyl-2-pentanone	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-27	SB-28	SB-28	SB-28	SB-29
Sample ID		SB-27 (22-23.5)	SB-28 (10-12)	SB-28 (17-19)	SB-28 (22-23)	SB-29 (2.5-3)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		22.0-23.5	10.0-12.0	17.0-19.0	22.0-23.0	2.5-3.0
Date Sampled		01/12/14	01/12/14	01/12/14	01/12/14	01/11/14
Parameter	**Units**					
Volatile Organic Compounds						
Acetone	MG/KG	0.12	0.0068	0.0091	0.062	0.0039 J
Benzene	MG/KG	0.014 U	0.029	0.010	0.17	0.0056 U
Bromochloromethane	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Bromodichloromethane	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Bromoform	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Bromomethane	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Carbon disulfide	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Carbon tetrachloride	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Chlorobenzene	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Chloroethane	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Chloroform	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Chloromethane	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Cyclohexane	MG/KG	0.014 U	0.0057 UJ	0.0062 UJ	0.016 U	0.0056 UJ
Dibromochloromethane	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Dichlorodifluoromethane	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Ethylbenzene	MG/KG	0.014 U	0.0036 J	0.0062	0.42	0.0056 U
Isopropylbenzene	MG/KG	0.014 U	0.0033 J	0.0043 J	0.033	0.0056 U
Methyl acetate	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Methyl tert-butyl ether	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Methylcyclohexane	MG/KG	0.014 U	0.0057 UJ	0.0062 UJ	0.016 U	0.0056 UJ
Methylene chloride	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
n-Butylbenzene	MG/KG	0.014 U	0.0028 J	0.0062 U	0.016 U	0.0056 U
n-Propylbenzene	MG/KG	0.014 U	0.0030 J	0.0028 J	0.010 J	0.0056 U
sec-Butylbenzene	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Styrene	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-27	SB-28	SB-28	SB-28	SB-29
Sample ID		SB-27 (22-23.5)	SB-28 (10-12)	SB-28 (17-19)	SB-28 (22-23)	SB-29 (2.5-3)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		22.0-23.5	10.0-12.0	17.0-19.0	22.0-23.0	2.5-3.0
Date Sampled		01/12/14	01/12/14	01/12/14	01/12/14	01/11/14
Parameter	**Units**					
Volatile Organic Compounds						
tert-Butylbenzene	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Tetrachloroethene	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Toluene	MG/KG	0.014 U	0.0025 J	0.0045 J	0.021	0.0056 U
Trichloroethene	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Trichlorofluoromethane	MG/KG	0.014 U	0.0057 UJ	0.0062 UJ	0.016 U	0.0056 UJ
Vinyl chloride	MG/KG	0.014 U	0.0057 U	0.0062 U	0.016 U	0.0056 U
Xylene (total)	MG/KG	0.014 U	0.0084	0.0138	0.28	0.0056 U
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	0.37 U	0.37 U	0.25 J	1.2 J	0.37 UJ
1,2,4,5-Tetrachlorobenzene	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
2,2'-oxybis(1-Chloropropane)	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
2,3,4,6-Tetrachlorophenol	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
2,4,5-Trichlorophenol	MG/KG	0.75 U	0.75 U	0.77 U	0.81 UJ	0.75 UJ
2,4,6-Trichlorophenol	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
2,4-Dichlorophenol	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
2,4-Dimethylphenol	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
2,4-Dinitrophenol	MG/KG	0.75 U	0.75 U	0.77 U	0.81 UJ	0.75 UJ
2,4-Dinitrotoluene	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
2,6-Dinitrotoluene	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
2-Chloronaphthalene	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
2-Chlorophenol	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
2-Methylnaphthalene	MG/KG	0.33 J	0.12 J	0.55	7.1 DJ	0.37 UJ
2-Methylphenol (o-cresol)	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
2-Nitroaniline	MG/KG	0.75 U	0.75 U	0.77 U	0.81 UJ	0.75 UJ
2-Nitrophenol	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-27	SB-28	SB-28	SB-28	SB-29
Sample ID		SB-27 (22-23.5)	SB-28 (10-12)	SB-28 (17-19)	SB-28 (22-23)	SB-29 (2.5-3)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		22.0-23.5	10.0-12.0	17.0-19.0	22.0-23.0	2.5-3.0
Date Sampled		01/12/14	01/12/14	01/12/14	01/12/14	01/11/14
Parameter	**Units**					
Semivolatile Organic Compounds						
3,3'-Dichlorobenzidine	MG/KG	0.37 U	0.37 U	0.38 U	0.40 U	0.37 U
3-Nitroaniline	MG/KG	0.75 U	0.75 U	0.77 U	0.81 UJ	0.75 UJ
4,6-Dinitro-2-methylphenol	MG/KG	0.75 U	0.75 U	0.77 U	0.81 U	0.75 U
4-Bromophenyl-phenylether	MG/KG	0.37 U	0.37 U	0.38 U	0.40 U	0.37 U
4-Chloro-3-methylphenol	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
4-Chloroaniline	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
4-Chlorophenyl-phenylether	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
4-Methylphenol (p-cresol)	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
4-Nitroaniline	MG/KG	0.75 U	0.75 U	0.77 U	0.81 UJ	0.75 UJ
4-Nitrophenol	MG/KG	0.75 U	0.75 U	0.77 U	0.81 UJ	0.75 UJ
Acenaphthene	MG/KG	0.67	0.43	2.3	21 D	0.21 J
Acenaphthylene	MG/KG	0.097 J	0.37 U	0.38 U	0.40 UJ	0.52 J
Acetophenone	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
Anthracene	MG/KG	1.3	0.17 J	1.3	38 D	0.68
Atrazine	MG/KG	0.37 U	0.37 U	0.38 U	0.40 U	0.37 U
Benzaldehyde	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
Benzo(a)anthracene	MG/KG	1.2	0.22 J	0.52	49 D	1.8
Benzo(a)pyrene	MG/KG	1.1	0.19 J	0.38 J	38 D	1.6
Benzo(b)fluoranthene	MG/KG	1.3	0.26 J	0.46	55 D	2.2
Benzo(g,h,i)perylene	MG/KG	0.75	0.10 J	0.23 J	20 D	1.3
Benzo(k)fluoranthene	MG/KG	0.49	0.37 U	0.15 J	17 D	0.60
bis(2-Chloroethoxy)methane	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
bis(2-Chloroethyl)ether	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
bis(2-Ethylhexyl)phthalate	MG/KG	0.37 U	0.37 U	0.38 U	0.40 U	0.37 U
Butylbenzylphthalate	MG/KG	0.37 U	0.37 U	0.38 U	0.40 U	0.37 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-27	SB-28	SB-28	SB-28	SB-29
Sample ID		SB-27 (22-23.5)	SB-28 (10-12)	SB-28 (17-19)	SB-28 (22-23)	SB-29 (2.5-3)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		22.0-23.5	10.0-12.0	17.0-19.0	22.0-23.0	2.5-3.0
Date Sampled		01/12/14	01/12/14	01/12/14	01/12/14	01/11/14
Parameter	**Units**					
Semivolatile Organic Compounds						
Caprolactam	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
Carbazole	MG/KG	0.87	0.15 J	0.56	14 DJ	0.21 J
Chrysene	MG/KG	1.2	0.24 J	0.56	42 D	2.1
Dibenz(a,h)anthracene	MG/KG	0.18 J	0.37 U	0.38 U	5.7	0.28 J
Dibenzofuran	MG/KG	0.57	0.14 J	1.4	18 D	0.088 J
Diethylphthalate	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
Dimethylphthalate	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
Di-n-butylphthalate	MG/KG	0.37 U	0.37 U	0.38 U	0.40 U	0.37 U
Di-n-octylphthalate	MG/KG	0.37 U	0.37 U	0.38 U	0.40 U	0.37 U
Fluoranthene	MG/KG	3.3	0.48	2.1	130 D	3.8
Fluorene	MG/KG	0.97	0.26 J	2.2	27 D	0.37 UJ
Hexachlorobenzene	MG/KG	0.37 U	0.37 U	0.38 U	0.40 U	0.37 U
Hexachlorobutadiene	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
Hexachlorocyclopentadiene	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
Hexachloroethane	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
Indeno(1,2,3-cd)pyrene	MG/KG	0.89	0.14 J	0.25 J	27 DJ	1.5
Isophorone	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
Naphthalene	MG/KG	0.61	0.66	1.8	17 D	0.37 UJ
Nitrobenzene	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
N-Nitroso-di-n-propylamine	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
N-Nitrosodiphenylamine	MG/KG	0.37 U	0.37 U	0.38 U	0.40 U	0.37 U
Pentachlorophenol	MG/KG	0.75 UJ	0.75 UJ	0.77 UJ	0.81 UJ	0.75 UJ
Phenanthrene	MG/KG	4.0	0.60	6.1	130 D	2.5
Phenol	MG/KG	0.37 U	0.37 U	0.38 U	0.40 UJ	0.37 UJ
Pyrene	MG/KG	3.0	0.42	2.0	93 D	2.8

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-27	SB-28	SB-28	SB-28	SB-29
Sample ID		SB-27 (22-23.5)	SB-28 (10-12)	SB-28 (17-19)	SB-28 (22-23)	SB-29 (2.5-3)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		22.0-23.5	10.0-12.0	17.0-19.0	22.0-23.0	2.5-3.0
Date Sampled		01/12/14	01/12/14	01/12/14	01/12/14	01/11/14
Parameter	**Units**					
Metals						
Aluminum	MG/KG	15,400	15,400	10,800	12,100	12,100
Antimony	MG/KG	0.38 U	0.36 U	0.33 U	0.30 UJ	0.36 U
Arsenic	MG/KG	9.2	2.4	8.8	2.9	2.5
Barium	MG/KG	719	118	95.2	66.8	159
Beryllium	MG/KG	0.24 J	0.41	0.22	0.19 J	0.32
Cadmium	MG/KG	3.0	0.11 J	0.013 U	0.027 J	0.014 U
Calcium	MG/KG	12,500	18,000	9,870	14,200	7,640
Chromium	MG/KG	89.1	25.4	24.4	14.3	27.9
Cobalt	MG/KG	12.0	8.6	6.0	11.0	9.2
Copper	MG/KG	72.6	22.9	24.1	31.9	72.5
Iron	MG/KG	63,900	21,100	12,800	19,400	17,900
Lead	MG/KG	801	18.3	16.0	50.4 J	197
Magnesium	MG/KG	10,100	4,320	4,140	5,700	5,700
Manganese	MG/KG	662	541	186	251	356
Mercury	MG/KG	0.17	0.046	0.091	0.099	0.25
Nickel	MG/KG	33.7	19.1	18.5	16.0	31.2
Potassium	MG/KG	9,390	3,450	3,570	2,390	5,730
Selenium	MG/KG	0.64 U	0.61 U	0.56 U	0.51 U	0.60 U
Silver	MG/KG	0.064 U	0.061 U	0.056 U	0.051 UJ	0.22 J
Sodium	MG/KG	246	286	388	526 J	455
Thallium	MG/KG	0.22 U	0.21 U	0.19 U	0.17 U	0.21 U
Vanadium	MG/KG	46.3	34.7	25.3	38.1	32.6
Zinc	MG/KG	425	300	43.6	774	124
Miscellaneous Parameters						
Cyanide, Total	MG/KG	1.7	0.49 U	0.50 U	0.56 U	0.47 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-29	SB-29	SB-30	SB-30	SB-31
Sample ID		SB-29 (5.8-7)	SB-29 (20.8-21.9)	SB-30 (3-3.5)	SB-30 (5.8-7.0)	SB-31 (4-4.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		5.8-7.0	20.8-21.9	3.0-3.5	5.8-7.0	4.0-4.5
Date Sampled		01/12/14	01/12/14	11/15/13	11/19/13	11/20/13
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,1,2,2-Tetrachloroethane	MG/KG	0.0056 U	0.38 U	0.0051 UJ	0.0049 U	0.0058 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.0056 UJ	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,1,2-Trichloroethane	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,1-Dichloroethane	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,1-Dichloroethene	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,2,3-Trichlorobenzene	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,2,4-Trichlorobenzene	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,2,4-Trimethylbenzene	MG/KG	0.0056 U	2.9	0.0051 U	0.0049 U	0.0058 U
1,2-Dibromo-3-chloropropane	MG/KG	0.0056 U	0.38 U	0.0051 UJ	0.0049 U	0.0058 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,2-Dichlorobenzene	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,2-Dichloroethane	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,2-Dichloroethene (cis)	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,2-Dichloroethene (trans)	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,2-Dichloropropane	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.0056 U	1.0	0.0051 U	0.0049 U	0.0058 U
1,3-Dichlorobenzene	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,3-Dichloropropene (cis)	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,3-Dichloropropene (trans)	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,4-Dichlorobenzene	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
1,4-Dioxane	MG/KG	R	R	R	R	R
2-Butanone	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
2-Hexanone	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
4-Methyl-2-pentanone	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-29	SB-29	SB-30	SB-30	SB-31
Sample ID		SB-29 (5.8-7)	SB-29 (20.8-21.9)	SB-30 (3-3.5)	SB-30 (5.8-7.0)	SB-31 (4-4.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		5.8-7.0	20.8-21.9	3.0-3.5	5.8-7.0	4.0-4.5
Date Sampled		01/12/14	01/12/14	11/15/13	11/19/13	11/20/13
Parameter	**Units**					
Volatile Organic Compounds						
Acetone	MG/KG	0.0096	0.38 U	0.0051 U	0.0049 U	0.0058 U
Benzene	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Bromochloromethane	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Bromodichloromethane	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Bromoform	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Bromomethane	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Carbon disulfide	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Carbon tetrachloride	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Chlorobenzene	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Chloroethane	MG/KG	0.0056 U	0.38 UJ	0.0051 U	0.0049 U	0.0058 U
Chloroform	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Chloromethane	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Cyclohexane	MG/KG	0.0056 UJ	0.38 U	0.0051 U	0.0049 U	0.0058 U
Dibromochloromethane	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Dichlorodifluoromethane	MG/KG	0.0056 U	0.38 U	0.0051 UJ	0.0049 U	0.0058 U
Ethylbenzene	MG/KG	0.0056 U	1.8	0.0051 U	0.0049 U	0.0058 U
Isopropylbenzene	MG/KG	0.0056 U	0.34 J	0.0051 U	0.0049 U	0.0058 U
Methyl acetate	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Methyl tert-butyl ether	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Methylcyclohexane	MG/KG	0.0056 UJ	0.12 J	0.0051 U	0.0049 U	0.0058 U
Methylene chloride	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
n-Butylbenzene	MG/KG	0.0056 U	0.18 J	0.0051 U	0.0049 U	0.0058 U
n-Propylbenzene	MG/KG	0.0056 U	0.26 J	0.0051 U	0.0049 U	0.0058 U
sec-Butylbenzene	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Styrene	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-29	SB-29	SB-30	SB-30	SB-31
Sample ID		SB-29 (5.8-7)	SB-29 (20.8-21.9)	SB-30 (3-3.5)	SB-30 (5.8-7.0)	SB-31 (4-4.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		5.8-7.0	20.8-21.9	3.0-3.5	5.8-7.0	4.0-4.5
Date Sampled		01/12/14	01/12/14	11/15/13	11/19/13	11/20/13
Parameter	**Units**					
Volatile Organic Compounds						
tert-Butylbenzene	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Tetrachloroethene	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Toluene	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Trichloroethene	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Trichlorofluoromethane	MG/KG	0.0056 UJ	0.38 U	0.0051 U	0.0049 U	0.0058 U
Vinyl chloride	MG/KG	0.0056 U	0.38 U	0.0051 U	0.0049 U	0.0058 U
Xylene (total)	MG/KG	0.0056 U	2.54	0.0051 U	0.0049 U	0.0058 U
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	0.38 U	1.3	0.38 U	0.38 U	1.5 U
1,2,4,5-Tetrachlorobenzene	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
2,2'-oxybis(1-Chloropropane)	MG/KG	0.38 U	0.41 U	0.38 UJ	0.38 U	1.5 U
2,3,4,6-Tetrachlorophenol	MG/KG	0.38 U	0.41 U	0.38 UJ	0.38 U	1.5 U
2,4,5-Trichlorophenol	MG/KG	0.77 U	0.84 U	0.78 U	0.69 U	3.1 U
2,4,6-Trichlorophenol	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
2,4-Dichlorophenol	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
2,4-Dimethylphenol	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
2,4-Dinitrophenol	MG/KG	0.77 U	0.84 U	0.78 UJ	0.69 UJ	3.1 UJ
2,4-Dinitrotoluene	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
2,6-Dinitrotoluene	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
2-Chloronaphthalene	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
2-Chlorophenol	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
2-Methylnaphthalene	MG/KG	0.23 J	10 D	0.15 J	0.38 U	1.5 U
2-Methylphenol (o-cresol)	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
2-Nitroaniline	MG/KG	0.77 U	0.84 U	0.78 UJ	0.69 U	3.1 U
2-Nitrophenol	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-29	SB-29	SB-30	SB-30	SB-31
Sample ID		SB-29 (5.8-7)	SB-29 (20.8-21.9)	SB-30 (3-3.5)	SB-30 (5.8-7.0)	SB-31 (4-4.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		5.8-7.0	20.8-21.9	3.0-3.5	5.8-7.0	4.0-4.5
Date Sampled		01/12/14	01/12/14	11/15/13	11/19/13	11/20/13
Parameter	**Units**					
Semivolatile Organic Compounds						
3,3'-Dichlorobenzidine	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
3-Nitroaniline	MG/KG	0.77 U	0.84 U	0.78 U	0.69 U	3.1 U
4,6-Dinitro-2-methylphenol	MG/KG	0.77 U	0.84 U	0.78 U	0.69 UJ	3.1 UJ
4-Bromophenyl-phenylether	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
4-Chloro-3-methylphenol	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
4-Chloroaniline	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
4-Chlorophenyl-phenylether	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
4-Methylphenol (p-cresol)	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
4-Nitroaniline	MG/KG	0.77 U	0.84 U	0.78 U	0.69 U	3.1 U
4-Nitrophenol	MG/KG	0.77 U	0.84 U	0.78 U	0.69 U	3.1 U
Acenaphthene	MG/KG	0.32 J	1.0	0.12 J	0.38 U	1.5 U
Acenaphthylene	MG/KG	0.38 U	1.3	0.36 J	0.38 U	2.4
Acetophenone	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
Anthracene	MG/KG	0.84	3.6	0.76	0.38 U	0.83 J
Atrazine	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
Benzaldehyde	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
Benzo(a)anthracene	MG/KG	1.1	2.0	1.4	0.38 U	5.2
Benzo(a)pyrene	MG/KG	0.89	1.8	1.5	0.38 U	8.4
Benzo(b)fluoranthene	MG/KG	1.1	1.9	1.8	0.38 U	11
Benzo(g,h,i)perylene	MG/KG	0.53	1.3	1.8	0.38 UJ	15 J
Benzo(k)fluoranthene	MG/KG	0.44	0.52	1.3	0.38 U	3.5
bis(2-Chloroethoxy)methane	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
bis(2-Chloroethyl)ether	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
bis(2-Ethylhexyl)phthalate	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
Butylbenzylphthalate	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-29	SB-29	SB-30	SB-30	SB-31
Sample ID		SB-29 (5.8-7)	SB-29 (20.8-21.9)	SB-30 (3-3.5)	SB-30 (5.8-7.0)	SB-31 (4-4.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		5.8-7.0	20.8-21.9	3.0-3.5	5.8-7.0	4.0-4.5
Date Sampled		01/12/14	01/12/14	11/15/13	11/19/13	11/20/13
Parameter	**Units**					
Semivolatile Organic Compounds						
Caprolactam	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
Carbazole	MG/KG	0.14 J	0.16 J	0.41	0.38 U	1.5 U
Chrysene	MG/KG	1.1	2.2	1.5	0.38 U	5.7
Dibenz(a,h)anthracene	MG/KG	0.16 J	0.21 J	0.43	0.38 U	1.5 J
Dibenzofuran	MG/KG	0.20 J	0.38 J	0.38 U	0.38 U	1.5 U
Diethylphthalate	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
Dimethylphthalate	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
Di-n-butylphthalate	MG/KG	0.38 U	0.41 U	0.081 J	0.38 U	1.5 U
Di-n-octylphthalate	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
Fluoranthene	MG/KG	2.5	4.8	2.6	0.38 U	8.1
Fluorene	MG/KG	0.45	2.8	0.17 J	0.38 U	0.50 J
Hexachlorobenzene	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
Hexachlorobutadiene	MG/KG	0.38 U	0.41 U	0.38 UJ	0.38 U	1.5 U
Hexachlorocyclopentadiene	MG/KG	0.38 U	0.41 U	0.38 UJ	0.38 UJ	1.5 UJ
Hexachloroethane	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
Indeno(1,2,3-cd)pyrene	MG/KG	0.62	1.2	1.4	0.38 U	11
Isophorone	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
Naphthalene	MG/KG	0.74	49 D	0.11 J	0.38 U	0.74 J
Nitrobenzene	MG/KG	0.38 U	0.41 U	0.38 UJ	0.38 U	1.5 U
N-Nitroso-di-n-propylamine	MG/KG	0.38 U	0.41 U	0.38 UJ	0.38 U	1.5 U
N-Nitrosodiphenylamine	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
Pentachlorophenol	MG/KG	0.77 UJ	0.84 UJ	0.78 UJ	0.69 UJ	3.1 UJ
Phenanthrene	MG/KG	2.6	16 D	1.5	0.38 U	3.1
Phenol	MG/KG	0.38 U	0.41 U	0.38 U	0.38 U	1.5 U
Pyrene	MG/KG	2.3	6.7	2.5	0.38 U	12

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-29	SB-29	SB-30	SB-30	SB-31
Sample ID		SB-29 (5.8-7)	SB-29 (20.8-21.9)	SB-30 (3-3.5)	SB-30 (5.8-7.0)	SB-31 (4-4.5)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		5.8-7.0	20.8-21.9	3.0-3.5	5.8-7.0	4.0-4.5
Date Sampled		01/12/14	01/12/14	11/15/13	11/19/13	11/20/13
Parameter	**Units**					
Metals						
Aluminum	MG/KG	11,900	23,000	10,500	19,400	5,360
Antimony	MG/KG	0.39 U	0.45 U	0.40 U	0.31 U	1.9
Arsenic	MG/KG	2.6	3.2	103	5.4	13.9
Barium	MG/KG	114	192	246	199	169
Beryllium	MG/KG	0.32	0.57	0.29	0.0061 U	0.25 U
Cadmium	MG/KG	0.015 U	0.018 U	1.3	0.28	0.99
Calcium	MG/KG	4,040	3,770	6,030	1,670	8,050
Chromium	MG/KG	22.9	41.3	36.7	32.4	15.5
Cobalt	MG/KG	7.0	13.2	8.8	16.0	9.8
Copper	MG/KG	23.9	46.3	145	46.5	117
Iron	MG/KG	16,800	28,500	20,800	33,200	75,000
Lead	MG/KG	57.4	55.6	1,010	2.8	545
Magnesium	MG/KG	3,900	6,950	4,620	7,940	1,790
Manganese	MG/KG	305	575	349	365	699
Mercury	MG/KG	0.10	0.63	1.5	0.040 U	5.0
Nickel	MG/KG	17.6	34.6	62.4	22.1	19.2
Potassium	MG/KG	3,000	6,570	2,990	12,200	1,080
Selenium	MG/KG	0.66 U	0.76 U	0.67 U	0.52 U	0.64 U
Silver	MG/KG	0.066 U	0.076 U	0.21 J	0.052 U	0.064 U
Sodium	MG/KG	293	300	128	98.4	156
Thallium	MG/KG	0.23 U	0.26 U	1.4	3.6	0.22 U
Vanadium	MG/KG	28.3	47.6	32.0	50.5	28.0
Zinc	MG/KG	77.9	100	361	68.2	244
Miscellaneous Parameters						
Cyanide, Total	MG/KG	0.52 U	6.6	0.61 J	0.46 U	4.2

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-31	SB-31	SB-31	SB-32	SB-32
Sample ID		SB-31 (8.8-9.5)	SB-31 (11.5-12.5)	SB-31 (13-14.5)	SB-32 (3-3.5)	SB-32 (8.8-10)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		8.8-9.5	11.5-12.5	13.0-14.5	3.0-3.5	8.8-10.0
Date Sampled		11/22/13	11/22/13	11/22/13	11/15/13	11/19/13
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,1,2,2-Tetrachloroethane	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 UJ	0.0053 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,1,2-Trichloroethane	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,1-Dichloroethane	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,1-Dichloroethene	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,2,3-Trichlorobenzene	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,2,4-Trichlorobenzene	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,2,4-Trimethylbenzene	MG/KG	0.058	7.6	6.3	0.0057 U	0.0053 U
1,2-Dibromo-3-chloropropane	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 UJ	0.0053 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,2-Dichlorobenzene	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,2-Dichloroethane	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,2-Dichloroethene (cis)	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,2-Dichloroethene (trans)	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,2-Dichloropropane	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.010 J	2.2	2.2	0.0057 U	0.0053 U
1,3-Dichlorobenzene	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,3-Dichloropropene (cis)	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,3-Dichloropropene (trans)	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,4-Dichlorobenzene	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
1,4-Dioxane	MG/KG	R	R	R	R	R
2-Butanone	MG/KG	0.015	0.35 U	0.28 U	0.0057 U	0.0053 U
2-Hexanone	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
4-Methyl-2-pentanone	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-31	SB-31	SB-31	SB-32	SB-32
Sample ID		SB-31 (8.8-9.5)	SB-31 (11.5-12.5)	SB-31 (13-14.5)	SB-32 (3-3.5)	SB-32 (8.8-10)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		8.8-9.5	11.5-12.5	13.0-14.5	3.0-3.5	8.8-10.0
Date Sampled		11/22/13	11/22/13	11/22/13	11/15/13	11/19/13
Parameter	**Units**					
Volatile Organic Compounds						
Acetone	MG/KG	0.060	0.35 U	0.28 U	0.0057 U	0.0036 J
Benzene	MG/KG	0.0073 J	0.35 U	0.28 U	0.0057 U	0.0053 U
Bromochloromethane	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Bromodichloromethane	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Bromoform	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Bromomethane	MG/KG	0.0068 U	0.35 UJ	0.28 UJ	0.0057 U	0.0053 U
Carbon disulfide	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Carbon tetrachloride	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Chlorobenzene	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Chloroethane	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Chloroform	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Chloromethane	MG/KG	0.0068 U	0.35 UJ	0.28 UJ	0.0057 U	0.0053 U
Cyclohexane	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Dibromochloromethane	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Dichlorodifluoromethane	MG/KG	0.0068 U	0.35 UJ	0.28 UJ	0.0057 UJ	0.0053 U
Ethylbenzene	MG/KG	0.010 J	0.28 J	0.85	0.0057 U	0.0053 U
Isopropylbenzene	MG/KG	0.025	1.0	0.72	0.0057 U	0.0053 U
Methyl acetate	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Methyl tert-butyl ether	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Methylcyclohexane	MG/KG	0.0076 J	1.9	0.41	0.0057 U	0.0053 U
Methylene chloride	MG/KG	0.0068 UJ	0.35 U	0.28 U	0.0057 U	0.0053 U
n-Butylbenzene	MG/KG	0.0068 U	0.79	0.28 U	0.0057 U	0.0053 U
n-Propylbenzene	MG/KG	0.017	1.0	0.80	0.0057 U	0.0053 U
sec-Butylbenzene	MG/KG	0.0068 U	0.10 J	0.28 U	0.0057 U	0.0053 U
Styrene	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-31	SB-31	SB-31	SB-32	SB-32
Sample ID		SB-31 (8.8-9.5)	SB-31 (11.5-12.5)	SB-31 (13-14.5)	SB-32 (3-3.5)	SB-32 (8.8-10)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		8.8-9.5	11.5-12.5	13.0-14.5	3.0-3.5	8.8-10.0
Date Sampled		11/22/13	11/22/13	11/22/13	11/15/13	11/19/13
Parameter	**Units**					
Volatile Organic Compounds						
tert-Butylbenzene	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Tetrachloroethene	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Toluene	MG/KG	0.0073 J	0.35 U	0.28 U	0.0057 U	0.0053 U
Trichloroethene	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Trichlorofluoromethane	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Vinyl chloride	MG/KG	0.0068 U	0.35 U	0.28 U	0.0057 U	0.0053 U
Xylene (total)	MG/KG	0.035	0.30 J	1.05	0.0057 U	0.0053 U
Semivolatile Organic Compounds						
1,1'-Biphenyl	MG/KG	1.7 U	12	3.7	0.38 U	0.37 U
1,2,4,5-Tetrachlorobenzene	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
2,2'-oxybis(1-Chloropropane)	MG/KG	1.7 UJ	1.6 UJ	0.36 UJ	0.38 UJ	0.37 U
2,3,4,6-Tetrachlorophenol	MG/KG	1.7 UJ	1.6 UJ	0.36 UJ	0.38 UJ	0.37 U
2,4,5-Trichlorophenol	MG/KG	3.4 U	3.2 U	0.74 U	0.77 U	0.76 U
2,4,6-Trichlorophenol	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
2,4-Dichlorophenol	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
2,4-Dimethylphenol	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
2,4-Dinitrophenol	MG/KG	3.4 UJ	3.2 UJ	0.74 UJ	0.77 UJ	0.76 UJ
2,4-Dinitrotoluene	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
2,6-Dinitrotoluene	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
2-Chloronaphthalene	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
2-Chlorophenol	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
2-Methylnaphthalene	MG/KG	0.73 J	100 D	26 D	0.38 U	0.37 U
2-Methylphenol (o-cresol)	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
2-Nitroaniline	MG/KG	3.4 UJ	3.2 UJ	0.74 UJ	0.77 UJ	0.76 U
2-Nitrophenol	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-31	SB-31	SB-31	SB-32	SB-32
Sample ID		SB-31 (8.8-9.5)	SB-31 (11.5-12.5)	SB-31 (13-14.5)	SB-32 (3-3.5)	SB-32 (8.8-10)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		8.8-9.5	11.5-12.5	13.0-14.5	3.0-3.5	8.8-10.0
Date Sampled		11/22/13	11/22/13	11/22/13	11/15/13	11/19/13
Parameter	**Units**					
Semivolatile Organic Compounds						
3,3'-Dichlorobenzidine	MG/KG	1.7 U	0.64 J	0.36 U	0.38 U	0.37 U
3-Nitroaniline	MG/KG	3.4 U	3.2 U	0.74 U	0.77 U	0.76 U
4,6-Dinitro-2-methylphenol	MG/KG	3.4 U	3.2 U	0.74 U	0.77 U	0.76 UJ
4-Bromophenyl-phenylether	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
4-Chloro-3-methylphenol	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
4-Chloroaniline	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
4-Chlorophenyl-phenylether	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
4-Methylphenol (p-cresol)	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
4-Nitroaniline	MG/KG	3.4 U	3.2 U	0.74 U	0.77 U	0.76 U
4-Nitrophenol	MG/KG	3.4 U	3.2 U	0.74 U	0.77 U	0.76 U
Acenaphthene	MG/KG	4.7	65 D	16 D	0.38 U	0.37 U
Acenaphthylene	MG/KG	2.6	9.0	2.2	0.54	0.37 U
Acetophenone	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
Anthracene	MG/KG	8.3	25	7.3 D	0.42	0.37 U
Atrazine	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
Benzaldehyde	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
Benzo(a)anthracene	MG/KG	21	19	5.3	1.8	0.37 U
Benzo(a)pyrene	MG/KG	22	15	3.9	2.0	0.37 U
Benzo(b)fluoranthene	MG/KG	27	13	2.7	2.0	0.37 U
Benzo(g,h,i)perylene	MG/KG	14	7.9	2.0	1.6	0.37 UJ
Benzo(k)fluoranthene	MG/KG	8.4	5.5	2.2	1.3	0.37 U
bis(2-Chloroethoxy)methane	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
bis(2-Chloroethyl)ether	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
bis(2-Ethylhexyl)phthalate	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
Butylbenzylphthalate	MG/KG	1.7 U	1.6 U	0.36 U	0.095 J	0.37 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-31	SB-31	SB-31	SB-32	SB-32
Sample ID		SB-31 (8.8-9.5)	SB-31 (11.5-12.5)	SB-31 (13-14.5)	SB-32 (3-3.5)	SB-32 (8.8-10)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		8.8-9.5	11.5-12.5	13.0-14.5	3.0-3.5	8.8-10.0
Date Sampled		11/22/13	11/22/13	11/22/13	11/15/13	11/19/13
Parameter	**Units**					
Semivolatile Organic Compounds						
Caprolactam	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
Carbazole	MG/KG	2.1	1.6 U	0.20 J	0.10 J	0.37 U
Chrysene	MG/KG	16	18	4.4	1.7	0.37 U
Dibenz(a,h)anthracene	MG/KG	4.6	1.5 J	0.35 J	0.24 J	0.37 U
Dibenzofuran	MG/KG	2.6	1.6 U	1.2	0.38 U	0.37 U
Diethylphthalate	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
Dimethylphthalate	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
Di-n-butylphthalate	MG/KG	1.7 U	1.6 U	0.091 J	0.38 U	0.37 U
Di-n-octylphthalate	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
Fluoranthene	MG/KG	30 D	48 D	11 D	2.3	0.37 U
Fluorene	MG/KG	5.3	28 D	8.9 D	0.084 J	0.37 U
Hexachlorobenzene	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
Hexachlorobutadiene	MG/KG	1.7 UJ	1.6 UJ	0.36 UJ	0.38 UJ	0.37 U
Hexachlorocyclopentadiene	MG/KG	1.7 UJ	1.6 UJ	0.36 UJ	0.38 UJ	0.37 UJ
Hexachloroethane	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
Indeno(1,2,3-cd)pyrene	MG/KG	16	7.0	1.6	1.5	0.37 U
Isophorone	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
Naphthalene	MG/KG	3.1	41 D	35 D	0.38 U	0.37 U
Nitrobenzene	MG/KG	1.7 UJ	1.6 UJ	0.36 UJ	0.38 UJ	0.37 U
N-Nitroso-di-n-propylamine	MG/KG	1.7 UJ	1.6 UJ	0.36 UJ	0.38 UJ	0.37 U
N-Nitrosodiphenylamine	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
Pentachlorophenol	MG/KG	3.4 UJ	3.2 UJ	0.74 UJ	0.77 UJ	0.76 UJ
Phenanthrene	MG/KG	20	110 D	29 D	0.72	0.37 U
Phenol	MG/KG	1.7 U	1.6 U	0.36 U	0.38 U	0.37 U
Pyrene	MG/KG	25	60 D	20 D	2.6	0.37 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SB-31	SB-31	SB-31	SB-32	SB-32
Sample ID		SB-31 (8.8-9.5)	SB-31 (11.5-12.5)	SB-31 (13-14.5)	SB-32 (3-3.5)	SB-32 (8.8-10)
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		8.8-9.5	11.5-12.5	13.0-14.5	3.0-3.5	8.8-10.0
Date Sampled		11/22/13	11/22/13	11/22/13	11/15/13	11/19/13
Parameter	**Units**					
Metals						
Aluminum	MG/KG	11,500	14,200	12,900	12,200	16,500
Antimony	MG/KG	0.33 U	0.24 U	0.35 U	1.1 J	0.31 U
Arsenic	MG/KG	3.1	2.3	1.1	28.4 J	1.2
Barium	MG/KG	75.2	58.7	120	197	154
Beryllium	MG/KG	0.23	0.00096 U	0.0014 U	0.34	0.0012 U
Cadmium	MG/KG	0.013 U	0.0096 U	0.014 U	1.5 J	0.012 U
Calcium	MG/KG	16,600	1,060	1,180	7,190	843
Chromium	MG/KG	15.8	35.6	36.2	26.5	27.5
Cobalt	MG/KG	5.3	7.2	11.4	10.5	11.9
Copper	MG/KG	14.4	12.8	18.5	89.1 J	31.8
Iron	MG/KG	13,600	24,700	18,200	59,100 J	27,800
Lead	MG/KG	60.7	6.7	4.7	379	4.6
Magnesium	MG/KG	2,360	4,250	5,390	3,570	5,660
Manganese	MG/KG	300	193	300	784 J	454
Mercury	MG/KG	0.13	0.013 J	0.0032 J	1.8 J+	0.040 U
Nickel	MG/KG	13.0	14.8	26.9	21.6	23.6
Potassium	MG/KG	794	2,720	5,270	3,290	7,430
Selenium	MG/KG	0.59 J	0.46 J	0.59 U	0.70 U	0.95 J
Silver	MG/KG	0.056 U	0.041 U	0.059 U	0.070 U	0.052 U
Sodium	MG/KG	159	219	156	179	101
Thallium	MG/KG	0.57 J	1.2	1.4	2.2	2.2
Vanadium	MG/KG	21.4	33.4	28.6	40.5	34.3
Zinc	MG/KG	40.1	33.2	40.2	341 J	49.8
Miscellaneous Parameters						
Cyanide, Total	MG/KG	0.56 U	0.52 U	0.48 U	0.48 U	0.48 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		TP-09	TP-09
Sample ID		TP-9 (2.7-2.9)	TP-9 (3.9-4.2)
Matrix		Soil	Soil
Depth Interval (ft)		2.7-2.9	3.9-4.2
Date Sampled		01/15/14	01/15/14
Parameter	**Units**		
Volatile Organic Compounds			
1,1,1-Trichloroethane	MG/KG	0.0090 U	0.0049 U
1,1,2,2-Tetrachloroethane	MG/KG	0.0090 U	0.0049 U
1,1,2-Trichloro-1,2,2-trifluoroethane	MG/KG	0.0090 UJ	0.0049 UJ
1,1,2-Trichloroethane	MG/KG	0.0090 U	0.0049 U
1,1-Dichloroethane	MG/KG	0.0090 U	0.0049 U
1,1-Dichloroethene	MG/KG	0.0090 U	0.0049 U
1,2,3-Trichlorobenzene	MG/KG	0.0090 U	0.0049 U
1,2,4-Trichlorobenzene	MG/KG	0.0090 U	0.0049 U
1,2,4-Trimethylbenzene	MG/KG	0.0090 U	0.0049 U
1,2-Dibromo-3-chloropropane	MG/KG	0.0090 U	0.0049 U
1,2-Dibromoethane (Ethylene dibromide)	MG/KG	0.0090 U	0.0049 U
1,2-Dichlorobenzene	MG/KG	0.0090 U	0.0049 U
1,2-Dichloroethane	MG/KG	0.0090 U	0.0049 U
1,2-Dichloroethene (cis)	MG/KG	0.0090 U	0.0049 U
1,2-Dichloroethene (trans)	MG/KG	0.0090 U	0.0049 U
1,2-Dichloropropane	MG/KG	0.0090 U	0.0049 U
1,3,5-Trimethylbenzene (Mesitylene)	MG/KG	0.0090 U	0.0049 U
1,3-Dichlorobenzene	MG/KG	0.0090 U	0.0049 U
1,3-Dichloropropene (cis)	MG/KG	0.0090 U	0.0049 U
1,3-Dichloropropene (trans)	MG/KG	0.0090 U	0.0049 U
1,4-Dichlorobenzene	MG/KG	0.0090 U	0.0049 U
1,4-Dioxane	MG/KG	R	R
2-Butanone	MG/KG	0.0090 U	0.0049 U
2-Hexanone	MG/KG	0.0090 U	0.0049 U
4-Methyl-2-pentanone	MG/KG	0.0090 U	0.0049 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		TP-09	TP-09
Sample ID		TP-9 (2.7-2.9)	TP-9 (3.9-4.2)
Matrix		Soil	Soil
Depth Interval (ft)		2.7-2.9	3.9-4.2
Date Sampled		01/15/14	01/15/14
Parameter	**Units**		
Volatile Organic Compounds			
Acetone	MG/KG	0.0074 J	0.0049 U
Benzene	MG/KG	0.0090 U	0.0049 U
Bromochloromethane	MG/KG	0.0090 U	0.0049 U
Bromodichloromethane	MG/KG	0.0090 U	0.0049 U
Bromoform	MG/KG	0.0090 U	0.0049 U
Bromomethane	MG/KG	0.0090 U	0.0049 U
Carbon disulfide	MG/KG	0.0090 U	0.0049 U
Carbon tetrachloride	MG/KG	0.0090 U	0.0049 U
Chlorobenzene	MG/KG	0.0090 U	0.0049 U
Chloroethane	MG/KG	0.0090 U	0.0049 U
Chloroform	MG/KG	0.0090 U	0.0049 U
Chloromethane	MG/KG	0.0090 U	0.0049 U
Cyclohexane	MG/KG	0.0090 U	0.0049 U
Dibromochloromethane	MG/KG	0.0090 U	0.0049 U
Dichlorodifluoromethane	MG/KG	0.0090 U	0.0049 U
Ethylbenzene	MG/KG	0.0090 U	0.0049 U
Isopropylbenzene	MG/KG	0.0090 U	0.0049 U
Methyl acetate	MG/KG	0.0090 U	0.0049 U
Methyl tert-butyl ether	MG/KG	0.0090 U	0.0049 U
Methylcyclohexane	MG/KG	0.0090 U	0.0049 U
Methylene chloride	MG/KG	0.0090 U	0.0049 U
n-Butylbenzene	MG/KG	0.0090 U	0.0049 U
n-Propylbenzene	MG/KG	0.0090 U	0.0049 U
sec-Butylbenzene	MG/KG	0.0090 U	0.0049 U
Styrene	MG/KG	0.0090 U	0.0049 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		TP-09	TP-09
Sample ID		TP-9 (2.7-2.9)	TP-9 (3.9-4.2)
Matrix		Soil	Soil
Depth Interval (ft)		2.7-2.9	3.9-4.2
Date Sampled		01/15/14	01/15/14
Parameter	**Units**		
Volatile Organic Compounds			
tert-Butylbenzene	MG/KG	0.0090 U	0.0049 U
Tetrachloroethene	MG/KG	0.0090 U	0.0049 U
Toluene	MG/KG	0.0090 U	0.0049 U
Trichloroethene	MG/KG	0.0090 U	0.0049 U
Trichlorofluoromethane	MG/KG	0.0090 U	0.0049 U
Vinyl chloride	MG/KG	0.0090 U	0.0049 U
Xylene (total)	MG/KG	0.0090 U	0.0049 U
Semivolatile Organic Compounds			
1,1'-Biphenyl	MG/KG	0.37 U	0.36 U
1,2,4,5-Tetrachlorobenzene	MG/KG	0.37 U	0.36 U
2,2'-oxybis(1-Chloropropane)	MG/KG	0.37 U	0.36 U
2,3,4,6-Tetrachlorophenol	MG/KG	0.37 U	0.36 U
2,4,5-Trichlorophenol	MG/KG	0.70 U	0.72 U
2,4,6-Trichlorophenol	MG/KG	0.37 U	0.36 U
2,4-Dichlorophenol	MG/KG	0.37 U	0.36 U
2,4-Dimethylphenol	MG/KG	0.37 U	0.36 U
2,4-Dinitrophenol	MG/KG	0.70 U	0.72 U
2,4-Dinitrotoluene	MG/KG	0.37 U	0.36 U
2,6-Dinitrotoluene	MG/KG	0.37 U	0.36 U
2-Chloronaphthalene	MG/KG	0.37 U	0.36 U
2-Chlorophenol	MG/KG	0.37 U	0.36 U
2-Methylnaphthalene	MG/KG	0.37 U	0.36 U
2-Methylphenol (o-cresol)	MG/KG	0.37 U	0.36 U
2-Nitroaniline	MG/KG	0.70 U	0.36 U
2-Nitrophenol	MG/KG	0.37 U	0.36 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		TP-09	TP-09
Sample ID		TP-9 (2.7-2.9)	TP-9 (3.9-4.2)
Matrix		Soil	Soil
Depth Interval (ft)		2.7-2.9	3.9-4.2
Date Sampled		01/15/14	01/15/14
Parameter	**Units**		
Semivolatile Organic Compounds			
3,3'-Dichlorobenzidine	MG/KG	0.37 U	0.36 U
3-Nitroaniline	MG/KG	0.70 U	0.72 U
4,6-Dinitro-2-methylphenol	MG/KG	0.70 U	0.72 U
4-Bromophenyl-phenylether	MG/KG	0.37 U	0.36 U
4-Chloro-3-methylphenol	MG/KG	0.37 U	0.36 U
4-Chloroaniline	MG/KG	0.37 U	0.36 U
4-Chlorophenyl-phenylether	MG/KG	0.37 U	0.36 U
4-Methylphenol (p-cresol)	MG/KG	0.37 U	0.36 U
4-Nitroaniline	MG/KG	0.70 U	0.72 U
4-Nitrophenol	MG/KG	0.70 U	0.72 U
Acenaphthene	MG/KG	0.37 U	0.36 U
Acenaphthylene	MG/KG	0.37 U	0.092 J
Acetophenone	MG/KG	0.37 U	0.36 U
Anthracene	MG/KG	0.37 U	0.36 U
Atrazine	MG/KG	0.37 U	0.36 U
Benzaldehyde	MG/KG	0.37 U	0.36 U
Benzo(a)anthracene	MG/KG	0.37 U	0.17 J
Benzo(a)pyrene	MG/KG	0.071 J	0.21 J
Benzo(b)fluoranthene	MG/KG	0.086 J	0.27 J
Benzo(g,h,i)perylene	MG/KG	0.078 J	0.24 J
Benzo(k)fluoranthene	MG/KG	0.37 U	0.080 J
bis(2-Chloroethoxy)methane	MG/KG	0.37 U	0.36 U
bis(2-Chloroethyl)ether	MG/KG	0.37 U	0.36 U
bis(2-Ethylhexyl)phthalate	MG/KG	0.37 U	0.36 U
Butylbenzylphthalate	MG/KG	0.37 U	0.36 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		TP-09	TP-09
Sample ID		TP-9 (2.7-2.9)	TP-9 (3.9-4.2)
Matrix		Soil	Soil
Depth Interval (ft)		2.7-2.9	3.9-4.2
Date Sampled		01/15/14	01/15/14
Parameter	**Units**		
Semivolatile Organic Compounds			
Caprolactam	MG/KG	0.37 U	0.36 U
Carbazole	MG/KG	0.37 U	0.36 U
Chrysene	MG/KG	0.37 U	0.18 J
Dibenz(a,h)anthracene	MG/KG	0.37 U	0.36 U
Dibenzofuran	MG/KG	0.37 U	0.36 U
Diethylphthalate	MG/KG	0.37 U	0.36 U
Dimethylphthalate	MG/KG	0.37 U	0.36 U
Di-n-butylphthalate	MG/KG	0.37 U	0.36 U
Di-n-octylphthalate	MG/KG	0.37 U	0.36 U
Fluoranthene	MG/KG	0.078 J	0.39
Fluorene	MG/KG	0.37 U	0.36 U
Hexachlorobenzene	MG/KG	0.37 U	0.36 U
Hexachlorobutadiene	MG/KG	0.37 U	0.36 U
Hexachlorocyclopentadiene	MG/KG	0.37 U	0.36 U
Hexachloroethane	MG/KG	0.37 U	0.36 U
Indeno(1,2,3-cd)pyrene	MG/KG	0.079 J	0.23 J
Isophorone	MG/KG	0.37 U	0.36 U
Naphthalene	MG/KG	0.16 J	0.18 J
Nitrobenzene	MG/KG	0.37 U	0.36 U
N-Nitroso-di-n-propylamine	MG/KG	0.37 U	0.36 U
N-Nitrosodiphenylamine	MG/KG	0.37 U	0.36 U
Pentachlorophenol	MG/KG	0.70 UJ	0.72 UJ
Phenanthrene	MG/KG	0.37 U	0.28 J
Phenol	MG/KG	0.37 U	0.36 U
Pyrene	MG/KG	0.11 J	0.54

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED SOIL SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		TP-09	TP-09
Sample ID		TP-9 (2.7-2.9)	TP-9 (3.9-4.2)
Matrix		Soil	Soil
Depth Interval (ft)		2.7-2.9	3.9-4.2
Date Sampled		01/15/14	01/15/14
Parameter	**Units**		
Metals			
Aluminum	MG/KG	15,100	18,700
Antimony	MG/KG	1.04 U	0.31 UJ
Arsenic	MG/KG	1.4	1.4
Barium	MG/KG	157	202
Beryllium	MG/KG	0.26 U	0.0012 UJ
Cadmium	MG/KG	0.016 U	0.12 J
Calcium	MG/KG	1,920	2,070
Chromium	MG/KG	45.3	44.4
Cobalt	MG/KG	8.7	15.9 J
Copper	MG/KG	62.3	65.8
Iron	MG/KG	23,200	30,500
Lead	MG/KG	28.4	24.7 J
Magnesium	MG/KG	7,280	9,540
Manganese	MG/KG	393	492
Mercury	MG/KG	0.079	0.14
Nickel	MG/KG	27.7	38.8
Potassium	MG/KG	10,200	13,500
Selenium	MG/KG	0.85 J	0.52 U
Silver	MG/KG	0.23 J	0.24 J
Sodium	MG/KG	182	241
Thallium	MG/KG	0.23 U	1.7
Vanadium	MG/KG	43.9	57.8
Zinc	MG/KG	87.6	112
Miscellaneous Parameters			
Cyanide, Total	MG/KG	0.47 U	0.47 U

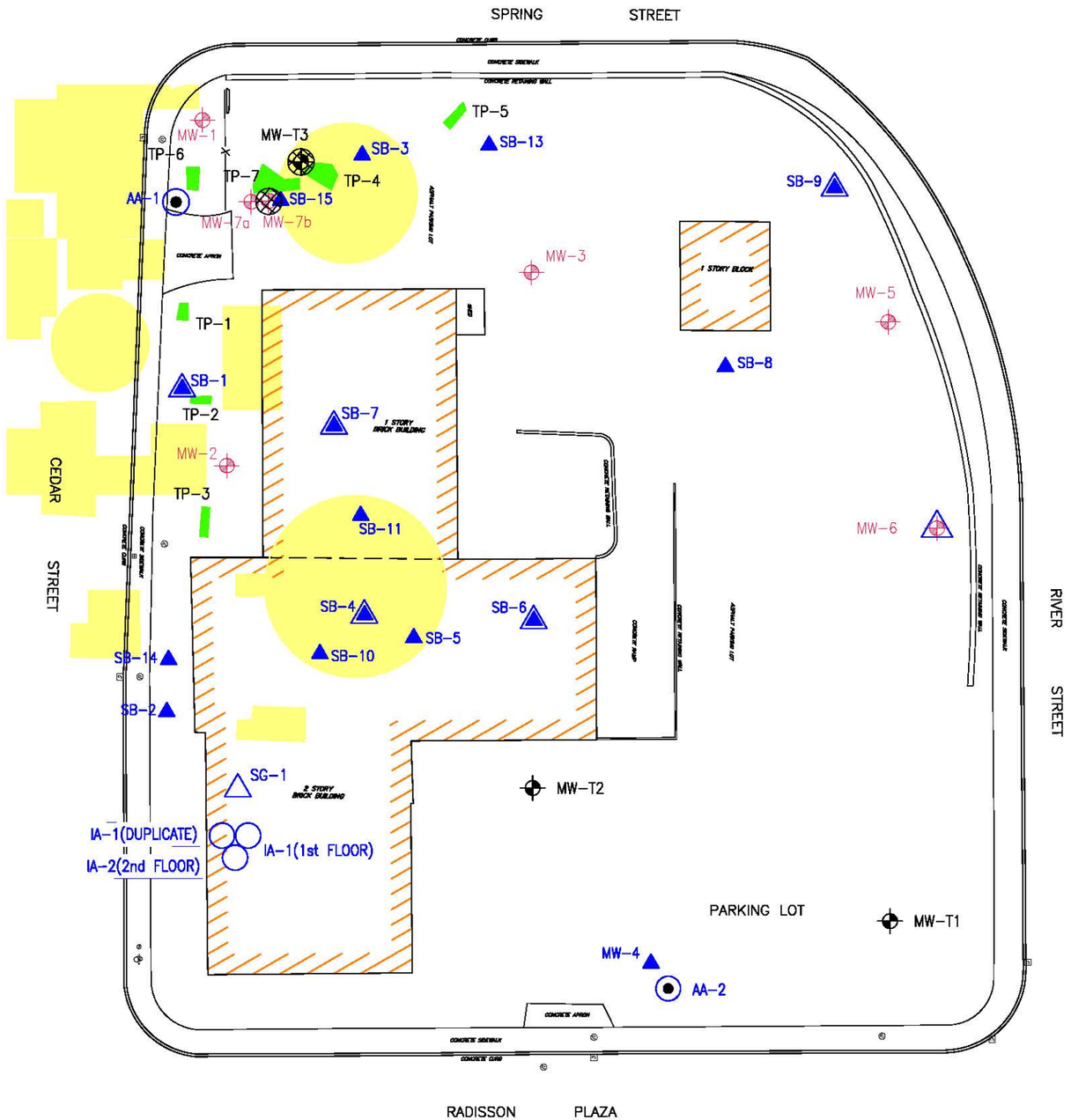
Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

Groundwater Data

- Summary of Groundwater Analytical Results (Parsons 2009)
- Summary of Groundwater Analytical Results (URS 2017)



LEGEND:

- SOIL BORING LOCATION
- MONITORING WELL
- HISTORIC MONITORING WELL
- TEST PIT LOCATION
- APPROXIMATE LOCATION OF FORMER MGP STRUCTURES
- SOIL GAS LOCATION
- INDOOR AIR SAMPLING LOCATION
- AMBIENT AIR SAMPLING LOCATION
- NAPL OBSERVED

NOTES:

1. SAMPLE LOCATION SG-1 AS WELL AS THE INDOOR/AMBIENT AIR SAMPLE LOCATIONS ARE APPROXIMATE.

2. HISTORIC MONITORING WELLS MW-T1 AND MW-T2 ARE DAMAGED AND NOT USEABLE.

3. BASE MAP INFORMATION BASED ON A SURVEY PROVIDED BY CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE, CO., P.C. DATED 1/20/09.

4. REFUSAL WAS ENCOUNTERED WITHIN THE TOP 2 FT AT LOCATION MW-4. THEREFORE A MONITORING WELL COULD NOT BE INSTALLED.

50 25 0 50 100

SCALE: 1"=50'

FIGURE 2

CONSOLIDATED EDISON
CEDAR STREET WORKS
NEW ROCHELLE, NY

SAMPLE LOCATION MAP

PARSONS
290 ELWOOD DAVIS ROAD, SUITE 312, LIVERPOOL, N.Y. 13088, PHONE: 315-451-9560

FILE NAME: P:\CONED\442098 - CEDAR STREET\CAD\442098-SK001.DWG
PLOT DATE: 4/16/2009 4:14 PM PLOTTED BY: WINTERS, CHRIS

Table 1
Sample Summary
Cedar Street

Location	Sample ID	Depth (bgs)	TCL VOCs	TCL SVOCs	TAL Metals	Cyanide	Hydrocarbon Fingerprint	Available Cyanide	Dissolved Metals
GROUNDWATER SAMPLES									
MW-1	MW-1	NA	X	X	X	X		X	X
MW-2	MW-2	NA	X	X	X	X		X	X
MW-3	MW-3	NA	X	X	X	X		X	X
MW-5	MW-5	NA	X	X	X	X		X	X
M W-6	M W-7	NA	X	X	X	X		X	X
MW-7A	MW-7A	NA	X	X	X	X		X	X
MW-7B	MW-7B	NA	X	X	X	X		X	
MW-T3	MW-T3	NA	X	X	X	X	X	X	X
MW-T300	MW-T300*	NA	X	X	X	X		X	X

* Indicates a duplicate sample.
BP - Beneath pipe
IH - Inside Holder
OH - Outside Holder

Table 3
Validated Groundwater Analytical Data
Detected Compound Summary
Ceder Stret

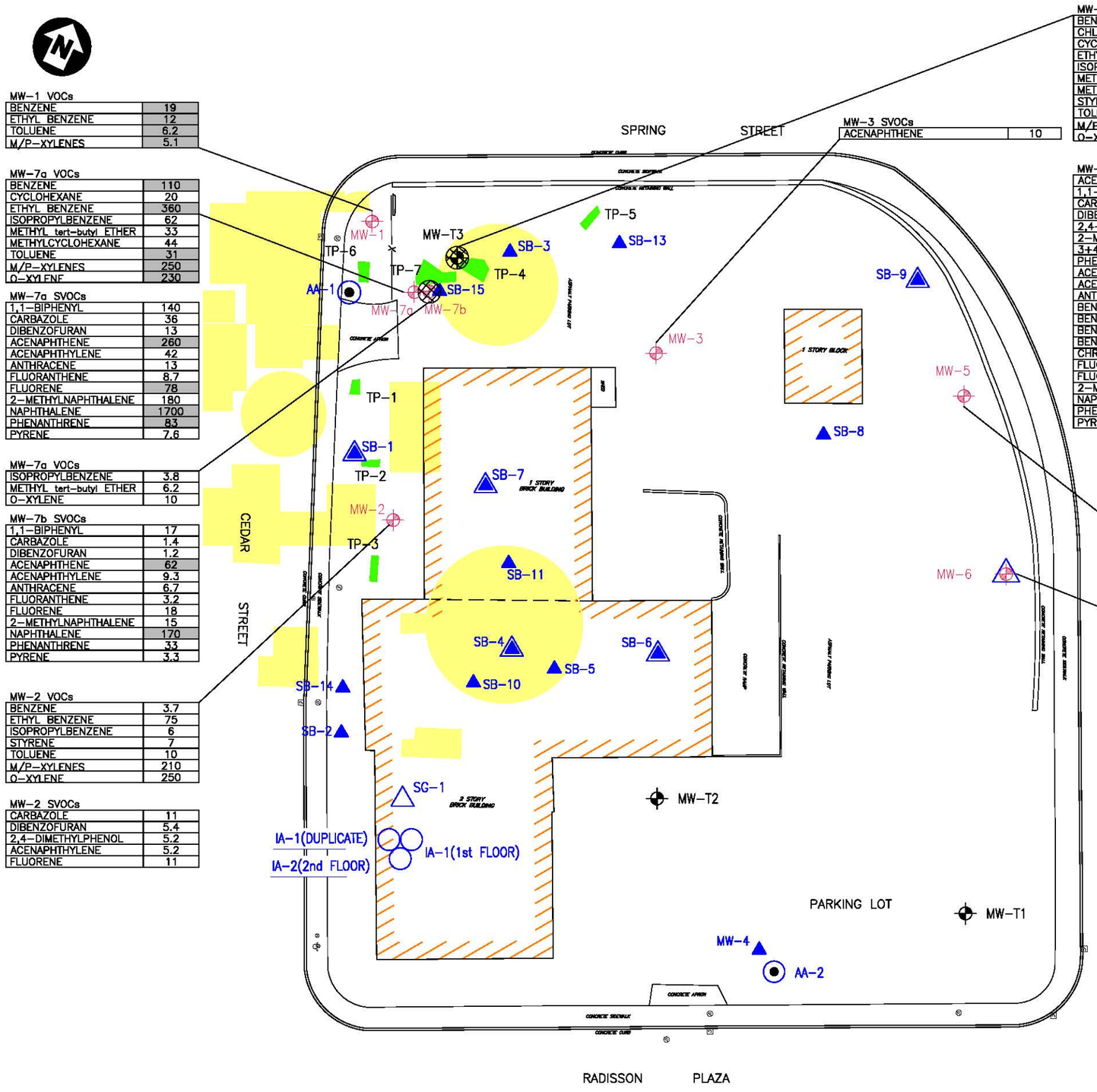
Consolidated Edison Cedar Street Validated Groundwater Analytical Data Detected Compound Summary		NYSDEC Class GA Groundwater Standards/Guidance Values (1)	Sample ID: Lab Sample Ids: Source: SDG: Matrix: Sampled: Validated:	MW-1 A1539-01 Chemtech A1539 WATER 2/16/2009 4/9/2009	MW-2 A1539-02 Chemtech A1539 WATER 2/16/2009 4/9/2009	MW-3 A1539-03 Chemtech A1539 WATER 2/16/2009 4/9/2009	MW-5 A1555-03 Chemtech A1555 WATER 2/17/2009 4/9/2009	MW-6 A1555-02 Chemtech A1555 WATER 2/17/2009 4/9/2009	MW-7A A1539-05 Chemtech A1539 WATER 2/16/2009 4/9/2009	MW-7B A1539-06 Chemtech A1539 WATER 2/16/2009 4/9/2009	MW-T3 A1555-04 Chemtech A1555 WATER 2/17/2009 4/9/2009	Dup of MW-T3 MW-T300 A1555-07 Chemtech A1555 WATER 2/17/2009 4/9/2009
CAS NO.	COMPOUND											
	VOLATILES		ug/L									
71-43-2	Benzene	1	ug/L	19	3.7 J	ND	ND	ND	110	ND	6700	7300
74-87-3	Chloromethane	5	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	4.2 J
110-82-7	Cyclohexane	--	ug/L	ND	ND	ND	ND	ND	20	ND	ND	5.9 J
100-41-4	Ethyl Benzene	5	ug/L	12	75	ND	ND	ND	360	ND	2600	2600
98-82-8	Isopropylbenzene	5	ug/L	ND	6	ND	ND	ND	62	3.8 J	55	56 J
1634-04-4	Methyl tert-butyl Ether	10	ug/L	ND	ND	ND	ND	ND	33	6.2	170	100 J
108-87-2	Methylcyclohexane	--	ug/L	ND	ND	ND	ND	ND	44	ND	ND J	12 J
100-42-5	Styrene	5	ug/L	ND	7	ND	ND	ND	ND	ND	54	54 J
108-88-3	Toluene	5	ug/L	6.2	10	ND	ND	ND	31	ND	1700	1800
136777-61-2	m/p-Xylenes	5	ug/L	5.1 J	210	ND	ND	ND	250	ND	990	1100
1330-20-7	o-Xylene	5	ug/L	ND	250	ND	ND	ND	230	10	560	580
	Total VOCs	--	**ug/L**	**42.3**	**561.7**	**ND**	**ND**	**ND**	**1140**	**20**	**12829**	**13612.1**
	SEMIVOLATILES											
98-86-2	Acetophenone	--	ug/L	ND	ND	ND	ND	ND	ND	ND	ND J	42 J
92-52-4	1,1-Biphenyl	--	ug/L	ND	ND	ND	ND	ND	140	17	53	77
117-81-7	Bis(2-ethylhexyl)phthalate	10 (G)	ug/L	ND	ND	ND	2.4 J	ND	ND	ND	ND	ND
86-74-8	Carbazole	--	ug/L	ND	11 J	ND	ND	ND	36 J	1.4 J	2.8 J	3.2 J
132-64-9	Dibenzofuran	--	ug/L	ND	5.4 J	ND	ND	ND	13 J	1.2 J	ND J	1.2 J
105-67-9	2,4-Dimethylphenol	1	ug/L	ND	5.2 J	ND	ND	ND	ND	ND	35 J	21 J
50-32-8	2-Methylphenol	1	ug/L	ND	ND	ND	ND	ND	ND	ND	6 J	13 J
87-86-5	3+4-Methylphenols	1	ug/L	ND	ND	ND	ND	ND	ND	ND	14 J	17
108-95-2	Phenol	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND J	20 J
	PAHs											
83-32-9	Acenaphthene	20 (G)	ug/L	ND	ND	10 J	ND	ND	260	62	120	200
208-96-8	Acenaphthylene	--	ug/L	ND	5.2 J	ND	ND	ND	42 J	9.3 J	25	37
120-12-7	Anthracene	50 (G)	ug/L	ND	ND	ND	ND	ND	13 J	6.7 J	6.1 J	7.9 J
120-12-7	Benzo(a)anthracene	0.002 (G)	ug/L	ND	ND	ND	ND	ND	ND	ND	1.7 J	2.1 J
50-32-8	Benzo(a)pyrene	0 ND	ug/L	ND	ND	ND	ND	ND	ND	ND	1.4 J	1.7 J
205-99-2	Benzo(b)fluoranthene	0.002 (G)	ug/L	ND	ND	ND	ND	ND	ND	ND	1.4 J	1.8 J
191-24-2	Benzo(g,h,i)perylene	--	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J
218-01-9	Chrysene	0.002 (G)	ug/L	ND	ND	ND	ND	ND	ND	ND	1.4 J	1.9 J
206-44-0	Fluoranthene	50 (G)	ug/L	ND	ND	ND	ND	ND	8.7 J	3.2 J	5 J	5.1 J
86-73-7	Fluorene	50 (G)	ug/L	ND	11 J	ND	1.6 J	ND	78	18	13 J	28 J
91-57-6	2-Methylnaphthalene	--	ug/L	ND	ND	ND	19	25	180	15	330	380
91-20-3	Naphthalene	10 (G)	ug/L	ND	ND	ND	ND	4 J	1700	170	7100	7800
85-01-8	Phenanthrene	50 (G)	ug/L	ND	ND	ND	2 J	ND	83	33	27 J	29
129-00-0	Pyrene	50 (G)	ug/L	ND	ND	ND	ND	ND	7.6 J	3.3 J	5 J	6.2 J
	Total PAHs			ND	16.2	10	22.6	29	2372.3	320.5	7637	8502
	Total SVOCs			**ND**	**37.8**	**10**	**25**	**29**	**2561**	**340**	**7748**	**8696**

Notes:
(1) NYSDEC TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values (October 1998).
(2) -- indicates no standard or guidance value is available.
(3) (G) indicates guidance value.
(4) ND indicated compound was not detected.
(5) J indicates an estimated concentration.
(6) Shaded values exceed NYSDEC Class GA Groundwater Standards and Guidance Values.

Table 3
Validated Groundwater Analytical Data
Detected Compound Summary
Ceder Stret

Consolidated Edison Cedar Street Validated Groundwater Analytical Data Detected Compound Summary		NYSDEC Class GA Groundwater Standards/Guidance Values (1)	Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MW-1 A1539-01 Chemtech A1539 WATER 2/16/2009 4/9/2009	MW-2 A1539-02 Chemtech A1539 WATER 2/16/2009 4/9/2009	MW-3 A1539-03 Chemtech A1539 WATER 2/16/2009 4/9/2009	MW-5 A1555-03 Chemtech A1555 WATER 2/17/2009 4/9/2009	MW-6 A1555-02 Chemtech A1555 WATER 2/17/2009 4/9/2009	MW-7A A1539-05 Chemtech A1539 WATER 2/16/2009 4/9/2009	MW-7B A1539-06 Chemtech A1539 WATER 2/16/2009 4/9/2009	MW-T3 A1555-04 Chemtech A1555 WATER 2/17/2009 4/9/2009	Dup of MW-T3 MW-T300 A1555-07 Chemtech A1555 WATER 2/17/2009 4/9/2009
CAS NO.	COMPOUND											
	INORGANICS		ug/L									
7429-90-5	Aluminum	--	ug/L	84900	56500	46700	19800	85700	ND	ND	160 J	410 J
7440-38-2	Arsenic	25	ug/L	ND	4.58 J	ND	ND	7.51 J	ND	ND	ND	ND
7440-39-3	Barium	1000		1090	704	645	339	986	ND	ND	244	247
7440-41-7	Beryllium	3	ug/L	3.25	2.08 J	2.03 J	0.78 J	2.97 J	ND	ND	ND	ND
7440-43-9	Cadmium	5	ug/L	1.39 J	0.81 J	0.73 J	1.26 J	0.88 J	ND	ND	ND	ND
7440-70-2	Calcium	--	ug/L	ND	ND	ND	154000	125000	ND	ND	192000	191000
7440-47-3	Chromium	50	ug/L	225	121	71.5	131	155	1.91 J	1.85 J	ND	ND
7440-48-4	Cobalt	--	ug/L	53.6	36	34.5	12.6 J	63.1	ND	ND	10.9 J	15.2
7440-50-8	Copper	200	ug/L	185	171	172	109	365	ND	ND	16.4	25.8
7439-89-6	Iron	300	ug/L	ND	ND	ND	38300 J	146000 J	ND	ND	62200 J	62700 J
7439-92-1	Lead	25	ug/L	87	152	77.4	268	276	6.45	6.05	10	10.3
7439-95-4	Magnesium	35000 (G)	ug/L	41000	44200	37400	37500	37100	53000	52900	57900	57800
7439-96-5	Manganese	300	ug/L	ND	ND	ND	2030 J	3450 J	ND	ND	4870 J	4860 J
7439-97-6	Mercury	0.7	ug/L	ND	0.19 J	0.35	0.24	0.42	ND	ND	ND	ND
7440-02-0	Nickel	100	ug/L	174	103	76.3	249	188	ND	ND	5.99 J	7.01 J
7440-09-7	Potassium	--	ug/L	40400	38300	38800	43000	44300	ND	ND	24800	24700
7782-49-2	Selenium	10	ug/L	6.77 J	ND	ND	ND	ND	ND	ND	ND	ND
7440-23-5	Sodium	20000	ug/L	ND	ND	ND	105000	31300	ND	ND	75400	74700
7440-28-0	Thallium	0.5	ug/L	13 J	5.63 J	ND	ND	4.15 J	ND	ND	ND	ND
7440-62-2	Vanadium	--	ug/L	204	127	82.2	51.9	197	ND	ND	ND	6.17 J
7440-66-6	Zinc	2000 (G)	ug/L	279	200	191	513	472	ND	ND	20.7	19.2 J
57-12-5	Cyanide	200	ug/L	0.153	0.044	0.037	ND	ND	0.114	ND	0.059	0.055
	DISSOLVED METALS											
7429-90-5	Aluminum	--	ug/L	1880	803	635	1120	156	45 J		15.8 J	17.5 J
7440-39-3	Barium	1000	ug/L	132	123	124	145	71.4	72		182	190
7440-70-2	Calcium	--	ug/L	136000	144000	142000	145000	107000	262000		187000	181000
7440-47-3	Chromium	50	ug/L	4.71 J	1.77 J	1.51 J	7.98	ND	ND		ND	ND
7440-50-8	Copper	200	ug/L	ND	ND	ND	8.24 J	ND	ND		7.95 J	8.7 J
7439-89-6	Iron	300	ug/L	2910	1730	784	1590	6090	26000		49400	50900
7439-92-1	Lead	25	ug/L	5.92 J	5.76 J	3.2 J	17	3.85 J	5.81 J		9.07	7.13
7439-95-4	Magnesium	35000 (G)	ug/L	7810	24500	21100	30300	9300	6560		56800	54900
7439-96-5	Manganese	300	ug/L	79.9	5540	8550	1450	1170	2330		4740	4620
7440-02-0	Nickel	100	ug/L	4.2 J	32.2	6.86 J	50	ND	ND		4.78 J	4.5 J
7440-09-7	Potassium	--	ug/L	4390	14800	14400	35300	9280	6970		24100	23700
7782-49-2	Selenium	10	ug/L	14.3	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U		4.8 U	4.8 U
7440-23-5	Sodium	20000	ug/L	12300	49700	78900	104000	30700	43300		73500	72800
7440-66-6	Zinc	2000 (G)	ug/L	18.9 J	15 J	18.4 J	120	12.4 J	13.3 J		20.3	20

Notes:
(1) NYSDEC TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values (October 1998).
(2) -- indicates no standard or guidance value is available.
(3) (G) indicates guidance value.
(4) ND indicated compound was not detected.
(5) J indicates an estimated concentration.
(6) Shaded values exceed NYSDEC Class GA Groundwater Standards and Guidance Values.



MW-1 VOCs

BENZENE	19
ETHYL BENZENE	12
TOLUENE	6.2
M/P-XYLENES	5.1

MW-7a VOCs

BENZENE	110
CYCLOHEXANE	20
ETHYL BENZENE	360
ISOPROPYLBENZENE	62
METHYL tert-butyl ETHER	33
METHYLCYCLOHEXANE	44
TOLUENE	31
M/P-XYLENES	250
O-XYLENE	230

MW-7a SVOCs

1,1-BIPHENYL	140
CARBAZOLE	36
DIBENZOFURAN	13
ACENAPHTHENE	260
ACENAPHTHYLENE	42
ANTHRACENE	13
FLUORANTHENE	8.7
FLUORENE	78
2-METHYLNAPHTHALENE	180
NAPHTHALENE	1700
PHENANTHRENE	83
PYRENE	7.6

MW-7a VOCs

ISOPROPYLBENZENE	3.8
METHYL tert-butyl ETHER	6.2
O-XYLENE	10

MW-7b SVOCs

1,1-BIPHENYL	17
CARBAZOLE	1.4
DIBENZOFURAN	1.2
ACENAPHTHENE	62
ACENAPHTHYLENE	9.3
ANTHRACENE	6.7
FLUORANTHENE	3.2
FLUORENE	18
2-METHYLNAPHTHALENE	15
NAPHTHALENE	170
PHENANTHRENE	33
PYRENE	3.3

MW-2 VOCs

BENZENE	3.7
ETHYL BENZENE	75
ISOPROPYLBENZENE	6
STYRENE	7
TOLUENE	10
M/P-XYLENES	210
O-XYLENE	250

MW-2 SVOCs

CARBAZOLE	11
DIBENZOFURAN	5.4
2,4-DIMETHYLPHENOL	5.2
ACENAPHTHYLENE	5.2
FLUORENE	11

MW-3 SVOCs

ACENAPHTHENE	10

MW-T3 VOCs

		DUP.
BENZENE	6700	7300
CHLOROMETHANE	ND	4.2
CYCLOHEXANE	ND	5.9
ETHYL BENZENE	2600	2600
ISOPROPYLBENZENE	55	56
METHYL tert-butyl ETHER	170	100
METHYLCYCLOHEXANE	ND	12
STYRENE	54	54
TOLUENE	1700	1800
M/P-XYLENES	990	1100
O-XYLENE	560	580

MW-T3 SVOCs

		DUP.
ACETOPHENONE	ND	42
1,1-BIPHENYL	53	77
CARBAZOLE	2.8	3.2
DIBENZOFURAN	ND	1.2
2,4-DIMETHYLPHENOL	35	21
2-METHYLPHENOL	6	13
3+4-METHYLPHENOLS	14	17
PHENOL	ND	20
ACENAPHTHENE	120	200
ACENAPHTHYLENE	25	37
ANTHRACENE	6.1	7.9
BENZO(a)ANTHRACENE	1.7	2.1
BENZO(a)PYRENE	1.4	1.7
BENZO(b)FLUORANTHENE	1.4	1.8
BENZO(g,h,i)PERYLENE	ND	1.3
CHRYSENE	1.4	1.9
FLUORANTHENE	5	5.1
FLUORENE	13	28
2-METHYLNAPHTHALENE	330	380
NAPHTHALENE	7100	7800
PHENANTHRENE	27	29
PYRENE	5	6.2

MW-5 SVOCs

BIS(2-ETHYLHEXYL)PHTHALATE	2.4
FLUORENE	1.6
2-METHYLNAPHTHALENE	19
PHENANTHRENE	2

MW-6 SVOCs

2-METHYLNAPHTHALENE	25
NAPHTHALENE	4

LEGEND:

- SOIL BORING LOCATION
- MONITORING WELL
- HISTORIC MONITORING WELL
- TEST PIT LOCATION
- APPROXIMATE LOCATION OF FORMER MGP STRUCTURES
- SOIL GAS LOCATION
- INDOOR AIR SAMPLING LOCATION
- AMBIENT AIR SAMPLING LOCATION
- NAPL OBSERVED

NOTES:

1. ALL CONCENTRATIONS ARE IN PARTS PER BILLION (ppb).
2. SHADED VALUES EXCEED NYSDEC GROUNDWATER QUALITY STANDARDS OR GUIDANCE VALUES (TOGS 1.1.1).
3. VOCs WERE NOT DETECTED IN GROUNDWATER SAMPLES COLLECTED FROM MW-3, MW-5 AND MW-6.
4. SVOCs WERE NOT DETECTED IN THE GROUNDWATER SAMPLE COLLECTED FROM MW-1.
5. ND = NOT DETECTED
6. HISTORIC MONITORING WELLS MW-T1 AND MW-T2 ARE DAMAGED AND NOT USEABLE.
7. REFUSAL WAS ENCOUNTERED WITHIN THE TOP 2 FT AT LOCATION MW-4. THEREFORE A MONITORING WELL COULD NOT BE INSTALLED.

50 25 0 50 100

SCALE: 1"=50'

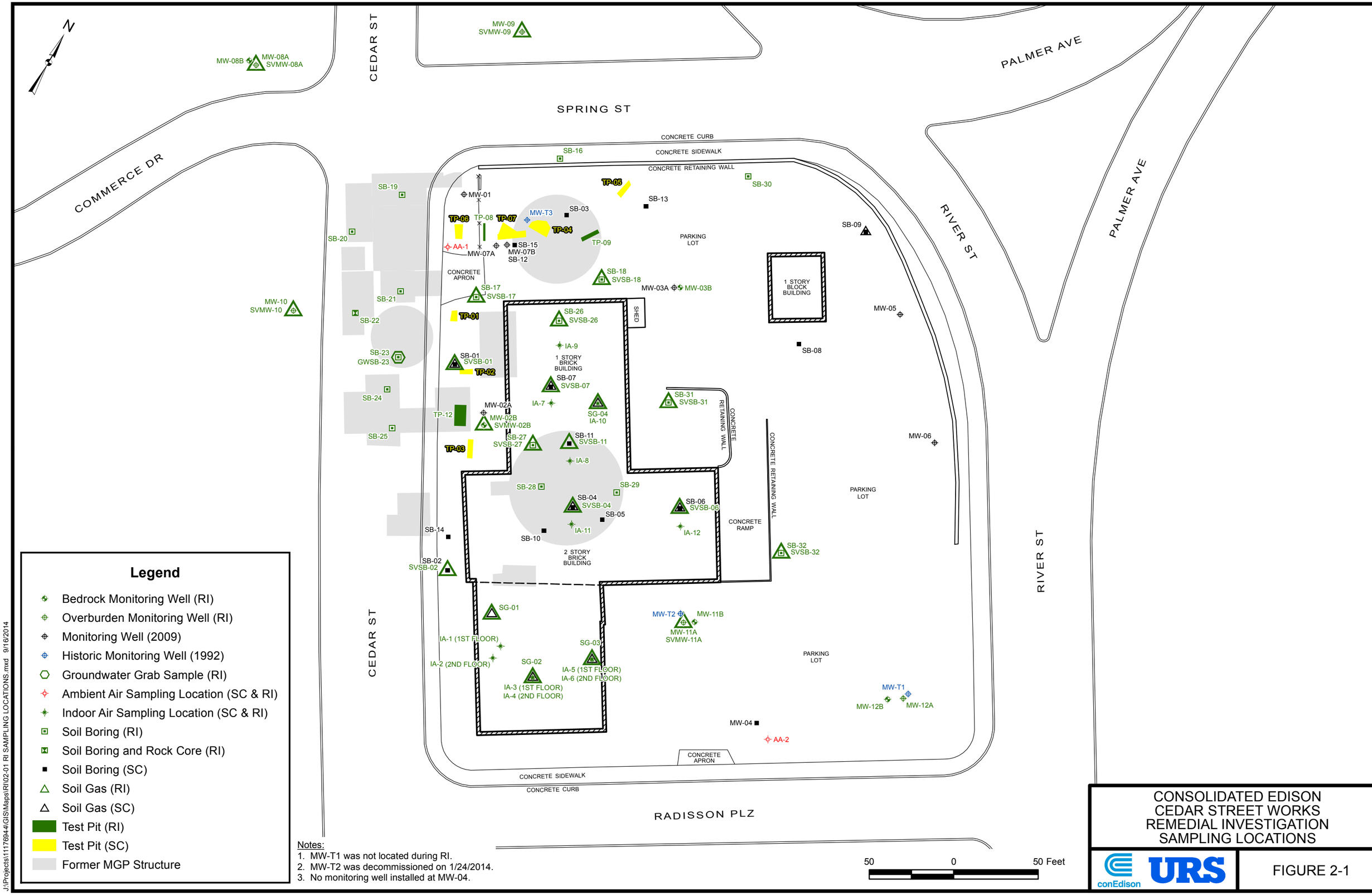
FIGURE 7

CONSOLIDATED EDISON
CEDAR STREET WORKS
NEW ROCHELLE, NY

SUMMARY OF VOCs & SVOCs DETECTED IN GROUNDWATER

PARSONS
290 ELWOOD DAVIS ROAD, SUITE 312, LIVERPOOL, N.Y. 13088, PHONE: 315-451-9560

FILE NAME: P:\CONED\442098 - CEDAR STREET\CAD\DWGS FROM BOSTON\442098-SK001.DWG
PLOT DATE: 4/16/2009 4:23 PM PLOTTED BY: WINTERS, CHRIS



Legend

- Bedrock Monitoring Well (RI)
- Overburden Monitoring Well (RI)
- Monitoring Well (2009)
- Historic Monitoring Well (1992)
- Groundwater Grab Sample (RI)
- Ambient Air Sampling Location (SC & RI)
- Indoor Air Sampling Location (SC & RI)
- Soil Boring (RI)
- Soil Boring and Rock Core (RI)
- Soil Boring (SC)
- Soil Gas (RI)
- Soil Gas (SC)
- Test Pit (RI)
- Test Pit (SC)
- Former MGP Structure

Notes:
1. MW-T1 was not located during RI.
2. MW-T2 was decommissioned on 1/24/2014.
3. No monitoring well installed at MW-04.

50 0 50 Feet

CONSOLIDATED EDISON CEDAR STREET WORKS REMEDIAL INVESTIGATION SAMPLING LOCATIONS

conEdison URS

FIGURE 2-1

J:\Projects\11176944\GIS\Maps\RI\02-01 RI SAMPLING LOCATIONS.mxd 9/16/2014

TABLE 4-7
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-01	MW-02	MW-03	MW-05	MW-06
Sample ID			MW-01	MW-02	MW-03	MW-05	MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/16/09	02/16/09	02/16/09	02/17/09	02/17/09
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Benzene	UG/L	1	19	3.7 J			
Chloromethane	UG/L	5					
Cyclohexane	UG/L	-					
Ethylbenzene	UG/L	5	12	75			
Isopropylbenzene	UG/L	5		6			
Methyl tert-butyl ether	UG/L	10					
Methylcyclohexane	UG/L	-					
Styrene	UG/L	5		7			
Toluene	UG/L	5	6.2	10			
Xylene (total)	UG/L	5	5.1 J	460			
Total BTEX	UG/L	-	42.3	548.7	ND	ND	ND
Total Volatile Organic Compounds	UG/L	-	42.3	561.7	ND	ND	ND
Semivolatile Organic Compounds							
1,1'-Biphenyl	UG/L	5					
2,4-Dimethylphenol	UG/L	50		5.2 J			
2-Methylnaphthalene	UG/L	-				19	25
2-Methylphenol (o-cresol)	UG/L	1					
3&4-Methylphenol (m,p-cresol)	UG/L	1					
Acenaphthene	UG/L	20			10 J		
Acenaphthylene	UG/L	-		5.2 J			
Acetophenone	UG/L	-					
Anthracene	UG/L	50					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-7
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-01	MW-02	MW-03	MW-05	MW-06
Sample ID			MW-01	MW-02	MW-03	MW-05	MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/16/09	02/16/09	02/16/09	02/17/09	02/17/09
Parameter	**Units**	**Criteria***					
Semivolatile Organic Compounds							
Benzo(a)anthracene	UG/L	0.002					
Benzo(a)pyrene	UG/L	ND					
Benzo(b)fluoranthene	UG/L	0.002					
Benzo(g,h,i)perylene	UG/L	-					
bis(2-Ethylhexyl)phthalate	UG/L	5				2.4 J	
Carbazole	UG/L	-		11 J			
Chrysene	UG/L	0.002					
Dibenzofuran	UG/L	-		5.4 J			
Fluoranthene	UG/L	50					
Fluorene	UG/L	50		11 J		1.6 J	
Naphthalene	UG/L	10					4 J
Phenanthrene	UG/L	50				2 J	
Phenol	UG/L	1					
Pyrene	UG/L	50					
Total Polynuclear Aromatic Hydrocarbons	UG/L	-	ND	16.2	10	22.6	29
Total Semivolatile Organic Compounds	UG/L	-	ND	37.8	10	25	29
Metals							
Aluminum	UG/L	-	84,900	56,500	46,700	19,800	85,700
Arsenic	UG/L	25		4.58 J			7.51 J
Barium	UG/L	1000	1,090	704	645	339	986
Beryllium	UG/L	3	3.25	2.08 J	2.03 J	0.78 J	2.97 J
Cadmium	UG/L	5	1.39 J	0.81 J	0.73 J	1.26 J	0.88 J

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

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TABLE 4-7
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CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-01	MW-02	MW-03	MW-05	MW-06
Sample ID			MW-01	MW-02	MW-03	MW-05	MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/16/09	02/16/09	02/16/09	02/17/09	02/17/09
Parameter	**Units**	**Criteria***					
Metals							
Calcium	UG/L	-				154,000	125,000
Chromium	UG/L	50	225	121	71.5	131	155
Cobalt	UG/L	-	53.6	36	34.5	12.6 J	63.1
Copper	UG/L	200	185	171	172	109	365
Iron	UG/L	300				38,300 J	146,000 J
Lead	UG/L	25	87	152	77.4	268	276
Magnesium	UG/L	35000	41,000	44,200	37,400	37,500	37,100
Manganese	UG/L	300				2,030 J	3,450 J
Mercury	UG/L	0.7		0.19 J	0.35	0.24	0.42
Nickel	UG/L	100	174	103	76.3	249	188
Potassium	UG/L	-	40,400	38,300	38,800	43,000	44,300
Selenium	UG/L	10	6.77 J				
Sodium	UG/L	20000				105,000	31,300
Thallium	UG/L	0.5	13 J	5.63 J			4.15 J
Vanadium	UG/L	-	204	127	82.2	51.9	197
Zinc	UG/L	2000	279	200	191	513	472
Dissolved Metals							
Aluminum	UG/L	-	1,880	803	635	1,120	156
Barium	UG/L	-	132	123	124	145	71.4
Calcium	UG/L	-	136,000	144,000	142,000	145,000	107,000
Chromium	UG/L	-	4.71 J	1.77 J	1.51 J	7.98	
Copper	UG/L	-				8.24 J	

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

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- = No standard, criteria or guidance value.

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TABLE 4-7
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CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-01	MW-02	MW-03	MW-05	MW-06
Sample ID			MW-01	MW-02	MW-03	MW-05	MW-06
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			02/16/09	02/16/09	02/16/09	02/17/09	02/17/09
Parameter	**Units**	**Criteria***					
Dissolved Metals							
Iron	UG/L	300	2,910	1,730	784	1,590	6,090
Lead	UG/L	-	5.92 J	5.76 J	3.2 J	17	3.85 J
Magnesium	UG/L	-	7,810	24,500	21,100	30,300	9,300
Manganese	UG/L	-	79.9	5,540	8,550	1,450	1,170
Nickel	UG/L	-	4.2 J	32.2	6.86 J	50	
Potassium	UG/L	-	4,390	14,800	14,400	35,300	9,280
Selenium	UG/L	-	14.3				
Sodium	UG/L	-	12,300	49,700	78,900	104,000	30,700
Zinc	UG/L	-	18.9 J	15 J	18.4 J	120	12.4 J
Miscellaneous Parameters							
Cyanide, Total	UG/L	200	0.153	0.044	0.037		

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

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- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-7
SUMMARY OF DETECTED COMPOUNDS IN SITE CHARACTERIZATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-07A	MW-07B	MW-T3	MW-T3
Sample ID			MW-07A	MW-07B	MW-T3	MW-T3 DUP
Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-
Date Sampled			02/16/09	02/16/09	02/17/09	02/17/09
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)
Volatile Organic Compounds						
Benzene	UG/L	1	110		6,700	7,300
Chloromethane	UG/L	5				4.2 J
Cyclohexane	UG/L	-	20			5.9 J
Ethylbenzene	UG/L	5	360		2,600	2,600
Isopropylbenzene	UG/L	5	62	3.8 J	55	56 J
Methyl tert-butyl ether	UG/L	10	33	6.2	170	100 J
Methylcyclohexane	UG/L	-	44			12 J
Styrene	UG/L	5			54	54 J
Toluene	UG/L	5	31		1,700	1,800
Xylene (total)	UG/L	5	480	10	1,550	1,680
Total BTEX	UG/L	-	981	10	12,550	13,380
Total Volatile Organic Compounds	UG/L	-	1,140	20	12,829	13,612.1
Semivolatile Organic Compounds						
1,1'-Biphenyl	UG/L	5	140	17	53	77
2,4-Dimethylphenol	UG/L	50			35 J	21 J
2-Methylnaphthalene	UG/L	-	180	15	330	380
2-Methylphenol (o-cresol)	UG/L	1			6 J	13 J
3&4-Methylphenol (m,p-cresol)	UG/L	1			14 J	17
Acenaphthene	UG/L	20	260	62	120	200
Acenaphthylene	UG/L	-	42 J	9.3 J	25	37
Acetophenone	UG/L	-				42 J
Anthracene	UG/L	50	13 J	6.7 J	6.1 J	7.9 J

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

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TABLE 4-7
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CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-07A	MW-07B	MW-T3	MW-T3
Sample ID			MW-07A	MW-07B	MW-T3	MW-T3 DUP
Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-
Date Sampled			02/16/09	02/16/09	02/17/09	02/17/09
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)
Semivolatile Organic Compounds						
Benzo(a)anthracene	UG/L	0.002			1.7 J	2.1 J
Benzo(a)pyrene	UG/L	ND			1.4 J	1.7 J
Benzo(b)fluoranthene	UG/L	0.002			1.4 J	1.8 J
Benzo(g,h,i)perylene	UG/L	-				1.3 J
bis(2-Ethylhexyl)phthalate	UG/L	5				
Carbazole	UG/L	-	36 J	1.4 J	2.8 J	3.2 J
Chrysene	UG/L	0.002			1.4 J	1.9 J
Dibenzofuran	UG/L	-	13 J	1.2 J		1.2 J
Fluoranthene	UG/L	50	8.7 J	3.2 J	5 J	5.1 J
Fluorene	UG/L	50	78	18	13 J	28 J
Naphthalene	UG/L	10	1,700	170	7,100	7,800
Phenanthrene	UG/L	50	83	33	27 J	29
Phenol	UG/L	1				20 J
Pyrene	UG/L	50	7.6 J	3.3 J	5 J	6.2 J
Total Polynuclear Aromatic Hydrocarbons	UG/L	-	2,372.3	320.5	7,637	8,502
Total Semivolatile Organic Compounds	UG/L	-	2,561.3	340.1	7,747.8	8,696.4
Metals						
Aluminum	UG/L	-			160 J	410 J
Arsenic	UG/L	25				
Barium	UG/L	1000			244	247
Beryllium	UG/L	3				
Cadmium	UG/L	5				

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

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TABLE 4-7
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CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-07A	MW-07B	MW-T3	MW-T3
Sample ID			MW-07A	MW-07B	MW-T3	MW-T3 DUP
Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-
Date Sampled			02/16/09	02/16/09	02/17/09	02/17/09
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)
Metals						
Calcium	UG/L	-			192,000	191,000
Chromium	UG/L	50	1.91 J	1.85 J		
Cobalt	UG/L	-			10.9 J	15.2
Copper	UG/L	200			16.4	25.8
Iron	UG/L	300			62,200 J	62,700 J
Lead	UG/L	25	6.45	6.05	10	10.3
Magnesium	UG/L	35000	53,000	52,900	57,900	57,800
Manganese	UG/L	300			4,870 J	4,860 J
Mercury	UG/L	0.7				
Nickel	UG/L	100			5.99 J	7.01 J
Potassium	UG/L	-			24,800	24,700
Selenium	UG/L	10				
Sodium	UG/L	20000			75,400	74,700
Thallium	UG/L	0.5				
Vanadium	UG/L	-				6.17 J
Zinc	UG/L	2000			20.7	19.2 J
Dissolved Metals						
Aluminum	UG/L	-	45 J		15.8 J	17.5 J
Barium	UG/L	-	72		182	190
Calcium	UG/L	-	262,000		187,000	181,000
Chromium	UG/L	-				
Copper	UG/L	-			7.95 J	8.7 J

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

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TABLE 4-7
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CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-07A	MW-07B	MW-T3	MW-T3
Sample ID			MW-07A	MW-07B	MW-T3	MW-T3 DUP
Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-
Date Sampled			02/16/09	02/16/09	02/17/09	02/17/09
Parameter	**Units**	**Criteria***				Field Duplicate (1-1)
Dissolved Metals						
Iron	UG/L	300	26,000		49,400	50,900
Lead	UG/L	-	5.81 J		9.07	7.13
Magnesium	UG/L	-	6,560		56,800	54,900
Manganese	UG/L	-	2,330		4,740	4,620
Nickel	UG/L	-			4.78 J	4.5 J
Potassium	UG/L	-	6,970		24,100	23,700
Selenium	UG/L	-				
Sodium	UG/L	-	43,300		73,500	72,800
Zinc	UG/L	-	13.3 J		20.3	20
Miscellaneous Parameters						
Cyanide, Total	UG/L	200	0.114		0.059	0.055

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- = No standard, criteria or guidance value.

J - The reported concentration is an estimated value. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-8
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN SITE CHARACTERIZATION GROUNDWATER SAMPLES CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value
					Min	Max	Avg		
Volatile Organic Compounds									
Benzene	UG/L	1	9	5	3.70	7,300	2,827	5	MW-T3
Chloromethane	UG/L	5	9	1	4.20	4.20	4.20	0	MW-T3
Cyclohexane	UG/L	-	9	2	5.90	20.00	12.95	0	MW-07A
Ethylbenzene	UG/L	5	9	5	12.00	2,600	1,129	5	MW-T3
Isopropylbenzene	UG/L	5	9	5	3.80	62.00	36.56	4	MW-07A
Methyl tert-butyl ether	UG/L	10	9	4	6.20	170.0	77.30	3	MW-T3
Methylcyclohexane	UG/L	-	9	2	12.00	44.00	28.00	0	MW-07A
Styrene	UG/L	5	9	3	7.00	54.00	38.33	3	MW-T3
Toluene	UG/L	5	9	5	6.20	1,800	709.4	5	MW-T3
Xylene (total)	UG/L	5	9	6	5.10	1,680	697.5	6	MW-T3
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/L	5	9	4	17.00	140.0	71.75	4	MW-07A
2,4-Dimethylphenol	UG/L	50	9	3	5.20	35.00	20.40	0	MW-T3
2-Methylnaphthalene	UG/L	-	9	6	15.00	380.0	158.2	0	MW-T3
2-Methylphenol (o-cresol)	UG/L	1	9	2	6.00	13.00	9.50	2	MW-T3
3&4-Methylphenol (m,p-cresol)	UG/L	1	9	2	14.00	17.00	15.50	2	MW-T3
Acenaphthene	UG/L	20	9	5	10.00	260.0	130.4	4	MW-07A
Acenaphthylene	UG/L	-	9	5	5.20	42.00	23.70	0	MW-07A

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-8
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN SITE CHARACTERIZATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value
					Min	Max	Avg		
Semivolatile Organic Compounds									
Acetophenone	UG/L	-	9	1	42.00	42.00	42.00	0	MW-T3
Anthracene	UG/L	50	9	4	6.10	13.00	8.43	0	MW-07A
Benzo(a)anthracene	UG/L	0.002	9	2	1.70	2.10	1.90	2	MW-T3
Benzo(a)pyrene	UG/L	0	9	2	1.40	1.70	1.55	2	MW-T3
Benzo(b)fluoranthene	UG/L	0.002	9	2	1.40	1.80	1.60	2	MW-T3
Benzo(g,h,i)perylene	UG/L	-	9	1	1.30	1.30	1.30	0	MW-T3
bis(2-Ethylhexyl)phthalate	UG/L	5	9	1	2.40	2.40	2.40	0	MW-05
Carbazole	UG/L	-	9	5	1.40	36.00	10.88	0	MW-07A
Chrysene	UG/L	0.002	9	2	1.40	1.90	1.65	2	MW-T3
Dibenzofuran	UG/L	-	9	4	1.20	13.00	5.20	0	MW-07A
Fluoranthene	UG/L	50	9	4	3.20	8.70	5.50	0	MW-07A
Fluorene	UG/L	50	9	6	1.60	78.00	24.93	1	MW-07A
Naphthalene	UG/L	10	9	5	4.00	7,800	3,355	4	MW-T3
Phenanthrene	UG/L	50	9	5	2.00	83.00	34.80	1	MW-07A
Phenol	UG/L	1	9	1	20.00	20.00	20.00	1	MW-T3
Pyrene	UG/L	50	9	4	3.30	7.60	5.53	0	MW-07A
Metals									
Aluminum	UG/L	-	9	7	160.0	8.57E+04	4.20E+04	0	MW-06

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-8
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN SITE CHARACTERIZATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value
					Min	Max	Avg		
Metals									
Arsenic	UG/L	25	9	2	4.58	7.51	6.05	0	MW-06
Barium	UG/L	1000	9	7	244.0	1,090	607.9	1	MW-01
Beryllium	UG/L	3	9	5	0.780	3.25	2.22	1	MW-01
Cadmium	UG/L	5	9	5	0.730	1.39	1.01	0	MW-01
Calcium	UG/L	-	9	4	1.25E+05	1.92E+05	1.66E+05	0	MW-T3
Chromium	UG/L	50	9	7	1.85	225.0	101.0	5	MW-01
Cobalt	UG/L	-	9	7	10.90	63.10	32.27	0	MW-06
Copper	UG/L	200	9	7	16.40	365.0	149.2	1	MW-06
Iron	UG/L	300	9	4	3.83E+04	1.46E+05	7.73E+04	4	MW-06
Lead	UG/L	25	9	9	6.05	276.0	99.24	5	MW-06
Magnesium	UG/L	35000	9	9	3.71E+04	5.79E+04	4.65E+04	9	MW-T3
Manganese	UG/L	300	9	4	2,030	4,870	3,803	4	MW-T3
Mercury	UG/L	0.7	9	4	0.190	0.420	0.300	0	MW-06
Nickel	UG/L	100	9	7	5.99	249.0	114.8	4	MW-05
Potassium	UG/L	-	9	7	2.47E+04	4.43E+04	3.63E+04	0	MW-06
Selenium	UG/L	10	9	1	6.77	6.77	6.77	0	MW-01
Sodium	UG/L	20000	9	4	3.13E+04	1.05E+05	7.16E+04	4	MW-05
Thallium	UG/L	0.5	9	3	4.15	13.00	7.59	3	MW-01
Vanadium	UG/L	-	9	6	6.17	204.0	111.4	0	MW-01

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-8
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN SITE CHARACTERIZATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value
					Min	Max	Avg		
Metals									
Zinc	UG/L	2000	9	7	19.20	513.0	242.1	0	MW-05
Dissolved Metals									
Aluminum	UG/L	-	9	8	15.80	1,880	584.0	0	MW-01
Barium	UG/L	-	9	8	71.40	190.0	129.9	0	MW-T3
Calcium	UG/L	-	9	8	1.07E+05	2.62E+05	1.63E+05	0	MW-07A
Chromium	UG/L	-	9	4	1.51	7.98	3.99	0	MW-05
Copper	UG/L	-	9	3	7.95	8.70	8.30	0	MW-T3
Iron	UG/L	300	9	8	784.0	5.09E+04	1.74E+04	8	MW-T3
Lead	UG/L	-	9	8	3.20	17.00	7.22	0	MW-05
Magnesium	UG/L	-	9	8	6,560	5.68E+04	2.64E+04	0	MW-T3
Manganese	UG/L	-	9	8	79.90	8,550	3,560	0	MW-03
Nickel	UG/L	-	9	6	4.20	50.00	17.09	0	MW-05
Potassium	UG/L	-	9	8	4,390	3.53E+04	1.66E+04	0	MW-05
Selenium	UG/L	-	9	1	14.30	14.30	14.30	0	MW-01
Sodium	UG/L	-	9	8	1.23E+04	1.04E+05	5.82E+04	0	MW-05
Zinc	UG/L	-	9	8	12.40	120.0	29.79	0	MW-05
Miscellaneous Parameters									
Cyanide, Total	UG/L	200	9	6	0.037	0.153	0.077	0	MW-01

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-9
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			GWSB-23	MW-01	MW-02A	MW-02B	MW-03A
Sample ID			SB-23 (13-14)	MW-1	MW-2A	MW-2B	MW-3A
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			13.0-14.0	-	-	-	-
Date Sampled			11/06/13	04/22/14	04/23/14	04/23/14	04/22/14
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,2,4-Trimethylbenzene	UG/L	-					
1,2-Dichloroethene (cis)	UG/L	5					
1,3,5-Trimethylbenzene (Mesitylene)	UG/L	-					
Benzene	UG/L	1	1,600				
Ethylbenzene	UG/L	5	630				
Isopropylbenzene	UG/L	5					
Methylcyclohexane	UG/L	-					
n-Propylbenzene	UG/L	-					
Toluene	UG/L	5					
Trichloroethene	UG/L	5				0.98 J	
Xylene (total)	UG/L	5	580 J		2.5 J		
Total BTEX	UG/L	-	2,810	ND	2.5	ND	ND
Total Volatile Organic Compounds	UG/L	-	2,810	ND	2.5	0.98	ND
Semivolatile Organic Compounds							
1,1'-Biphenyl	UG/L	5	59				
2-Methylnaphthalene	UG/L	-	920 DJ				
2-Methylphenol (o-cresol)	UG/L	1	6.4 J				
Acenaphthene	UG/L	20	460 DJ				
Acenaphthylene	UG/L	-	31				
Anthracene	UG/L	50	110 DJ				
Benzo(a)anthracene	UG/L	0.002	41				
Benzo(a)pyrene	UG/L	ND	41				

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- = No standard, criteria or guidance value.

Blank cell or ND - Not detected. D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

Only Detected Results Reported.

TABLE 4-9
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			GWSB-23	MW-01	MW-02A	MW-02B	MW-03A
Sample ID			SB-23 (13-14)	MW-1	MW-2A	MW-2B	MW-3A
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			13.0-14.0	-	-	-	-
Date Sampled			11/06/13	04/22/14	04/23/14	04/23/14	04/22/14
Parameter	**Units**	**Criteria***					
Semivolatile Organic Compounds							
Benzo(b)fluoranthene	UG/L	0.002	30				
Benzo(g,h,i)perylene	UG/L	-	21				
Benzo(k)fluoranthene	UG/L	0.002	17				
Carbazole	UG/L	-	13				
Chrysene	UG/L	0.002	39				
Dibenz(a,h)anthracene	UG/L	-	4.4 J				
Dibenzofuran	UG/L	-					
Di-n-butylphthalate	UG/L	50	1.3 J	1.0 J			
Fluoranthene	UG/L	50	120 DJ				
Fluorene	UG/L	50	150 DJ				
Indeno(1,2,3-cd)pyrene	UG/L	0.002	18				
Naphthalene	UG/L	10	4,300 D		1.8 J		
Phenanthrene	UG/L	50	410 DJ				
Pyrene	UG/L	50	170 DJ				
Total Polynuclear Aromatic Hydrocarbons	UG/L	-	6,882.4	ND	1.8	ND	ND
Total Semivolatile Organic Compounds	UG/L	-	6,962.1	1	1.8	ND	ND
Metals							
Aluminum	UG/L	-	30,700	3,680	11,700		1,160
Arsenic	UG/L	25	20.9				
Barium	UG/L	1000	1,260				
Beryllium	UG/L	3	3.8 J		0.53 J		
Cadmium	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- = No standard, criteria or guidance value.

Blank cell or ND - Not detected. D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

Only Detected Results Reported.

TABLE 4-9
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			GWSB-23	MW-01	MW-02A	MW-02B	MW-03A
Sample ID			SB-23 (13-14)	MW-1	MW-2A	MW-2B	MW-3A
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			13.0-14.0	-	-	-	-
Date Sampled			11/06/13	04/22/14	04/23/14	04/23/14	04/22/14
Parameter	**Units**	**Criteria***					
Metals							
Calcium	UG/L	-	322,000	127,000	155,000	166,000	190,000
Chromium	UG/L	50	86.7	9.5 J	22.6		3.1 J
Cobalt	UG/L	-		2.3 J		2.5 J	
Copper	UG/L	200	31.2	8.4 J	29.9 J		8.0 J
Iron	UG/L	300	275,000	5,470	16,600		1,450
Lead	UG/L	25	412		16.8		
Magnesium	UG/L	35000	51,200	8,810	22,700	63,700	26,100
Manganese	UG/L	300	2,980	80.4	687	1,070	2,660
Mercury	UG/L	0.7			0.071 J		
Nickel	UG/L	100	122				
Potassium	UG/L	-	63,400	4,050	10,700	9,380	14,200
Selenium	UG/L	10		12.1 J			
Sodium	UG/L	20000	1,250,000	27,500	71,000	164,000	623,000
Vanadium	UG/L	-	94.4	8.3 J			
Zinc	UG/L	2000	20,500				
Miscellaneous Parameters							
Cyanide, Total	UG/L	200			49.8		30.1

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- = No standard, criteria or guidance value.

Blank cell or ND - Not detected. D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

Only Detected Results Reported.

TABLE 4-9
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-03B	MW-05	MW-06	MW-07A	MW-07B
Sample ID			MW-3B	MW-5	MW-6	MW-7A	MW-7B
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/22/14	04/23/14	04/22/14	04/22/14	04/22/14
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,2,4-Trimethylbenzene	UG/L	-	16			260 D	4.1 J
1,2-Dichloroethene (cis)	UG/L	5					
1,3,5-Trimethylbenzene (Mesitylene)	UG/L	-	4.5 J				
Benzene	UG/L	1	5.1 J				
Ethylbenzene	UG/L	5	2.5 J			50	
Isopropylbenzene	UG/L	5	2.9 J			27	
Methylcyclohexane	UG/L	-				5.4 J	
n-Propylbenzene	UG/L	-				31	
Toluene	UG/L	5	3.2 J				
Trichloroethene	UG/L	5					1.4 J
Xylene (total)	UG/L	5	25			20	
Total BTEX	UG/L	-	35.8	ND	ND	70	ND
Total Volatile Organic Compounds	UG/L	-	59.2	ND	ND	393.4	5.5
Semivolatile Organic Compounds							
1,1'-Biphenyl	UG/L	5	6.1 J			34	
2-Methylnaphthalene	UG/L	-	26	1.7 J			
2-Methylphenol (o-cresol)	UG/L	1					
Acenaphthene	UG/L	20	41			170 D	
Acenaphthylene	UG/L	-	13			14	
Anthracene	UG/L	50	9.8 J			8.3 J	
Benzo(a)anthracene	UG/L	0.002					
Benzo(a)pyrene	UG/L	ND					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- = No standard, criteria or guidance value.

Blank cell or ND - Not detected. D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

Only Detected Results Reported.

TABLE 4-9
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-03B	MW-05	MW-06	MW-07A	MW-07B
Sample ID			MW-3B	MW-5	MW-6	MW-7A	MW-7B
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/22/14	04/23/14	04/22/14	04/22/14	04/22/14
Parameter	**Units**	**Criteria***					
Semivolatile Organic Compounds							
Benzo(b)fluoranthene	UG/L	0.002					
Benzo(g,h,i)perylene	UG/L	-					
Benzo(k)fluoranthene	UG/L	0.002					
Carbazole	UG/L	-				3.4 J	
Chrysene	UG/L	0.002					
Dibenz(a,h)anthracene	UG/L	-					
Dibenzofuran	UG/L	-	1.3 J			2.7 J	
Di-n-butylphthalate	UG/L	50		1.0 J	1.4 J		
Fluoranthene	UG/L	50	4.4 J			3.0 J	
Fluorene	UG/L	50	17			49	
Indeno(1,2,3-cd)pyrene	UG/L	0.002					
Naphthalene	UG/L	10	120 D			7.7 J	
Phenanthrene	UG/L	50	74			47	
Pyrene	UG/L	50	5.6 J			3.7 J	
Total Polynuclear Aromatic Hydrocarbons	UG/L	-	310.8	1.7	ND	302.7	ND
Total Semivolatile Organic Compounds	UG/L	-	318.2	2.7	1.4	342.8	ND
Metals							
Aluminum	UG/L	-	70.4 J			939	
Arsenic	UG/L	25					
Barium	UG/L	1000	206	225			
Beryllium	UG/L	3					
Cadmium	UG/L	5		1.7 J			

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- = No standard, criteria or guidance value.

Blank cell or ND - Not detected. D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

Only Detected Results Reported.

TABLE 4-9
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-03B	MW-05	MW-06	MW-07A	MW-07B
Sample ID			MW-3B	MW-5	MW-6	MW-7A	MW-7B
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/22/14	04/23/14	04/22/14	04/22/14	04/22/14
Parameter	**Units**	**Criteria***					
Metals							
Calcium	UG/L	-	172,000	194,000	280,000	219,000	187,000
Chromium	UG/L	50		13.8 J		2.3 J	1.2 J
Cobalt	UG/L	-				0.72 J	1.1 J
Copper	UG/L	200		72.0	7.8 J		
Iron	UG/L	300	17,800	245	187 J	27,400	75.3 J
Lead	UG/L	25					
Magnesium	UG/L	35000	66,000	31,800	42,300	6,320	70,500
Manganese	UG/L	300	1,880	26.7 J	161	1,030	1,170
Mercury	UG/L	0.7					
Nickel	UG/L	100		115			
Potassium	UG/L	-	9,140	53,400	39,300	7,110	9,610
Selenium	UG/L	10					
Sodium	UG/L	20000	176,000	92,200	265,000	170,000	197,000
Vanadium	UG/L	-				2.3 J	
Zinc	UG/L	2000		802	130		
Miscellaneous Parameters							
Cyanide, Total	UG/L	200				161	

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

Flags assigned during chemistry validation are shown.

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- = No standard, criteria or guidance value.

Blank cell or ND - Not detected. D - Result reported from a secondary dilution analysis.

J - The reported concentration is an estimated value.

Only Detected Results Reported.

TABLE 4-9
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-08A	MW-08B	MW-09	MW-10	MW-11A
Sample ID			MW-8A	MW-8B	MW-9	MW-10	FD1-20140422
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/23/14	04/23/14	04/22/14	04/23/14	04/22/14
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Volatile Organic Compounds							
1,2,4-Trimethylbenzene	UG/L	-					
1,2-Dichloroethene (cis)	UG/L	5					
1,3,5-Trimethylbenzene (Mesitylene)	UG/L	-					
Benzene	UG/L	1					
Ethylbenzene	UG/L	5					
Isopropylbenzene	UG/L	5					
Methylcyclohexane	UG/L	-					
n-Propylbenzene	UG/L	-					
Toluene	UG/L	5					
Trichloroethene	UG/L	5					
Xylene (total)	UG/L	5					
Total BTEX	UG/L	-	ND	ND	ND	ND	ND
Total Volatile Organic Compounds	UG/L	-	ND	ND	ND	ND	ND
Semivolatile Organic Compounds							
1,1'-Biphenyl	UG/L	5					
2-Methylnaphthalene	UG/L	-					
2-Methylphenol (o-cresol)	UG/L	1					
Acenaphthene	UG/L	20					
Acenaphthylene	UG/L	-					
Anthracene	UG/L	50					
Benzo(a)anthracene	UG/L	0.002					
Benzo(a)pyrene	UG/L	ND					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

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Concentration Exceeds Criteria

- = No standard, criteria or guidance value.

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Only Detected Results Reported.

TABLE 4-9
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-08A	MW-08B	MW-09	MW-10	MW-11A
Sample ID			MW-8A	MW-8B	MW-9	MW-10	FD1-20140422
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/23/14	04/23/14	04/22/14	04/23/14	04/22/14
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Semivolatile Organic Compounds							
Benzo(b)fluoranthene	UG/L	0.002					
Benzo(g,h,i)perylene	UG/L	-					
Benzo(k)fluoranthene	UG/L	0.002					
Carbazole	UG/L	-					
Chrysene	UG/L	0.002					
Dibenz(a,h)anthracene	UG/L	-					
Dibenzofuran	UG/L	-					
Di-n-butylphthalate	UG/L	50	1.0 J				
Fluoranthene	UG/L	50					
Fluorene	UG/L	50					
Indeno(1,2,3-cd)pyrene	UG/L	0.002					
Naphthalene	UG/L	10					
Phenanthrene	UG/L	50					
Pyrene	UG/L	50					
Total Polynuclear Aromatic Hydrocarbons	UG/L	-	ND	ND	ND	ND	ND
Total Semivolatile Organic Compounds	UG/L	-	1	ND	ND	ND	ND
Metals							
Aluminum	UG/L	-	1,650	239	574	1,880	237 J
Arsenic	UG/L	25					
Barium	UG/L	1000					252
Beryllium	UG/L	3					
Cadmium	UG/L	5					

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

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TABLE 4-9
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-08A	MW-08B	MW-09	MW-10	MW-11A
Sample ID			MW-8A	MW-8B	MW-9	MW-10	FD1-20140422
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/23/14	04/23/14	04/22/14	04/23/14	04/22/14
Parameter	**Units**	**Criteria***					Field Duplicate (1-1)
Metals							
Calcium	UG/L	-	123,000	65,500	116,000	155,000	224,000
Chromium	UG/L	50	4.9 J	1.1 J	2.2 J	4.3 J	
Cobalt	UG/L	-			1.0 J		
Copper	UG/L	200	5.1 J	6.1 J		7.1 J	
Iron	UG/L	300	2,410	3,360	919	3,100	20,900
Lead	UG/L	25					
Magnesium	UG/L	35000	16,200	18,900	44,800	28,900	60,000
Manganese	UG/L	300	224	238	282	5,980	9,160
Mercury	UG/L	0.7					
Nickel	UG/L	100					
Potassium	UG/L	-	7,800	8,050	4,350	7,380	10,700
Selenium	UG/L	10			14.7 J		15.3 J
Sodium	UG/L	20000	18,100	28,600	36,000	40,300	279,000
Vanadium	UG/L	-			2.3 J		
Zinc	UG/L	2000					
Miscellaneous Parameters							
Cyanide, Total	UG/L	200					7.7 J

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

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TABLE 4-9
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-11A	MW-11B	MW-12A	MW-12B
Sample ID			MW-11A	MW-11B	MW-12A	MW-12B
Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-
Date Sampled			04/22/14	04/22/14	04/23/14	04/23/14
Parameter	**Units**	**Criteria***				
Volatile Organic Compounds						
1,2,4-Trimethylbenzene	UG/L	-				
1,2-Dichloroethene (cis)	UG/L	5	0.60 J			
1,3,5-Trimethylbenzene (Mesitylene)	UG/L	-				
Benzene	UG/L	1				
Ethylbenzene	UG/L	5				
Isopropylbenzene	UG/L	5				
Methylcyclohexane	UG/L	-				
n-Propylbenzene	UG/L	-				
Toluene	UG/L	5				
Trichloroethene	UG/L	5		1.2 J		2.2 J
Xylene (total)	UG/L	5				
Total BTEX	UG/L	-	ND	ND	ND	ND
Total Volatile Organic Compounds	UG/L	-	0.6	1.2	ND	2.2
Semivolatile Organic Compounds						
1,1'-Biphenyl	UG/L	5				
2-Methylnaphthalene	UG/L	-				
2-Methylphenol (o-cresol)	UG/L	1				
Acenaphthene	UG/L	20				
Acenaphthylene	UG/L	-				
Anthracene	UG/L	50				
Benzo(a)anthracene	UG/L	0.002				
Benzo(a)pyrene	UG/L	ND				

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

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TABLE 4-9
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-11A	MW-11B	MW-12A	MW-12B
Sample ID			MW-11A	MW-11B	MW-12A	MW-12B
Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-
Date Sampled			04/22/14	04/22/14	04/23/14	04/23/14
Parameter	**Units**	**Criteria***				
Semivolatile Organic Compounds						
Benzo(b)fluoranthene	UG/L	0.002				
Benzo(g,h,i)perylene	UG/L	-				
Benzo(k)fluoranthene	UG/L	0.002				
Carbazole	UG/L	-				
Chrysene	UG/L	0.002				
Dibenz(a,h)anthracene	UG/L	-				
Dibenzofuran	UG/L	-				
Di-n-butylphthalate	UG/L	50	1.2 J		1.0 J	
Fluoranthene	UG/L	50				
Fluorene	UG/L	50				
Indeno(1,2,3-cd)pyrene	UG/L	0.002				
Naphthalene	UG/L	10				
Phenanthrene	UG/L	50				
Pyrene	UG/L	50				
Total Polynuclear Aromatic Hydrocarbons	UG/L	-	ND	ND	ND	ND
Total Semivolatile Organic Compounds	UG/L	-	1.2	ND	1	ND
Metals						
Aluminum	UG/L	-	354 J		205	
Arsenic	UG/L	25				
Barium	UG/L	1000	251			
Beryllium	UG/L	3				
Cadmium	UG/L	5				

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

Flags assigned during chemistry validation are shown.


Concentration Exceeds Criteria

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J - The reported concentration is an estimated value.

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TABLE 4-9
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION GROUNDWATER SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID			MW-11A	MW-11B	MW-12A	MW-12B
Sample ID			MW-11A	MW-11B	MW-12A	MW-12B
Matrix			Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-
Date Sampled			04/22/14	04/22/14	04/23/14	04/23/14
Parameter	**Units**	**Criteria***				
Metals						
Calcium	UG/L	-	222,000	338,000	184,000	256,000
Chromium	UG/L	50		1.2 J		
Cobalt	UG/L	-	4.6 J			
Copper	UG/L	200		19.8 J	5.7 J	9.7 J
Iron	UG/L	300	20,600	1,210	2,500	
Lead	UG/L	25				
Magnesium	UG/L	35000	58,500	128,000	31,200	89,100
Manganese	UG/L	300	8,920	167	4,550	608
Mercury	UG/L	0.7				
Nickel	UG/L	100				
Potassium	UG/L	-	10,600	12,100	26,200	9,540
Selenium	UG/L	10	12.9 J			13.7 J
Sodium	UG/L	20000	274,000	587,000	280,000	323,000
Vanadium	UG/L	-				
Zinc	UG/L	2000				
Miscellaneous Parameters						
Cyanide, Total	UG/L	200				

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- = No standard, criteria or guidance value.

Blank cell or ND - Not detected. D - Result reported from a secondary dilution analysis.

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Only Detected Results Reported.

TABLE 4-10
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION GROUNDWATER SAMPLES CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value
					Min	Max	Avg		
Volatile Organic Compounds									
1,2,4-Trimethylbenzene	UG/L	-	19	3	4.10	260.0	93.37	0	MW-07A
1,2-Dichloroethene (cis)	UG/L	5	19	1	0.600	0.600	0.600	0	MW-11A
1,3,5-Trimethylbenzene (Mesitylene)	UG/L	-	19	1	4.50	4.50	4.50	0	MW-03B
Benzene	UG/L	1	19	2	5.10	1,600	802.6	2	GWSB-23
Ethylbenzene	UG/L	5	19	3	2.50	630.0	227.5	2	GWSB-23
Isopropylbenzene	UG/L	5	19	2	2.90	27.00	14.95	1	MW-07A
Methylcyclohexane	UG/L	-	19	1	5.40	5.40	5.40	0	MW-07A
n-Propylbenzene	UG/L	-	19	1	31.00	31.00	31.00	0	MW-07A
Toluene	UG/L	5	19	1	3.20	3.20	3.20	0	MW-03B
Trichloroethene	UG/L	5	19	4	0.980	2.20	1.45	0	MW-12B
Xylene (total)	UG/L	5	19	4	2.50	580.0	156.9	3	GWSB-23
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/L	5	19	3	6.10	59.00	33.03	3	GWSB-23
2-Methylnaphthalene	UG/L	-	19	3	1.70	920.0	315.9	0	GWSB-23
2-Methylphenol (o-cresol)	UG/L	1	19	1	6.40	6.40	6.40	1	GWSB-23
Acenaphthene	UG/L	20	19	3	41.00	460.0	223.7	3	GWSB-23
Acenaphthylene	UG/L	-	19	3	13.00	31.00	19.33	0	GWSB-23
Anthracene	UG/L	50	19	3	8.30	110.0	42.70	1	GWSB-23
Benzo(a)anthracene	UG/L	0.002	19	1	41.00	41.00	41.00	1	GWSB-23

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

Concentration Exceeds Criteria

Only Detected Results Reported.

TABLE 4-10
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION GROUNDWATER SAMPLES CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value
					Min	Max	Avg		
Semivolatile Organic Compounds									
Benzo(a)pyrene	UG/L	0	19	1	41.00	41.00	41.00	1	GWSB-23
Benzo(b)fluoranthene	UG/L	0.002	19	1	30.00	30.00	30.00	1	GWSB-23
Benzo(g,h,i)perylene	UG/L	-	19	1	21.00	21.00	21.00	0	GWSB-23
Benzo(k)fluoranthene	UG/L	0.002	19	1	17.00	17.00	17.00	1	GWSB-23
Carbazole	UG/L	-	19	2	3.40	13.00	8.20	0	GWSB-23
Chrysene	UG/L	0.002	19	1	39.00	39.00	39.00	1	GWSB-23
Dibenz(a,h)anthracene	UG/L	-	19	1	4.40	4.40	4.40	0	GWSB-23
Dibenzofuran	UG/L	-	19	2	1.30	2.70	2.00	0	MW-07A
Di-n-butylphthalate	UG/L	50	19	7	1.00	1.40	1.13	0	MW-06
Fluoranthene	UG/L	50	19	3	3.00	120.0	42.47	1	GWSB-23
Fluorene	UG/L	50	19	3	17.00	150.0	72.00	1	GWSB-23
Indeno(1,2,3-cd)pyrene	UG/L	0.002	19	1	18.00	18.00	18.00	1	GWSB-23
Naphthalene	UG/L	10	19	4	1.80	4,300	1,107	2	GWSB-23
Phenanthrene	UG/L	50	19	3	47.00	410.0	177.0	2	GWSB-23
Pyrene	UG/L	50	19	3	3.70	170.0	59.77	1	GWSB-23
Metals									
Aluminum	UG/L	-	19	13	70.40	3.07E+04	4,107	0	GWSB-23
Arsenic	UG/L	25	19	1	20.90	20.90	20.90	0	GWSB-23
Barium	UG/L	1000	19	5	206.0	1,260	438.8	1	GWSB-23

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.

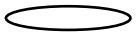
Concentration Exceeds Criteria

Only Detected Results Reported.

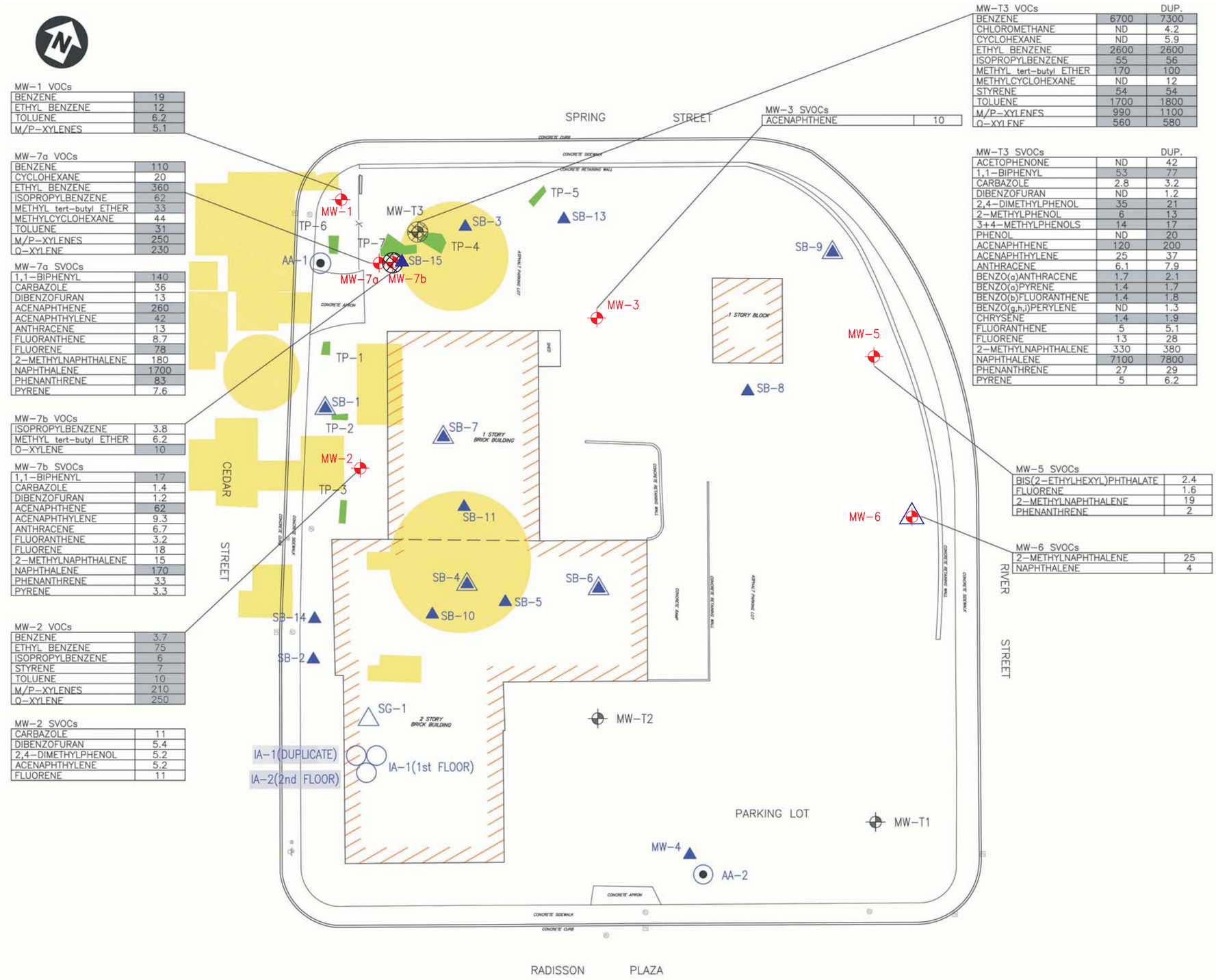
TABLE 4-10
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION GROUNDWATER SAMPLES CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	Criteria*	No. of Samples	No. of Detections	Range of Detections			No. Exceed	Location of Max Value
					Min	Max	Avg		
Metals									
Beryllium	UG/L	3	19	2	0.530	3.80	2.17	1	GWSB-23
Cadmium	UG/L	5	19	1	1.70	1.70	1.70	0	MW-05
Calcium	UG/L	-	19	19	6.55E+04	3.38E+05	1.95E+05	0	MW-11B
Chromium	UG/L	50	19	12	1.10	86.70	12.74	1	GWSB-23
Cobalt	UG/L	-	19	6	0.720	4.60	2.04	0	MW-11A
Copper	UG/L	200	19	12	5.10	72.00	17.57	0	MW-05
Iron	UG/L	300	19	17	75.30	2.75E+05	2.35E+04	14	GWSB-23
Lead	UG/L	25	19	2	16.80	412.0	214.4	1	GWSB-23
Magnesium	UG/L	35000	19	19	6,320	1.28E+05	4.55E+04	10	MW-11B
Manganese	UG/L	300	19	19	26.70	9,160	2,204	12	MW-11A
Mercury	UG/L	0.7	19	1	0.071	0.071	0.071	0	MW-02A
Nickel	UG/L	100	19	2	115.0	122.0	118.5	2	GWSB-23
Potassium	UG/L	-	19	19	4,050	6.34E+04	1.67E+04	0	GWSB-23
Selenium	UG/L	10	19	5	12.10	15.30	13.74	5	MW-11A
Sodium	UG/L	20000	19	19	1.81E+04	1.25E+06	2.58E+05	18	GWSB-23
Vanadium	UG/L	-	19	4	2.30	94.40	26.83	0	GWSB-23
Zinc	UG/L	2000	19	3	130.0	2.05E+04	7,144	1	GWSB-23
Miscellaneous Parameters									
Cyanide, Total	UG/L	200	19	4	7.70	161.0	62.15	0	MW-07A

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (including April 2000 and June 2004 addenda). Class GA.


Concentration Exceeds Criteria

Only Detected Results Reported.



MW-1 VOCs

BENZENE	19
ETHYL BENZENE	12
TOLUENE	6.2
M/P-XYLENES	5.1

MW-7a VOCs

BENZENE	110
CYCLOHEXANE	20
ETHYL BENZENE	360
ISOPROPYLBENZENE	62
METHYL tert-butyl ETHER	33
METHYLCYCLOHEXANE	44
TOLUENE	31
M/P-XYLENES	250
O-XYLENE	230

MW-7a SVOCs

1,1-BIPHENYL	140
CARBAZOLE	36
DIBENZOFURAN	13
ACENAPHTHENE	260
ACENAPHTHYLENE	42
ANTHRACENE	13
FLUORANTHENE	8.7
FLUORENE	78
2-METHYLNAPHTHALENE	180
NAPHTHALENE	1700
PHENANTHRENE	83
PYRENE	7.6

MW-7b VOCs

ISOPROPYLBENZENE	3.8
METHYL tert-butyl ETHER	6.2
O-XYLENE	10

MW-7b SVOCs

1,1-BIPHENYL	17
CARBAZOLE	1.4
DIBENZOFURAN	1.2
ACENAPHTHENE	62
ACENAPHTHYLENE	9.3
ANTHRACENE	6.7
FLUORANTHENE	3.2
FLUORENE	18
2-METHYLNAPHTHALENE	15
NAPHTHALENE	170
PHENANTHRENE	33
PYRENE	3.3

MW-2 VOCs

BENZENE	3.7
ETHYL BENZENE	75
ISOPROPYLBENZENE	6
STYRENE	7
TOLUENE	10
M/P-XYLENES	210
O-XYLENE	250

MW-2 SVOCs

CARBAZOLE	11
DIBENZOFURAN	5.4
2,4-DIMETHYLPHENOL	5.2
ACENAPHTHYLENE	5.2
FLUORENE	11

MW-3 SVOCs

ACENAPHTHENE	10

MW-T3 VOCs

		DUP.
BENZENE	6700	7300
CHLOROMETHANE	ND	4.2
CYCLOHEXANE	ND	5.9
ETHYL BENZENE	2600	2600
ISOPROPYLBENZENE	55	56
METHYL tert-butyl ETHER	170	100
METHYLCYCLOHEXANE	ND	12
STYRENE	54	54
TOLUENE	1700	1800
M/P-XYLENES	990	1100
O-XYLENE	560	580

MW-T3 SVOCs

		DUP.
ACETOPHENONE	ND	42
1,1-BIPHENYL	53	77
CARBAZOLE	2.8	3.2
DIBENZOFURAN	ND	1.2
2,4-DIMETHYLPHENOL	35	21
2-METHYLPHENOL	6	13
3+4-METHYLPHENOLS	14	17
PHENOL	ND	20
ACENAPHTHENE	120	200
ACENAPHTHYLENE	25	37
ANTHRACENE	6.1	7.9
BENZO(a)ANTHRACENE	1.7	2.1
BENZO(a)PYRENE	1.4	1.7
BENZO(b)FLUORANTHENE	1.4	1.8
BENZO(g,h,i)PERYLENE	ND	1.3
CHRYSENE	1.4	1.9
FLUORANTHENE	5	5.1
FLUORENE	13	28
2-METHYLNAPHTHALENE	330	380
NAPHTHALENE	7100	7800
PHENANTHRENE	27	29
PYRENE	5	6.2

MW-5 SVOCs

BIS(2-ETHYLHEXYL)PHTHALATE	2.4
FLUORENE	1.6
2-METHYLNAPHTHALENE	19
PHENANTHRENE	2

MW-6 SVOCs

2-METHYLNAPHTHALENE	25
NAPHTHALENE	4

LEGEND:

- SOIL BORING LOCATION
- MONITORING WELL
- HISTORIC MONITORING WELL
- TEST PIT LOCATION
- APPROXIMATE LOCATION OF FORMER MGP STRUCTURES
- SOIL GAS LOCATION
- INDOOR AIR SAMPLING LOCATION
- AMBIENT AIR SAMPLING LOCATION
- NAPL OBSERVED

NOTES:

1. ALL CONCENTRATIONS ARE IN PARTS PER BILLION (ppb).
2. SHADED VALUES EXCEED NYSDEC GROUNDWATER QUALITY STANDARDS OR GUIDANCE VALUES (TOGS 1.1.1).
3. VOCs WERE NOT DETECTED IN GROUNDWATER SAMPLES COLLECTED FROM MW-3, MW-5 AND MW-6.
4. SVOCs WERE NOT DETECTED IN THE GROUNDWATER SAMPLE COLLECTED FROM MW-1.
5. ND = NOT DETECTED
6. HISTORIC MONITORING WELLS MW-T1 AND MW-T2 ARE DAMAGED AND NOT USEABLE.
7. REFUSAL WAS ENCOUNTERED WITHIN THE TOP 2 FT AT LOCATION MW-4. THEREFORE A MONITORING WELL COULD NOT BE INSTALLED.

50 25 0 50 100

SOURCE: Draft Data Summary for Site Characterization Activities at the Cedar Street Works Site; Parsons; July 2009; Figure 7, with modifications by URS (2014).

CEDAR STREET WORKS SITE GROUNDWATER ANALYTICAL RESULTS - SITE CHARACTERIZATION

conEdison URS

FIGURE 4-7

AG20991-111769A4-081214-GCM

N

CEDAR ST

SPRING ST

PALMER AVE

COMMERCE DR

CONCRETE CURB

CONCRETE SIDEWALK

CONCRETE RETAINING WALL

PARKING LOT

1 STORY BLOCK BUILDING

RIVER ST

PALMER AVE

CONCRETE APRON

SHED

1 STORY BRICK BUILDING

CONCRETE RETAINING WALL

CONCRETE RETAINING WALL

PARKING LOT

CONCRETE RAMP

2 STORY BRICK BUILDING

PARKING LOT

CONCRETE APRON

CONCRETE SIDEWALK

CONCRETE CURB

RADISSON PLZ

CEDAR ST

RIVER ST

MW-08B	CRIT	4/14
Metals:		
Iron	300	3360
Sodium	20000	28600

MW-08A	CRIT	4/14
Metals:		
Iron	300	2410

MW-09	CRIT	4/14
Metals:		
Iron	300	919
Magnesium	35000	44800
Selenium	10	14.7
Sodium	20000	36000

MW-01	CRIT	4/14
Metals:		
Iron	300	5470
Selenium	10	12.1
Sodium	20000	27500

MW-07A	CRIT	4/14
VOCs:		
Ethylbenzene	5	50
Isopropylbenzene	5	27
Xylene (total)	5	20
SVOCs:		
1,1'-Biphenyl	5	34
Acenaphthene	20	170
Metals:		
Iron	300	27400
Manganese	300	1030
Sodium	20000	170000

MW-07B	CRIT	4/14
Metals:		
Magnesium	35000	70500
Manganese	300	1170
Sodium	20000	197000

MW-03B	CRIT	4/14
VOCs:		
Benzene	1	5.1
Xylene (total)	5	25
SVOCs:		
1,1'-Biphenyl	5	6.1
Acenaphthene	20	41
Naphthalene	10	120
Phenanthrene	50	74
Metals:		
Iron	300	17800
Magnesium	35000	66000
Manganese	300	1880
Sodium	20000	176000

MW-03A	CRIT	4/14
Metals:		
Iron	300	1450
Manganese	300	2660
Sodium	20000	623000

MW-05	CRIT	4/14
Metals:		
Nickel	100	115
Sodium	20000	92200

MW-10	CRIT	4/14
Metals:		
Iron	300	3100
Manganese	300	5980
Sodium	20000	40300

GWSB-23	CRIT	11/13
VOCs:		
Benzene	1	1600
Ethylbenzene	5	630
Xylene (total)	5	580
SVOCs:		
1,1'-Biphenyl	5	59
2-Methylphenol (o-cresol)	1	6.4
Acenaphthene	20	460
Anthracene	50	110
Benzo(a)anthracene	0.002	41
Benzo(b)fluoranthene	0.002	30
Benzo(k)fluoranthene	0.002	17
Chrysene	0.002	39
Fluoranthene	50	120
Fluorene	50	150
Indeno(1,2,3-cd)pyrene	0.002	18
Naphthalene	10	4300
Phenanthrene	50	410
Pyrene	50	170
Metals:		
Barium	1000	1260
Beryllium	3	3.8
Chromium	50	86.7
Iron	300	275000
Lead	25	412
Magnesium	35000	51200
Manganese	300	2980
Nickel	100	122
Sodium	20000	1250000
Zinc	2000	20500

MW-02A	CRIT	4/14
Metals:		
Iron	300	16600
Manganese	300	687
Sodium	20000	71000

MW-02B	CRIT	4/14
Metals:		
Magnesium	35000	63700
Manganese	300	1070
Sodium	20000	164000

MW-06	CRIT	4/14
Metals:		
Magnesium	35000	42300
Sodium	20000	265000

MW-11A	CRIT	4/14
Metals:		
Iron	300	20900
Magnesium	35000	60000
Manganese	300	9160
Selenium	10	15.3
Sodium	20000	279000

MW-11B	CRIT	4/14
Metals:		
Iron	300	1210
Magnesium	35000	128000
Sodium	20000	587000

MW-12B	CRIT	4/14
Metals:		
Magnesium	35000	89100
Manganese	300	608
Selenium	10	13.7
Sodium	20000	323000

MW-12A	CRIT	4/14
Metals:		
Iron	300	2500
Manganese	300	4550
Sodium	20000	280000

Legend

- Bedrock Monitoring Well (RI)
- Overburden Monitoring Well (RI)
- Monitoring Well (2009)
- Groundwater Grab Sample (RI)
- Former MGP Structure

Notes:
CRIT = NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA
Units = µg/L

50 0 50 Feet

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CONSOLIDATED EDISON
CEDAR STREET WORKS
REMEDIAL INVESTIGATION
GROUNDWATER ANALYTICAL RESULTS

conEdison URS

FIGURE 4-8

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		GWSB-23	MW-01	MW-02A	MW-02B	MW-03A
Sample ID		SB-23 (13-14)	MW-1	MW-2A	MW-2B	MW-3A
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		13.0-14.0	-	-	-	-
Date Sampled		11/06/13	04/22/14	04/23/14	04/23/14	04/22/14
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	UG/L	500 U	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2,3-Trichlorobenzene	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2,4-Trichlorobenzene	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2,4-Trimethylbenzene	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromoethane (Ethylene dibromide)	UG/L	500 U	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
1,2-Dichlorobenzene	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethene (cis)	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethene (trans)	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichlorobenzene	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichloropropene (cis)	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichloropropene (trans)	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,4-Dichlorobenzene	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
1,4-Dioxane	UG/L	R	R	R	R	R
2-Butanone	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	UG/L	500 U	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
4-Methyl-2-pentanone	UG/L	500 U	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Acetone	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		GWSB-23	MW-01	MW-02A	MW-02B	MW-03A
Sample ID		SB-23 (13-14)	MW-1	MW-2A	MW-2B	MW-3A
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		13.0-14.0	-	-	-	-
Date Sampled		11/06/13	04/22/14	04/23/14	04/23/14	04/22/14
Parameter	Units					
Volatile Organic Compounds						
Benzene	UG/L	1,600	5.0 U	5.0 U	5.0 U	5.0 U
Bromochloromethane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	UG/L	500 U	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Bromomethane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Cyclohexane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	UG/L	630	5.0 U	5.0 U	5.0 U	5.0 U
Isopropylbenzene	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Methyl acetate	UG/L	500 U	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Methyl tert-butyl ether	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylcyclohexane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
n-Butylbenzene	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
n-Propylbenzene	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
sec-Butylbenzene	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
tert-Butylbenzene	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		GWSB-23	MW-01	MW-02A	MW-02B	MW-03A
Sample ID		SB-23 (13-14)	MW-1	MW-2A	MW-2B	MW-3A
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		13.0-14.0	-	-	-	-
Date Sampled		11/06/13	04/22/14	04/23/14	04/23/14	04/22/14
Parameter	Units					
Volatile Organic Compounds						
Toluene	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	UG/L	500 U	5.0 U	5.0 U	0.98 J	5.0 U
Trichlorofluoromethane	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl chloride	UG/L	500 U	5.0 U	5.0 U	5.0 U	5.0 U
Xylene (total)	UG/L	580 J	5.0 U	2.5 J	5.0 U	5.0 U
Semivolatile Organic Compounds						
1,1'-Biphenyl	UG/L	59	10 U	10 U	10 U	10 U
1,2,4,5-Tetrachlorobenzene	UG/L	10 U	10 U	10 U	10 U	10 U
2,2'-oxybis(1-Chloropropane)	UG/L	10 UJ	10 U	10 U	10 U	10 U
2,3,4,6-Tetrachlorophenol	UG/L	10 U	25 U	25 U	25 U	25 U
2,4,5-Trichlorophenol	UG/L	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	UG/L	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	UG/L	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	UG/L	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	UG/L	20 U	20 UJ	20 UJ	20 UJ	20 UJ
2,4-Dinitrotoluene	UG/L	10 U	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	UG/L	10 U	10 U	10 U	10 U	10 U
2-Chloronaphthalene	UG/L	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol	UG/L	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	UG/L	920 DJ	10 U	10 U	10 U	10 U
2-Methylphenol (o-cresol)	UG/L	6.4 J	10 U	10 U	10 U	10 U
2-Nitroaniline	UG/L	20 UJ	20 U	20 U	20 U	20 U
2-Nitrophenol	UG/L	10 U	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	UG/L	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline	UG/L	20 U	20 U	20 U	20 U	20 U
4,6-Dinitro-2-methylphenol	UG/L	20 U	20 U	20 U	20 U	20 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		GWSB-23	MW-01	MW-02A	MW-02B	MW-03A
Sample ID		SB-23 (13-14)	MW-1	MW-2A	MW-2B	MW-3A
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		13.0-14.0	-	-	-	-
Date Sampled		11/06/13	04/22/14	04/23/14	04/23/14	04/22/14
Parameter	Units					
Semivolatile Organic Compounds						
4-Bromophenyl-phenylether	UG/L	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	UG/L	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	UG/L	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl-phenylether	UG/L	10 U	10 U	10 U	10 U	10 U
4-Methylphenol (p-cresol)	UG/L	10 U	10 U	10 U	10 U	10 U
4-Nitroaniline	UG/L	20 U	20 U	20 U	20 U	20 U
4-Nitrophenol	UG/L	20 U	20 U	20 U	20 U	20 U
Acenaphthene	UG/L	460 DJ	10 U	10 U	10 U	10 U
Acenaphthylene	UG/L	31	10 U	10 U	10 U	10 U
Acetophenone	UG/L	10 U	10 U	10 U	10 U	10 U
Anthracene	UG/L	110 DJ	10 U	10 U	10 U	10 U
Atrazine	UG/L	10 U	10 U	10 U	10 U	10 U
Benzaldehyde	UG/L	10 UJ	10 U	10 U	10 U	10 U
Benzo(a)anthracene	UG/L	41	10 U	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	41	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	30	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	21	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	17	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	UG/L	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	UG/L	10 U	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	UG/L	10 U	10 U	10 U	10 U	10 U
Butylbenzylphthalate	UG/L	10 U	10 U	10 U	10 U	10 U
Caprolactam	UG/L	10 U	10 U	10 U	10 U	10 U
Carbazole	UG/L	13	10 U	10 U	10 U	10 U
Chrysene	UG/L	39	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	UG/L	4.4 J	10 U	10 U	10 U	10 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		GWSB-23	MW-01	MW-02A	MW-02B	MW-03A
Sample ID		SB-23 (13-14)	MW-1	MW-2A	MW-2B	MW-3A
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		13.0-14.0	-	-	-	-
Date Sampled		11/06/13	04/22/14	04/23/14	04/23/14	04/22/14
Parameter	Units					
Semivolatile Organic Compounds						
Dibenzofuran	UG/L	10 U	10 U	10 U	10 U	10 U
Diethylphthalate	UG/L	10 U	10 U	10 U	10 U	10 U
Dimethylphthalate	UG/L	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate	UG/L	1.3 J	1.0 J	10 U	10 U	10 U
Di-n-octylphthalate	UG/L	10 U	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	120 DJ	10 U	10 U	10 U	10 U
Fluorene	UG/L	150 DJ	10 U	10 U	10 U	10 U
Hexachlorobenzene	UG/L	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	UG/L	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	UG/L	10 UJ	10 U	10 U	10 U	10 U
Hexachloroethane	UG/L	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	18	10 U	10 U	10 U	10 U
Isophorone	UG/L	10 U	10 U	10 U	10 U	10 U
Naphthalene	UG/L	4,300 D	10 U	1.8 J	10 U	10 U
Nitrobenzene	UG/L	10 U	10 U	10 U	10 U	10 U
N-Nitroso-di-n-propylamine	UG/L	10 UJ	10 U	10 U	10 U	10 U
N-Nitrosodiphenylamine	UG/L	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	UG/L	20 UJ	20 U	20 U	20 U	20 U
Phenanthrene	UG/L	410 DJ	10 U	10 U	10 U	10 U
Phenol	UG/L	10 U	10 U	10 U	10 U	10 U
Pyrene	UG/L	170 DJ	10 U	10 U	10 U	10 U
Metals						
Aluminum	UG/L	30,700	3,680	11,700	66.0 U	1,160
Antimony	UG/L	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U
Arsenic	UG/L	20.9	4.3 U	4.3 U	4.3 U	4.3 U
Barium	UG/L	1,260	200 U	200 U	200 U	200 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

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[SITEID] = '04' AND [MATRIX] = 'WG' AND [LOGDATE] >= #10/29/2013#

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		GWSB-23	MW-01	MW-02A	MW-02B	MW-03A
Sample ID		SB-23 (13-14)	MW-1	MW-2A	MW-2B	MW-3A
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		13.0-14.0	-	-	-	-
Date Sampled		11/06/13	04/22/14	04/23/14	04/23/14	04/22/14
Parameter	Units					
Metals						
Beryllium	UG/L	3.8 J	0.26 U	0.53 J	0.26 U	0.26 U
Cadmium	UG/L	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U
Calcium	UG/L	322,000	127,000	155,000	166,000	190,000
Chromium	UG/L	86.7	9.5 J	22.6	0.64 U	3.1 J
Cobalt	UG/L	50.0 U	2.3 J	50.0 U	2.5 J	50.0 U
Copper	UG/L	31.2	8.4 J	29.9 J	3.6 U	8.0 J
Iron	UG/L	275,000	5,470	16,600	31.0 U	1,450
Lead	UG/L	412	4.2 U	16.8	4.2 U	4.2 U
Magnesium	UG/L	51,200	8,810	22,700	63,700	26,100
Manganese	UG/L	2,980	80.4	687	1,070	2,660
Mercury	UG/L	0.20 U	0.028 U	0.071 J	0.028 U	0.028 U
Nickel	UG/L	122	50.0 U	50.0 U	50.0 U	50.0 U
Potassium	UG/L	63,400	4,050	10,700	9,380	14,200
Selenium	UG/L	12.0 U	12.1 J	12.0 U	12.0 U	12.0 U
Silver	UG/L	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U
Sodium	UG/L	1,250,000	27,500	71,000	164,000	623,000
Thallium	UG/L	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U
Vanadium	UG/L	94.4	8.3 J	50.0 U	1.1 U	50.0 U
Zinc	UG/L	20,500	50.0 U	50.0 U	4.9 U	50.0 U
Miscellaneous Parameters						
Cyanide, Total	UG/L	7.5 U	7.5 U	49.8	7.5 U	30.1
Cyanide, Available	MG/L	NA	0.0018 U	0.0018 U	0.0018 U	0.0018 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-03B	MW-05	MW-06	MW-07A	MW-07B
Sample ID		MW-3B	MW-5	MW-6	MW-7A	MW-7B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/22/14	04/23/14	04/22/14	04/22/14	04/22/14
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	UG/L	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2,3-Trichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2,4-Trichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2,4-Trimethylbenzene	UG/L	16	5.0 U	5.0 U	260 D	4.1 J
1,2-Dibromo-3-chloropropane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromoethane (Ethylene dibromide)	UG/L	5.0 UJ	5.0 U	5.0 UJ	5.0 UJ	5.0 UJ
1,2-Dichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethene (cis)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethene (trans)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/L	4.5 J	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichloropropene (cis)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichloropropene (trans)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,4-Dichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,4-Dioxane	UG/L	R	R	R	R	R
2-Butanone	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	UG/L	5.0 UJ	5.0 U	5.0 UJ	5.0 UJ	5.0 UJ
4-Methyl-2-pentanone	UG/L	5.0 UJ	5.0 U	5.0 UJ	5.0 UJ	5.0 UJ
Acetone	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-03B	MW-05	MW-06	MW-07A	MW-07B
Sample ID		MW-3B	MW-5	MW-6	MW-7A	MW-7B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/22/14	04/23/14	04/22/14	04/22/14	04/22/14
Parameter	Units					
Volatile Organic Compounds						
Benzene	UG/L	5.1 J	5.0 U	5.0 U	5.0 U	5.0 U
Bromochloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	UG/L	5.0 UJ	5.0 U	5.0 UJ	5.0 UJ	5.0 UJ
Bromomethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cyclohexane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	UG/L	2.5 J	5.0 U	5.0 U	50	5.0 U
Isopropylbenzene	UG/L	2.9 J	5.0 U	5.0 U	27	5.0 U
Methyl acetate	UG/L	5.0 UJ	5.0 U	5.0 UJ	5.0 UJ	5.0 UJ
Methyl tert-butyl ether	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylcyclohexane	UG/L	5.0 U	5.0 U	5.0 U	5.4 J	5.0 U
Methylene chloride	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
n-Butylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
n-Propylbenzene	UG/L	5.0 U	5.0 U	5.0 U	31	5.0 U
sec-Butylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
tert-Butylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-03B	MW-05	MW-06	MW-07A	MW-07B
Sample ID		MW-3B	MW-5	MW-6	MW-7A	MW-7B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/22/14	04/23/14	04/22/14	04/22/14	04/22/14
Parameter	Units					
Volatile Organic Compounds						
Toluene	UG/L	3.2 J	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	1.4 J
Trichlorofluoromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl chloride	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Xylene (total)	UG/L	25	5.0 U	5.0 U	20	5.0 U
Semivolatile Organic Compounds						
1,1'-Biphenyl	UG/L	6.1 J	10 U	10 U	34	10 U
1,2,4,5-Tetrachlorobenzene	UG/L	10 U	10 U	10 U	10 U	10 U
2,2'-oxybis(1-Chloropropane)	UG/L	10 U	10 U	10 U	10 U	10 U
2,3,4,6-Tetrachlorophenol	UG/L	25 U	25 U	25 U	25 U	25 U
2,4,5-Trichlorophenol	UG/L	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	UG/L	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	UG/L	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	UG/L	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	UG/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
2,4-Dinitrotoluene	UG/L	10 U	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	UG/L	10 U	10 U	10 U	10 U	10 U
2-Chloronaphthalene	UG/L	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol	UG/L	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	UG/L	26	1.7 J	10 U	10 U	10 U
2-Methylphenol (o-cresol)	UG/L	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline	UG/L	20 U	20 U	20 U	20 U	20 U
2-Nitrophenol	UG/L	10 U	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	UG/L	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline	UG/L	20 U	20 U	20 U	20 U	20 U
4,6-Dinitro-2-methylphenol	UG/L	20 U	20 U	20 U	20 U	20 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-03B	MW-05	MW-06	MW-07A	MW-07B
Sample ID		MW-3B	MW-5	MW-6	MW-7A	MW-7B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/22/14	04/23/14	04/22/14	04/22/14	04/22/14
Parameter	Units					
Semivolatile Organic Compounds						
4-Bromophenyl-phenylether	UG/L	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	UG/L	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	UG/L	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl-phenylether	UG/L	10 U	10 U	10 U	10 U	10 U
4-Methylphenol (p-cresol)	UG/L	10 U	10 U	10 U	10 U	10 U
4-Nitroaniline	UG/L	20 U	20 U	20 U	20 U	20 U
4-Nitrophenol	UG/L	20 U	20 U	20 U	20 U	20 U
Acenaphthene	UG/L	41	10 U	10 U	170 D	10 U
Acenaphthylene	UG/L	13	10 U	10 U	14	10 U
Acetophenone	UG/L	10 U	10 U	10 U	10 U	10 U
Anthracene	UG/L	9.8 J	10 U	10 U	8.3 J	10 U
Atrazine	UG/L	10 U	10 U	10 U	10 U	10 U
Benzaldehyde	UG/L	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	UG/L	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	UG/L	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	UG/L	10 U	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	UG/L	10 U	10 U	10 U	10 U	10 U
Butylbenzylphthalate	UG/L	10 U	10 U	10 U	10 U	10 U
Caprolactam	UG/L	10 U	10 U	10 U	10 U	10 U
Carbazole	UG/L	10 U	10 U	10 U	3.4 J	10 U
Chrysene	UG/L	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	UG/L	10 U	10 U	10 U	10 U	10 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-03B	MW-05	MW-06	MW-07A	MW-07B
Sample ID		MW-3B	MW-5	MW-6	MW-7A	MW-7B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/22/14	04/23/14	04/22/14	04/22/14	04/22/14
Parameter	Units					
Semivolatile Organic Compounds						
Dibenzofuran	UG/L	1.3 J	10 U	10 U	2.7 J	10 U
Diethylphthalate	UG/L	10 U	10 U	10 U	10 U	10 U
Dimethylphthalate	UG/L	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate	UG/L	10 U	1.0 J	1.4 J	10 U	10 U
Di-n-octylphthalate	UG/L	10 U	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	4.4 J	10 U	10 U	3.0 J	10 U
Fluorene	UG/L	17	10 U	10 U	49	10 U
Hexachlorobenzene	UG/L	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	UG/L	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	UG/L	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	UG/L	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	10 U	10 U	10 U	10 U	10 U
Isophorone	UG/L	10 U	10 U	10 U	10 U	10 U
Naphthalene	UG/L	120 D	10 U	10 U	7.7 J	10 U
Nitrobenzene	UG/L	10 U	10 U	10 U	10 U	10 U
N-Nitroso-di-n-propylamine	UG/L	10 U	10 U	10 U	10 U	10 U
N-Nitrosodiphenylamine	UG/L	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	UG/L	20 U	20 U	20 U	20 U	20 U
Phenanthrene	UG/L	74	10 U	10 U	47	10 U
Phenol	UG/L	10 U	10 U	10 U	10 U	10 U
Pyrene	UG/L	5.6 J	10 U	10 U	3.7 J	10 U
Metals						
Aluminum	UG/L	70.4 J	200 U	66.0 U	939	66.0 U
Antimony	UG/L	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U
Arsenic	UG/L	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U
Barium	UG/L	206	225	200 U	200 U	200 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-03B	MW-05	MW-06	MW-07A	MW-07B
Sample ID		MW-3B	MW-5	MW-6	MW-7A	MW-7B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/22/14	04/23/14	04/22/14	04/22/14	04/22/14
Parameter	Units					
Metals						
Beryllium	UG/L	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Cadmium	UG/L	0.89 U	1.7 J	0.89 U	0.89 U	0.89 U
Calcium	UG/L	172,000	194,000	280,000	219,000	187,000
Chromium	UG/L	0.64 U	13.8 J	0.64 U	2.3 J	1.2 J
Cobalt	UG/L	0.67 U	0.67 U	0.67 U	0.72 J	1.1 J
Copper	UG/L	3.6 U	72.0	7.8 J	3.6 U	3.6 U
Iron	UG/L	17,800	245	187 J	27,400	75.3 J
Lead	UG/L	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U
Magnesium	UG/L	66,000	31,800	42,300	6,320	70,500
Manganese	UG/L	1,880	26.7 J	161	1,030	1,170
Mercury	UG/L	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U
Nickel	UG/L	50.0 U	115	50.0 U	50.0 U	50.0 U
Potassium	UG/L	9,140	53,400	39,300	7,110	9,610
Selenium	UG/L	12.0 U	12.0 U	12.0 U	12.0 U	12.0 U
Silver	UG/L	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U
Sodium	UG/L	176,000	92,200	265,000	170,000	197,000
Thallium	UG/L	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U
Vanadium	UG/L	1.1 U	50.0 U	1.1 U	2.3 J	1.1 U
Zinc	UG/L	50.0 U	802	130	50.0 U	4.9 U
Miscellaneous Parameters						
Cyanide, Total	UG/L	7.5 U	7.5 U	7.5 U	161	7.5 U
Cyanide, Available	MG/L	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-08A	MW-08B	MW-09	MW-10	MW-11A
Sample ID		MW-8A	MW-8B	MW-9	MW-10	FD1-20140422
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/23/14	04/23/14	04/22/14	04/23/14	04/22/14
Parameter	Units					Field Duplicate (1-1)
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	UG/L	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2,3-Trichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2,4-Trichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2,4-Trimethylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromoethane (Ethylene dibromide)	UG/L	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 UJ
1,2-Dichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethene (cis)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethene (trans)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichloropropene (cis)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichloropropene (trans)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,4-Dichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,4-Dioxane	UG/L	R	R	R	R	R
2-Butanone	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	UG/L	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 UJ
4-Methyl-2-pentanone	UG/L	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 UJ
Acetone	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-08A	MW-08B	MW-09	MW-10	MW-11A
Sample ID		MW-8A	MW-8B	MW-9	MW-10	FD1-20140422
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/23/14	04/23/14	04/22/14	04/23/14	04/22/14
Parameter	Units					Field Duplicate (1-1)
Volatile Organic Compounds						
Benzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromochloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	UG/L	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 UJ
Bromomethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cyclohexane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Isopropylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methyl acetate	UG/L	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 UJ
Methyl tert-butyl ether	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylcyclohexane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
n-Butylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
n-Propylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
sec-Butylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
tert-Butylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-08A	MW-08B	MW-09	MW-10	MW-11A
Sample ID		MW-8A	MW-8B	MW-9	MW-10	FD1-20140422
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/23/14	04/23/14	04/22/14	04/23/14	04/22/14
Parameter	Units					Field Duplicate (1-1)
Volatile Organic Compounds						
Toluene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichlorofluoromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl chloride	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Xylene (total)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Semivolatile Organic Compounds						
1,1'-Biphenyl	UG/L	10 U	10 U	10 U	10 U	10 U
1,2,4,5-Tetrachlorobenzene	UG/L	10 U	10 U	10 U	10 U	10 U
2,2'-oxybis(1-Chloropropane)	UG/L	10 U	10 U	10 U	10 U	10 U
2,3,4,6-Tetrachlorophenol	UG/L	25 U	25 U	25 U	25 U	25 U
2,4,5-Trichlorophenol	UG/L	20 U	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	UG/L	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	UG/L	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	UG/L	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	UG/L	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
2,4-Dinitrotoluene	UG/L	10 U	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	UG/L	10 U	10 U	10 U	10 U	10 U
2-Chloronaphthalene	UG/L	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol	UG/L	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	UG/L	10 U	10 U	10 U	10 U	10 U
2-Methylphenol (o-cresol)	UG/L	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline	UG/L	20 U	20 U	20 U	20 U	20 U
2-Nitrophenol	UG/L	10 U	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	UG/L	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline	UG/L	20 U	20 U	20 U	20 U	20 U
4,6-Dinitro-2-methylphenol	UG/L	20 U	20 U	20 U	20 U	20 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-08A	MW-08B	MW-09	MW-10	MW-11A
Sample ID		MW-8A	MW-8B	MW-9	MW-10	FD1-20140422
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/23/14	04/23/14	04/22/14	04/23/14	04/22/14
Parameter	Units					Field Duplicate (1-1)
Semivolatile Organic Compounds						
4-Bromophenyl-phenylether	UG/L	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	UG/L	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	UG/L	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl-phenylether	UG/L	10 U	10 U	10 U	10 U	10 U
4-Methylphenol (p-cresol)	UG/L	10 U	10 U	10 U	10 U	10 U
4-Nitroaniline	UG/L	20 U	20 U	20 U	20 U	20 U
4-Nitrophenol	UG/L	20 U	20 U	20 U	20 U	20 U
Acenaphthene	UG/L	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	UG/L	10 U	10 U	10 U	10 U	10 U
Acetophenone	UG/L	10 U	10 U	10 U	10 U	10 U
Anthracene	UG/L	10 U	10 U	10 U	10 U	10 U
Atrazine	UG/L	10 U	10 U	10 U	10 U	10 U
Benzaldehyde	UG/L	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	UG/L	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	UG/L	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	UG/L	10 U	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	UG/L	10 U	10 U	10 U	10 U	10 U
Butylbenzylphthalate	UG/L	10 U	10 U	10 U	10 U	10 U
Caprolactam	UG/L	10 U	10 U	10 U	10 U	10 U
Carbazole	UG/L	10 U	10 U	10 U	10 U	10 U
Chrysene	UG/L	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	UG/L	10 U	10 U	10 U	10 U	10 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-08A	MW-08B	MW-09	MW-10	MW-11A
Sample ID		MW-8A	MW-8B	MW-9	MW-10	FD1-20140422
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/23/14	04/23/14	04/22/14	04/23/14	04/22/14
Parameter	Units					Field Duplicate (1-1)
Semivolatile Organic Compounds						
Dibenzofuran	UG/L	10 U	10 U	10 U	10 U	10 U
Diethylphthalate	UG/L	10 U	10 U	10 U	10 U	10 U
Dimethylphthalate	UG/L	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate	UG/L	1.0 J	10 U	10 U	10 U	10 U
Di-n-octylphthalate	UG/L	10 U	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	10 U	10 U	10 U	10 U	10 U
Fluorene	UG/L	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	UG/L	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	UG/L	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	UG/L	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	UG/L	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	10 U	10 U	10 U	10 U	10 U
Isophorone	UG/L	10 U	10 U	10 U	10 U	10 U
Naphthalene	UG/L	10 U	10 U	10 U	10 U	10 U
Nitrobenzene	UG/L	10 U	10 U	10 U	10 U	10 U
N-Nitroso-di-n-propylamine	UG/L	10 U	10 U	10 U	10 U	10 U
N-Nitrosodiphenylamine	UG/L	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	UG/L	20 U	20 U	20 U	20 U	20 U
Phenanthrene	UG/L	10 U	10 U	10 U	10 U	10 U
Phenol	UG/L	10 U	10 U	10 U	10 U	10 U
Pyrene	UG/L	10 U	10 U	10 U	10 U	10 U
Metals						
Aluminum	UG/L	1,650	239	574	1,880	237 J
Antimony	UG/L	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U
Arsenic	UG/L	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U
Barium	UG/L	200 U	200 U	200 U	200 U	252

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-08A	MW-08B	MW-09	MW-10	MW-11A
Sample ID		MW-8A	MW-8B	MW-9	MW-10	FD1-20140422
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/23/14	04/23/14	04/22/14	04/23/14	04/22/14
Parameter	Units					Field Duplicate (1-1)
Metals						
Beryllium	UG/L	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Cadmium	UG/L	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U
Calcium	UG/L	123,000	65,500	116,000	155,000	224,000
Chromium	UG/L	4.9 J	1.1 J	2.2 J	4.3 J	0.64 U
Cobalt	UG/L	50.0 U	50.0 U	1.0 J	50.0 U	0.67 U
Copper	UG/L	5.1 J	6.1 J	3.6 U	7.1 J	3.6 U
Iron	UG/L	2,410	3,360	919	3,100	20,900
Lead	UG/L	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U
Magnesium	UG/L	16,200	18,900	44,800	28,900	60,000
Manganese	UG/L	224	238	282	5,980	9,160
Mercury	UG/L	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U
Nickel	UG/L	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
Potassium	UG/L	7,800	8,050	4,350	7,380	10,700
Selenium	UG/L	12.0 U	12.0 U	14.7 J	12.0 U	15.3 J
Silver	UG/L	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U
Sodium	UG/L	18,100	28,600	36,000	40,300	279,000
Thallium	UG/L	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U
Vanadium	UG/L	50.0 U	50.0 U	2.3 J	50.0 U	1.1 U
Zinc	UG/L	50.0 U	50.0 U	50.0 U	50.0 U	20 U
Miscellaneous Parameters						
Cyanide, Total	UG/L	7.5 U	7.5 U	7.5 U	7.5 U	7.7 J
Cyanide, Available	MG/L	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-11A	MW-11B	MW-12A	MW-12B
Sample ID		MW-11A	MW-11B	MW-12A	MW-12B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-
Date Sampled		04/22/14	04/22/14	04/23/14	04/23/14
Parameter	Units				
Volatile Organic Compounds					
1,1,1-Trichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	UG/L	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2,3-Trichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2,4-Trichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2,4-Trimethylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromo-3-chloropropane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dibromoethane (Ethylene dibromide)	UG/L	5.0 UJ	5.0 UJ	5.0 U	5.0 U
1,2-Dichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethene (cis)	UG/L	0.60 J	5.0 U	5.0 U	5.0 U
1,2-Dichloroethene (trans)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichloropropene (cis)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichloropropene (trans)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,4-Dichlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
1,4-Dioxane	UG/L	R	R	R	R
2-Butanone	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	UG/L	5.0 UJ	5.0 UJ	5.0 U	5.0 U
4-Methyl-2-pentanone	UG/L	5.0 UJ	5.0 UJ	5.0 U	5.0 U
Acetone	UG/L	5.0 U	5.0 U	5.0 U	5.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-11A	MW-11B	MW-12A	MW-12B
Sample ID		MW-11A	MW-11B	MW-12A	MW-12B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-
Date Sampled		04/22/14	04/22/14	04/23/14	04/23/14
Parameter	Units				
Volatile Organic Compounds					
Benzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromochloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Bromoform	UG/L	5.0 UJ	5.0 UJ	5.0 U	5.0 U
Bromomethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Carbon disulfide	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Chloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Cyclohexane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Isopropylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Methyl acetate	UG/L	5.0 UJ	5.0 UJ	5.0 U	5.0 U
Methyl tert-butyl ether	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Methylcyclohexane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Methylene chloride	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
n-Butylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
n-Propylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
sec-Butylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
tert-Butylbenzene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-11A	MW-11B	MW-12A	MW-12B
Sample ID		MW-11A	MW-11B	MW-12A	MW-12B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-
Date Sampled		04/22/14	04/22/14	04/23/14	04/23/14
Parameter	**Units**				
Volatile Organic Compounds					
Toluene	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	UG/L	5.0 U	1.2 J	5.0 U	2.2 J
Trichlorofluoromethane	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl chloride	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Xylene (total)	UG/L	5.0 U	5.0 U	5.0 U	5.0 U
Semivolatile Organic Compounds					
1,1'-Biphenyl	UG/L	10 U	10 U	10 U	10 U
1,2,4,5-Tetrachlorobenzene	UG/L	10 U	10 U	10 U	10 U
2,2'-oxybis(1-Chloropropane)	UG/L	10 U	10 U	10 U	10 U
2,3,4,6-Tetrachlorophenol	UG/L	25 U	25 U	25 U	25 U
2,4,5-Trichlorophenol	UG/L	20 U	20 U	20 U	20 U
2,4,6-Trichlorophenol	UG/L	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	UG/L	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	UG/L	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	UG/L	20 UJ	20 UJ	20 UJ	20 UJ
2,4-Dinitrotoluene	UG/L	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	UG/L	10 U	10 U	10 U	10 U
2-Chloronaphthalene	UG/L	10 U	10 U	10 U	10 U
2-Chlorophenol	UG/L	10 U	10 U	10 U	10 U
2-Methylnaphthalene	UG/L	10 U	10 U	10 U	10 U
2-Methylphenol (o-cresol)	UG/L	10 U	10 U	10 U	10 U
2-Nitroaniline	UG/L	20 U	20 U	20 U	20 U
2-Nitrophenol	UG/L	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	UG/L	10 U	10 U	10 U	10 U
3-Nitroaniline	UG/L	20 U	20 U	20 U	20 U
4,6-Dinitro-2-methylphenol	UG/L	20 U	20 U	20 U	20 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-11A	MW-11B	MW-12A	MW-12B
Sample ID		MW-11A	MW-11B	MW-12A	MW-12B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-
Date Sampled		04/22/14	04/22/14	04/23/14	04/23/14
Parameter	Units				
Semivolatile Organic Compounds					
4-Bromophenyl-phenylether	UG/L	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	UG/L	10 U	10 U	10 U	10 U
4-Chloroaniline	UG/L	10 U	10 U	10 U	10 U
4-Chlorophenyl-phenylether	UG/L	10 U	10 U	10 U	10 U
4-Methylphenol (p-cresol)	UG/L	10 U	10 U	10 U	10 U
4-Nitroaniline	UG/L	20 U	20 U	20 U	20 U
4-Nitrophenol	UG/L	20 U	20 U	20 U	20 U
Acenaphthene	UG/L	10 U	10 U	10 U	10 U
Acenaphthylene	UG/L	10 U	10 U	10 U	10 U
Acetophenone	UG/L	10 U	10 U	10 U	10 U
Anthracene	UG/L	10 U	10 U	10 U	10 U
Atrazine	UG/L	10 U	10 U	10 U	10 U
Benzaldehyde	UG/L	10 U	10 U	10 U	10 U
Benzo(a)anthracene	UG/L	10 U	10 U	10 U	10 U
Benzo(a)pyrene	UG/L	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	UG/L	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	UG/L	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	UG/L	10 U	10 U	10 U	10 U
Butylbenzylphthalate	UG/L	10 U	10 U	10 U	10 U
Caprolactam	UG/L	10 U	10 U	10 U	10 U
Carbazole	UG/L	10 U	10 U	10 U	10 U
Chrysene	UG/L	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	UG/L	10 U	10 U	10 U	10 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-11A	MW-11B	MW-12A	MW-12B
Sample ID		MW-11A	MW-11B	MW-12A	MW-12B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-
Date Sampled		04/22/14	04/22/14	04/23/14	04/23/14
Parameter	**Units**				
Semivolatile Organic Compounds					
Dibenzofuran	UG/L	10 U	10 U	10 U	10 U
Diethylphthalate	UG/L	10 U	10 U	10 U	10 U
Dimethylphthalate	UG/L	10 U	10 U	10 U	10 U
Di-n-butylphthalate	UG/L	1.2 J	10 U	1.0 J	10 U
Di-n-octylphthalate	UG/L	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	10 U	10 U	10 U	10 U
Fluorene	UG/L	10 U	10 U	10 U	10 U
Hexachlorobenzene	UG/L	10 U	10 U	10 U	10 U
Hexachlorobutadiene	UG/L	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	UG/L	10 U	10 U	10 U	10 U
Hexachloroethane	UG/L	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	10 U	10 U	10 U	10 U
Isophorone	UG/L	10 U	10 U	10 U	10 U
Naphthalene	UG/L	10 U	10 U	10 U	10 U
Nitrobenzene	UG/L	10 U	10 U	10 U	10 U
N-Nitroso-di-n-propylamine	UG/L	10 U	10 U	10 U	10 U
N-Nitrosodiphenylamine	UG/L	10 U	10 U	10 U	10 U
Pentachlorophenol	UG/L	20 U	20 U	20 U	20 U
Phenanthrene	UG/L	10 U	10 U	10 U	10 U
Phenol	UG/L	10 U	10 U	10 U	10 U
Pyrene	UG/L	10 U	10 U	10 U	10 U
Metals					
Aluminum	UG/L	354 J	66.0 U	205	66.0 U
Antimony	UG/L	9.3 U	9.3 U	9.3 U	9.3 U
Arsenic	UG/L	4.3 U	4.3 U	4.3 U	4.3 U
Barium	UG/L	251	200 U	200 U	200 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

TABLE 3
VALIDATED GROUNDWATER SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		MW-11A	MW-11B	MW-12A	MW-12B
Sample ID		MW-11A	MW-11B	MW-12A	MW-12B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-
Date Sampled		04/22/14	04/22/14	04/23/14	04/23/14
Parameter	Units				
Metals					
Beryllium	UG/L	0.26 U	0.26 U	0.26 U	0.26 U
Cadmium	UG/L	0.89 U	0.89 U	0.89 U	0.89 U
Calcium	UG/L	222,000	338,000	184,000	256,000
Chromium	UG/L	0.64 U	1.2 J	0.64 U	0.64 U
Cobalt	UG/L	4.6 J	50.0 U	50.0 U	50.0 U
Copper	UG/L	3.6 U	19.8 J	5.7 J	9.7 J
Iron	UG/L	20,600	1,210	2,500	200 U
Lead	UG/L	4.2 U	4.2 U	4.2 U	4.2 U
Magnesium	UG/L	58,500	128,000	31,200	89,100
Manganese	UG/L	8,920	167	4,550	608
Mercury	UG/L	0.028 U	0.028 U	0.028 U	0.028 U
Nickel	UG/L	50.0 U	50.0 U	50.0 U	50.0 U
Potassium	UG/L	10,600	12,100	26,200	9,540
Selenium	UG/L	12.9 J	12.0 U	12.0 U	13.7 J
Silver	UG/L	6.9 U	6.9 U	6.9 U	6.9 U
Sodium	UG/L	274,000	587,000	280,000	323,000
Thallium	UG/L	6.2 U	6.2 U	6.2 U	6.2 U
Vanadium	UG/L	1.1 U	50.0 U	50.0 U	1.1 U
Zinc	UG/L	50.0 U	50.0 U	50.0 U	50.0 U
Miscellaneous Parameters					
Cyanide, Total	UG/L	7.5 U	7.5 U	7.5 U	7.5 U
Cyanide, Available	MG/L	0.0018 U	0.0018 U	0.0018 U	0.0018 U

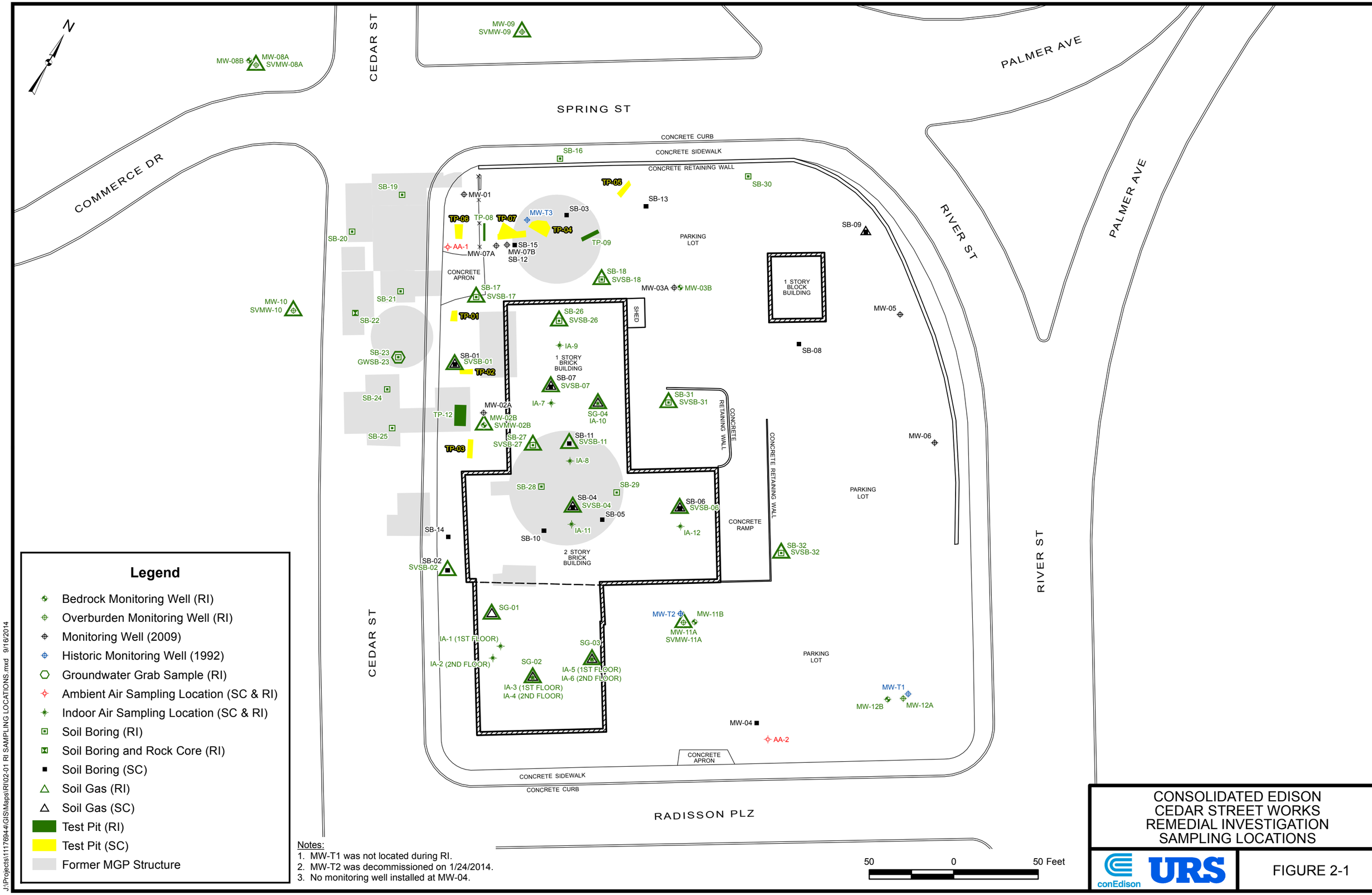
Flags assigned during chemistry validation are shown.

Made By: AMK 06/23/2014; Checked By: GEK 06/24/2014

Detection Limits shown are PQL

Indoor Air and Soil Vapor Data

- Summary of Indoor Air and Soil Vapor Analytical Results (URS 2017)



Legend

- Bedrock Monitoring Well (RI)
- Overburden Monitoring Well (RI)
- Monitoring Well (2009)
- Historic Monitoring Well (1992)
- Groundwater Grab Sample (RI)
- Ambient Air Sampling Location (SC & RI)
- Indoor Air Sampling Location (SC & RI)
- Soil Boring (RI)
- Soil Boring and Rock Core (RI)
- Soil Boring (SC)
- Soil Gas (RI)
- Soil Gas (SC)
- Test Pit (RI)
- Test Pit (SC)
- Former MGP Structure

Notes:
1. MW-T1 was not located during RI.
2. MW-T2 was decommissioned on 1/24/2014.
3. No monitoring well installed at MW-04.

50 0 50 Feet

CONSOLIDATED EDISON CEDAR STREET WORKS REMEDIAL INVESTIGATION SAMPLING LOCATIONS

conEdison URS

FIGURE 2-1

J:\Projects\11176944\GIS\Maps\RI\02-01 RI SAMPLING LOCATIONS.mxd 9/16/2014

TABLE 4-11
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION
AMBIENT AIR, INDOOR AIR, SUBSLAB SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		AA-1	AA-2	IA-1	IA-1	IA-10
Sample ID		AA-1	AA-2	011214-DUP-1	IA-1	IA-10
Matrix		Ambient Air	Ambient Air	Indoor Air	Indoor Air	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/13/14
Parameter	Units			Field Duplicate (1-1)		
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3					
1,1,2,2-Tetrachloroethane	UG/M3					
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.87	0.66	0.62	0.62	1.1
1,1,2-Trichloroethane	UG/M3					
1,1-Dichloroethane	UG/M3					
1,2,4-Trimethylbenzene	UG/M3	0.47	0.28	3.7	5.0	22
1,2-Dichloroethane	UG/M3					
1,2-Dichloroethene (cis)	UG/M3					
1,2-Dichloroethene (trans)	UG/M3			0.70	0.71	
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3			1.1	1.5	6.5
1,4-Dichlorobenzene	UG/M3					
1,4-Dioxane	UG/M3					
2,2,4-Trimethylpentane (Isooctane)	UG/M3	0.57		4.4	4.8	19
2-Butanone	UG/M3			9.3	11	8.4
2-Hexanone	UG/M3				0.88	
4-Ethyltoluene	UG/M3			0.98	1.3	6.1
4-Methyl-2-pentanone	UG/M3				1.7	5.3
Acetone	UG/M3	11 J	11 J	380 J	390 J	270 J
Benzene	UG/M3	0.99	0.76	1.4	1.7	5.2
Carbon disulfide	UG/M3					
Carbon tetrachloride	UG/M3	0.38	0.51	0.48	0.48	0.35
Chloroethane	UG/M3					
Chloroform	UG/M3					0.18
Chloromethane	UG/M3	1.0	0.99	1.2	1.3	1.2
Cyclohexane	UG/M3			0.73	0.85	3.1

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. NJ - Tentative identification of analyte in the sample at an estimated concentration. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-11
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION
AMBIENT AIR, INDOOR AIR, SUBSLAB SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		AA-1	AA-2	IA-1	IA-1	IA-10
Sample ID		AA-1	AA-2	011214-DUP-1	IA-1	IA-10
Matrix		Ambient Air	Ambient Air	Indoor Air	Indoor Air	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/13/14
Parameter	Units			Field Duplicate (1-1)		
Volatile Organic Compounds						
Dichlorodifluoromethane	UG/M3	2.2	2.7	2.6	2.8	3.8
Ethanol	UG/M3	15	13	110	120	170
Ethyl acetate	UG/M3		0.19	0.78	0.97	0.90
Ethylbenzene	UG/M3	0.32	0.21	2.4	3.2	10
Heptane	UG/M3	0.46	0.37	9.2	9.3	32
Hexane	UG/M3					17
Indane	UG/M3				0.54	2.3
Indene	UG/M3					
Isopropanol	UG/M3			49	49	23
Methyl tert-butyl ether	UG/M3			0.33	0.35	
Methylene chloride	UG/M3			2.2	3.6	3.3
Naphthalene	UG/M3		0.21	1.4	1.7	2.6
Styrene	UG/M3	0.17		0.28	0.37	0.44
Tetrachloroethene	UG/M3			4.9	6.7	3.3
Tetrahydrofuran	UG/M3					0.31
Toluene	UG/M3	2.1	1.7	72	97	210
Trichloroethene	UG/M3			0.83	0.88	5.6
Trichlorofluoromethane	UG/M3	1.4	1.5	2.1	2.1	5.9
Vinyl acetate	UG/M3					
Xylene (total)	UG/M3	1.36	0.91	11.1	14.7	56
Total BTEX	UG/M3	4.77	3.58	86.9	116.6	281.2
Total Volatile Organic Compounds	UG/M3	38.29	34.99	673.73	735.05	894.88
Volatile Tentatively Identified Compounds						
2-Methylpentane	UG/M3	4 NJ	3.1 NJ	15 NJ	15 NJ	100 NJ

Flags assigned during chemistry validation are shown.

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Only Detected Results Reported.

TABLE 4-11
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION
AMBIENT AIR, INDOOR AIR, SUBSLAB SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		IA-11	IA-12	IA-2	IA-3	IA-4
Sample ID		IA-11	IA-12	IA-2	IA-3	IA-4
Matrix		Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/13/14
Parameter	**Units**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3					
1,1,2,2-Tetrachloroethane	UG/M3					
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.68	0.56	0.88	0.58	1.2
1,1,2-Trichloroethane	UG/M3					
1,1-Dichloroethane	UG/M3					
1,2,4-Trimethylbenzene	UG/M3	21	15	4.5	3.0	17
1,2-Dichloroethane	UG/M3	0.15		0.59		
1,2-Dichloroethene (cis)	UG/M3					
1,2-Dichloroethene (trans)	UG/M3				0.46	0.31
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	6.1	4.4	1.3	0.92	4.9
1,4-Dichlorobenzene	UG/M3					0.45
1,4-Dioxane	UG/M3					
2,2,4-Trimethylpentane (Isooctane)	UG/M3	17	11	15	3.3	16
2-Butanone	UG/M3	7.3	5.7	8.4	9.2	8.3
2-Hexanone	UG/M3				0.74	0.43
4-Ethyltoluene	UG/M3	5.7	4.0	1.3	0.76	4.6
4-Methyl-2-pentanone	UG/M3	5.1	3.8	1.9	1.3	5.5
Acetone	UG/M3	260 J	230 J	230 J	310 J	400 J
Benzene	UG/M3	4.6	3.5	2.3	1.1	4.4
Carbon disulfide	UG/M3			1.4		
Carbon tetrachloride	UG/M3	0.46	0.50	0.54	0.38	0.47
Chloroethane	UG/M3					
Chloroform	UG/M3			0.18		0.21
Chloromethane	UG/M3	1.0	0.99	1.2	1.0	1.2
Cyclohexane	UG/M3	3.0	2.1	1.9	0.55	2.2

Flags assigned during chemistry validation are shown.

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Only Detected Results Reported.

TABLE 4-11
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION
AMBIENT AIR, INDOOR AIR, SUBSLAB SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		IA-11	IA-12	IA-2	IA-3	IA-4
Sample ID		IA-11	IA-12	IA-2	IA-3	IA-4
Matrix		Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/13/14
Parameter	**Units**					
Volatile Organic Compounds						
Dichlorodifluoromethane	UG/M3	3.8	3.7	3.2	2.4	3.7
Ethanol	UG/M3	150	210	100	95	160
Ethyl acetate	UG/M3	1.1	1.3	7.9		
Ethylbenzene	UG/M3	9.6	6.6	3.0	1.9	10
Heptane	UG/M3	31	24	6.4	6.4	20
Hexane	UG/M3	15	11	53	10	10
Indane	UG/M3	2.1	1.5	0.47		1.8
Indene	UG/M3					
Isopropanol	UG/M3	25	27	32	37	57
Methyl tert-butyl ether	UG/M3				0.23	0.20
Methylene chloride	UG/M3	2.8	2.5	60	1.8	2.1
Naphthalene	UG/M3	2.7	1.9	0.78	1.1	2.3
Styrene	UG/M3	0.38	0.33	0.80	0.24	1.2
Tetrachloroethene	UG/M3	3.3	2.6	1.4	3.6	6.5
Tetrahydrofuran	UG/M3	0.25		0.26		0.24
Toluene	UG/M3	200	150	59	58	130
Trichloroethene	UG/M3	4.6	3.1	0.68	0.64	2.1
Trichlorofluoromethane	UG/M3	5.6	5.0	5.4	1.9	7.4
Vinyl acetate	UG/M3					
Xylene (total)	UG/M3	53	37	14.7	8.9	51
Total BTEX	UG/M3	267.2	197.1	79	69.9	195.4
Total Volatile Organic Compounds	UG/M3	842.32	769.08	620.38	562.4	932.71
Volatile Tentatively Identified Compounds						
2-Methylpentane	UG/M3	92 NJ	62 NJ	46 NJ	15 NJ	57 NJ

Flags assigned during chemistry validation are shown.

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Only Detected Results Reported.

TABLE 4-11
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION
AMBIENT AIR, INDOOR AIR, SUBSLAB SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		IA-5	IA-6	IA-7	IA-8	IA-9
Sample ID		IA-5	IA-6	IA-7	IA-8	IA-9
Matrix		Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/13/14
Parameter	**Units**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3					
1,1,2,2-Tetrachloroethane	UG/M3					
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.90	1.3	0.85	0.92	0.54
1,1,2-Trichloroethane	UG/M3					
1,1-Dichloroethane	UG/M3					
1,2,4-Trimethylbenzene	UG/M3	3.5	13	21	20	23
1,2-Dichloroethane	UG/M3	0.17			0.16	
1,2-Dichloroethene (cis)	UG/M3					
1,2-Dichloroethene (trans)	UG/M3	0.49	0.29			
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	1.1	3.7	6.3	6.1	7.0
1,4-Dichlorobenzene	UG/M3		0.34			
1,4-Dioxane	UG/M3					
2,2,4-Trimethylpentane (Isooctane)	UG/M3	3.9	14	20	19	21
2-Butanone	UG/M3	10	12	7.4	8.0	6.9
2-Hexanone	UG/M3	0.97	0.66		0.70	
4-Ethyltoluene	UG/M3	0.90	3.7	5.9	5.7	6.5
4-Methyl-2-pentanone	UG/M3		4.5	5.1	5.0	5.4
Acetone	UG/M3	330 J	390 J	260 J	260 J	290 J
Benzene	UG/M3	1.3	4.0	4.5	4.4	4.5
Carbon disulfide	UG/M3					
Carbon tetrachloride	UG/M3	0.46	0.30	0.43	0.47	0.44
Chloroethane	UG/M3					
Chloroform	UG/M3		0.19			
Chloromethane	UG/M3	1.1	1.0	1.0	1.1	1.1
Cyclohexane	UG/M3	1.3	1.8	3.2	4.0	3.3

Flags assigned during chemistry validation are shown.

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Only Detected Results Reported.

TABLE 4-11
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION
AMBIENT AIR, INDOOR AIR, SUBSLAB SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		IA-5	IA-6	IA-7	IA-8	IA-9
Sample ID		IA-5	IA-6	IA-7	IA-8	IA-9
Matrix		Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/13/14
Parameter	**Units**					
Volatile Organic Compounds						
Dichlorodifluoromethane	UG/M3	2.6	3.6	3.7	3.7	3.9
Ethanol	UG/M3	110	150	170	170	190
Ethyl acetate	UG/M3	2.2		0.88	2.0	
Ethylbenzene	UG/M3	2.2	7.5	10	9.9	11
Heptane	UG/M3	7.4	17	30	30	33
Hexane	UG/M3		9.3	17	18	17
Indane	UG/M3		1.4	2.2	2.1	2.5
Indene	UG/M3					
Isopropanol	UG/M3	44	50	24	26	28
Methyl tert-butyl ether	UG/M3	0.24	0.18			
Methylene chloride	UG/M3	5.6	1.7	3.4	7.1	3.0
Naphthalene	UG/M3	1.3	1.9	1.9	0.93	3.0
Styrene	UG/M3	0.30	0.94	0.36	0.34	0.48
Tetrachloroethene	UG/M3	4.1	4.9	3.2	3.2	3.4
Tetrahydrofuran	UG/M3	0.11	0.23	0.29	0.30	0.26
Toluene	UG/M3	67	120	200	200	230
Trichloroethene	UG/M3	0.69	1.7	4.9	4.8	5.2
Trichlorofluoromethane	UG/M3	2.2	6.2	6.0	5.8	6.5
Vinyl acetate	UG/M3					
Xylene (total)	UG/M3	10.3	38.9	55	53	59
Total BTEX	UG/M3	80.8	170.4	269.5	267.3	304.5
Total Volatile Organic Compounds	UG/M3	616.33	866.23	868.51	872.72	965.92
Volatile Tentatively Identified Compounds						
2-Methylpentane	UG/M3	13 NJ	52 NJ	100 NJ	99 NJ	100 NJ

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. NJ - Tentative identification of analyte in the sample at an estimated concentration. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-11
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION
AMBIENT AIR, INDOOR AIR, SUBSLAB SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SG-01	SG-01	SG-02	SG-03	SG-04
Sample ID		011314-DUP-1	SG-1	SG-2	SG-3	SG-4
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/14/14	01/14/14	01/13/14	01/13/14	01/13/14
Parameter	Units	Field Duplicate (1-1)				
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3		0.64	4.7	17	14
1,1,2,2-Tetrachloroethane	UG/M3					1.4
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3		1.3		1.3	
1,1,2-Trichloroethane	UG/M3				0.82	
1,1-Dichloroethane	UG/M3			1.1	3.0	
1,2,4-Trimethylbenzene	UG/M3			94	74	2.9
1,2-Dichloroethane	UG/M3			0.77	0.87	
1,2-Dichloroethene (cis)	UG/M3					
1,2-Dichloroethene (trans)	UG/M3					
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3			39	37	
1,4-Dichlorobenzene	UG/M3				1.1	
1,4-Dioxane	UG/M3	27	24		6.9	
2,2,4-Trimethylpentane (Isooctane)	UG/M3		2.2			4.2
2-Butanone	UG/M3			110	73	25
2-Hexanone	UG/M3		0.81	29 J		2.5 J
4-Ethyltoluene	UG/M3		0.49	9.4	6.8	
4-Methyl-2-pentanone	UG/M3			17 J		6.3 J
Acetone	UG/M3	350	620	1,400	1,900	1,400
Benzene	UG/M3	0.77	0.91			
Carbon disulfide	UG/M3	6.2				
Carbon tetrachloride	UG/M3					
Chloroethane	UG/M3		0.64	2.9	4.6	
Chloroform	UG/M3			2.8	2.0	
Chloromethane	UG/M3					
Cyclohexane	UG/M3					

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. NJ - Tentative identification of analyte in the sample at an estimated concentration. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-11
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION
AMBIENT AIR, INDOOR AIR, SUBSLAB SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SG-01	SG-01	SG-02	SG-03	SG-04
Sample ID		011314-DUP-1	SG-1	SG-2	SG-3	SG-4
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/14/14	01/14/14	01/13/14	01/13/14	01/13/14
Parameter	**Units**	Field Duplicate (1-1)				
Volatile Organic Compounds						
Dichlorodifluoromethane	UG/M3	5.0	4.2	7.3	2.9	10
Ethanol	UG/M3	73	69	820	1,500	300
Ethyl acetate	UG/M3					
Ethylbenzene	UG/M3			3.5	14	2.3
Heptane	UG/M3	1.9	3.4	4.5	16	88
Hexane	UG/M3					
Indane	UG/M3			8.1	1.7	
Indene	UG/M3			3.6		
Isopropanol	UG/M3	55	54	210	290	120
Methyl tert-butyl ether	UG/M3					9.9
Methylene chloride	UG/M3	10	11	6.2		7.8
Naphthalene	UG/M3		0.80	18	20	2.3
Styrene	UG/M3			0.66		
Tetrachloroethene	UG/M3	11	9.3	360	210	1,000
Tetrahydrofuran	UG/M3	1.4				
Toluene	UG/M3	37	42	15	14	460
Trichloroethene	UG/M3			13	2.6	17
Trichlorofluoromethane	UG/M3	4.5	3.6	3.6	2.7	79
Vinyl acetate	UG/M3					
Xylene (total)	UG/M3	0.87 J	1.99	23.9	109	10.8
Total BTEX	UG/M3	38.64	44.9	42.4	137	473.1
Total Volatile Organic Compounds	UG/M3	583.64	850.28	3,208.03	4,311.29	3,563.4
Volatile Tentatively Identified Compounds						
2-Methylpentane	UG/M3	NA				

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Only Detected Results Reported.

TABLE 4-11
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION
AMBIENT AIR, INDOOR AIR, SUBSLAB SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-04	SVSB-06	SVSB-07	SVSB-11	SVSB-26
Sample ID		SB-4	SB-6	SB-7	SB-11	SG-26
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/11/14
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3	7.6	1.7	5.9	48	31
1,1,2,2-Tetrachloroethane	UG/M3	1.4				
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3				1.6	
1,1,2-Trichloroethane	UG/M3					
1,1-Dichloroethane	UG/M3				0.83	0.61
1,2,4-Trimethylbenzene	UG/M3	1.6	1.4	3.5	2.1	300
1,2-Dichloroethane	UG/M3			1.6		
1,2-Dichloroethene (cis)	UG/M3			1.6		
1,2-Dichloroethene (trans)	UG/M3					
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3		0.62	1.3	0.87	170
1,4-Dichlorobenzene	UG/M3					
1,4-Dioxane	UG/M3					
2,2,4-Trimethylpentane (Isooctane)	UG/M3			17	3.9	2.3
2-Butanone	UG/M3			33	15	22
2-Hexanone	UG/M3		0.60 J		1.6 J	1.2
4-Ethyltoluene	UG/M3			0.72		7.7
4-Methyl-2-pentanone	UG/M3		0.50 J	18	4.6 J	2.2
Acetone	UG/M3	99	110	350	460	380
Benzene	UG/M3			3.0	8.1	51
Carbon disulfide	UG/M3				3.6	3.9
Carbon tetrachloride	UG/M3					
Chloroethane	UG/M3					
Chloroform	UG/M3	6.0	7.7	1.4	7.4	1.2
Chloromethane	UG/M3			0.76 J	0.47	
Cyclohexane	UG/M3					

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Only Detected Results Reported.

TABLE 4-11
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION
AMBIENT AIR, INDOOR AIR, SUBSLAB SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-04	SVSB-06	SVSB-07	SVSB-11	SVSB-26
Sample ID		SB-4	SB-6	SB-7	SB-11	SG-26
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/11/14
Parameter	**Units**					
Volatile Organic Compounds						
Dichlorodifluoromethane	UG/M3	23	18	3.6	50	6.6
Ethanol	UG/M3	45	21		64	
Ethyl acetate	UG/M3		16		5.8	
Ethylbenzene	UG/M3	0.92	2.4	6.1	2.5	5.4
Heptane	UG/M3	2.3	0.53	17	11	3.9
Hexane	UG/M3					
Indane	UG/M3					37
Indene	UG/M3					270
Isopropanol	UG/M3				20	
Methyl tert-butyl ether	UG/M3					
Methylene chloride	UG/M3			7.2	4.2	3.8
Naphthalene	UG/M3		1.5		14	170
Styrene	UG/M3			0.72	0.71	39
Tetrachloroethene	UG/M3	380	17	370	2,500	460
Tetrahydrofuran	UG/M3					
Toluene	UG/M3	13	10	77	62	100
Trichloroethene	UG/M3	5.8		19	36	1.4
Trichlorofluoromethane	UG/M3	170	49	10	320	59
Vinyl acetate	UG/M3	16	22			
Xylene (total)	UG/M3	4.7	12.4	29.3	10.5	112
Total BTEX	UG/M3	18.62	24.8	115.4	83.1	268.4
Total Volatile Organic Compounds	UG/M3	776.32	292.35	977.7	3,658.78	2,241.21
Volatile Tentatively Identified Compounds						
2-Methylpentane	UG/M3			13 NJ	4.2 NJ	

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Only Detected Results Reported.

TABLE 4-11
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION
AMBIENT AIR, INDOOR AIR, SUBSLAB SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-27
Sample ID		SG-27
Matrix		Soil Gas
Depth Interval (ft)		-
Date Sampled		01/11/14
Parameter	**Units**	
Volatile Organic Compounds		
1,1,1-Trichloroethane	UG/M3	21
1,1,2,2-Tetrachloroethane	UG/M3	
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	
1,1,2-Trichloroethane	UG/M3	
1,1-Dichloroethane	UG/M3	
1,2,4-Trimethylbenzene	UG/M3	4.7
1,2-Dichloroethane	UG/M3	
1,2-Dichloroethene (cis)	UG/M3	
1,2-Dichloroethene (trans)	UG/M3	
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	1.7
1,4-Dichlorobenzene	UG/M3	
1,4-Dioxane	UG/M3	
2,2,4-Trimethylpentane (Isooctane)	UG/M3	1.4
2-Butanone	UG/M3	
2-Hexanone	UG/M3	
4-Ethyltoluene	UG/M3	0.60
4-Methyl-2-pentanone	UG/M3	
Acetone	UG/M3	52
Benzene	UG/M3	
Carbon disulfide	UG/M3	6.5
Carbon tetrachloride	UG/M3	
Chloroethane	UG/M3	
Chloroform	UG/M3	
Chloromethane	UG/M3	
Cyclohexane	UG/M3	

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. NJ - Tentative identification of analyte in the sample at an estimated concentration. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-11
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION
AMBIENT AIR, INDOOR AIR, SUBSLAB SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-27
Sample ID		SG-27
Matrix		Soil Gas
Depth Interval (ft)		-
Date Sampled		01/11/14
Parameter	**Units**	
Volatile Organic Compounds		
Dichlorodifluoromethane	UG/M3	
Ethanol	UG/M3	14
Ethyl acetate	UG/M3	
Ethylbenzene	UG/M3	
Heptane	UG/M3	7.8
Hexane	UG/M3	
Indane	UG/M3	
Indene	UG/M3	2.6
Isopropanol	UG/M3	
Methyl tert-butyl ether	UG/M3	
Methylene chloride	UG/M3	
Naphthalene	UG/M3	210
Styrene	UG/M3	
Tetrachloroethene	UG/M3	2,800
Tetrahydrofuran	UG/M3	
Toluene	UG/M3	36
Trichloroethene	UG/M3	15
Trichlorofluoromethane	UG/M3	73
Vinyl acetate	UG/M3	
Xylene (total)	UG/M3	
Total BTEX	UG/M3	36
Total Volatile Organic Compounds	UG/M3	3,246.3
Volatile Tentatively Identified Compounds		
2-Methylpentane	UG/M3	2.7 NJ

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. NJ - Tentative identification of analyte in the sample at an estimated concentration. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-12A
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION AMBIENT AIR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	No. of Samples	No. of Detections	Range of Detections			Location of Max Value
				Min	Max	Avg	
Volatile Organic Compounds							
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	2	2	0.660	0.870	0.765	AA-1
1,2,4-Trimethylbenzene	UG/M3	2	2	0.280	0.470	0.375	AA-1
2,2,4-Trimethylpentane (Isooctane)	UG/M3	2	1	0.570	0.570	0.570	AA-1
Acetone	UG/M3	2	2	11.00	11.00	11.00	AA-1
Benzene	UG/M3	2	2	0.760	0.990	0.875	AA-1
Carbon tetrachloride	UG/M3	2	2	0.380	0.510	0.445	AA-2
Chloromethane	UG/M3	2	2	0.990	1.00	0.995	AA-1
Dichlorodifluoromethane	UG/M3	2	2	2.20	2.70	2.45	AA-2
Ethanol	UG/M3	2	2	13.00	15.00	14.00	AA-1
Ethyl acetate	UG/M3	2	1	0.190	0.190	0.190	AA-2
Ethylbenzene	UG/M3	2	2	0.210	0.320	0.265	AA-1
Heptane	UG/M3	2	2	0.370	0.460	0.415	AA-1
Naphthalene	UG/M3	2	1	0.210	0.210	0.210	AA-2
Styrene	UG/M3	2	1	0.170	0.170	0.170	AA-1
Toluene	UG/M3	2	2	1.70	2.10	1.90	AA-1
Trichlorofluoromethane	UG/M3	2	2	1.40	1.50	1.45	AA-2
Xylene (total)	UG/M3	2	2	0.910	1.36	1.14	AA-1
Volatile Tentatively Identified Compounds							
2-Methylpentane	UG/M3	2	2	3.10	4.00	3.55	AA-1

Only Detected Results Reported.

TABLE 4-12B
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION INDOOR AIR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	No. of Samples	No. of Detections	Range of Detections			Location of Max Value
				Min	Max	Avg	
Volatile Organic Compounds							
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	13	13	0.540	1.30	0.827	IA-6
1,2,4-Trimethylbenzene	UG/M3	13	13	3.00	23.00	13.21	IA-9
1,2-Dichloroethane	UG/M3	13	4	0.150	0.590	0.268	IA-2
1,2-Dichloroethene (trans)	UG/M3	13	6	0.290	0.710	0.493	IA-1
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	13	13	0.920	7.00	3.92	IA-9
1,4-Dichlorobenzene	UG/M3	13	2	0.340	0.450	0.395	IA-4
2,2,4-Trimethylpentane (Isooctane)	UG/M3	13	13	3.30	21.00	12.95	IA-9
2-Butanone	UG/M3	13	13	5.70	12.00	8.61	IA-6
2-Hexanone	UG/M3	13	6	0.430	0.970	0.730	IA-5
4-Ethyltoluene	UG/M3	13	13	0.760	6.50	3.65	IA-9
4-Methyl-2-pentanone	UG/M3	13	11	1.30	5.50	4.05	IA-4
Acetone	UG/M3	13	13	230.0	400.0	307.7	IA-4
Benzene	UG/M3	13	13	1.10	5.20	3.30	IA-10
Carbon disulfide	UG/M3	13	1	1.40	1.40	1.40	IA-2
Carbon tetrachloride	UG/M3	13	13	0.300	0.540	0.443	IA-2
Chloroform	UG/M3	13	4	0.180	0.210	0.190	IA-4
Chloromethane	UG/M3	13	13	0.990	1.30	1.11	IA-1
Cyclohexane	UG/M3	13	13	0.550	4.00	2.16	IA-8
Dichlorodifluoromethane	UG/M3	13	13	2.40	3.90	3.35	IA-9

Only Detected Results Reported.

TABLE 4-12B
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION INDOOR AIR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	No. of Samples	No. of Detections	Range of Detections			Location of Max Value
				Min	Max	Avg	
Volatile Organic Compounds							
Ethanol	UG/M3	13	13	95.00	210.0	146.5	IA-12
Ethyl acetate	UG/M3	13	9	0.780	7.90	2.00	IA-2
Ethylbenzene	UG/M3	13	13	1.90	11.00	6.72	IA-9
Heptane	UG/M3	13	13	6.40	33.00	19.67	IA-9
Hexane	UG/M3	13	10	9.30	53.00	17.73	IA-2
Indane	UG/M3	13	10	0.470	2.50	1.69	IA-9
Isopropanol	UG/M3	13	13	23.00	57.00	36.23	IA-4
Methyl tert-butyl ether	UG/M3	13	6	0.180	0.350	0.255	IA-1
Methylene chloride	UG/M3	13	13	1.70	60.00	7.62	IA-2
Naphthalene	UG/M3	13	13	0.780	3.00	1.81	IA-9
Styrene	UG/M3	13	13	0.240	1.20	0.497	IA-4
Tetrachloroethene	UG/M3	13	13	1.40	6.70	3.93	IA-1
Tetrahydrofuran	UG/M3	13	9	0.110	0.310	0.250	IA-10
Toluene	UG/M3	13	13	58.00	230.0	137.9	IA-9
Trichloroethene	UG/M3	13	13	0.640	5.60	2.75	IA-10
Trichlorofluoromethane	UG/M3	13	13	1.90	7.40	4.78	IA-4
Xylene (total)	UG/M3	13	13	8.90	59.00	35.58	IA-9
Volatile Tentatively Identified Compounds							
2-Methylpentane	UG/M3	13	13	13.00	100.0	58.92	IA-10

Only Detected Results Reported.

TABLE 4-12C
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SUBSLAB SOIL VAPOR SAMPLES CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	No. of Samples	No. of Detections	Range of Detections			Location of Max Value
				Min	Max	Avg	
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/M3	11	10	0.640	48.00	15.15	SVSB-11
1,1,2,2-Tetrachloroethane	UG/M3	11	2	1.40	1.40	1.40	SVSB-04
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	11	3	1.30	1.60	1.40	SVSB-11
1,1,2-Trichloroethane	UG/M3	11	1	0.820	0.820	0.820	SG-03
1,1-Dichloroethane	UG/M3	11	4	0.610	3.00	1.39	SG-03
1,2,4-Trimethylbenzene	UG/M3	11	9	1.40	300.0	53.80	SVSB-26
1,2-Dichloroethane	UG/M3	11	3	0.770	1.60	1.08	SVSB-07
1,2-Dichloroethene (cis)	UG/M3	11	1	1.60	1.60	1.60	SVSB-07
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	11	7	0.620	170.0	35.78	SVSB-26
1,4-Dichlorobenzene	UG/M3	11	1	1.10	1.10	1.10	SG-03
1,4-Dioxane	UG/M3	11	3	6.90	27.00	19.30	SG-01
2,2,4-Trimethylpentane (Isooctane)	UG/M3	11	6	1.40	17.00	5.17	SVSB-07
2-Butanone	UG/M3	11	6	15.00	110.0	46.33	SG-02
2-Hexanone	UG/M3	11	6	0.600	29.00	5.95	SG-02
4-Ethyltoluene	UG/M3	11	6	0.490	9.40	4.29	SG-02
4-Methyl-2-pentanone	UG/M3	11	6	0.500	18.00	8.10	SVSB-07
Acetone	UG/M3	11	11	52.00	1,900	647.4	SG-03
Benzene	UG/M3	11	5	0.770	51.00	12.76	SVSB-26

Only Detected Results Reported.

TABLE 4-12C
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SUBSLAB SOIL VAPOR SAMPLES CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	No. of Samples	No. of Detections	Range of Detections			Location of Max Value
				Min	Max	Avg	
Volatile Organic Compounds							
Carbon disulfide	UG/M3	11	4	3.60	6.50	5.05	SVSB-27
Chloroethane	UG/M3	11	3	0.640	4.60	2.71	SG-03
Chloroform	UG/M3	11	7	1.20	7.70	4.07	SVSB-06
Chloromethane	UG/M3	11	2	0.470	0.760	0.615	SVSB-07
Dichlorodifluoromethane	UG/M3	11	10	2.90	50.00	13.06	SVSB-11
Ethanol	UG/M3	11	9	14.00	1,500	322.9	SG-03
Ethyl acetate	UG/M3	11	2	5.80	16.00	10.90	SVSB-06
Ethylbenzene	UG/M3	11	8	0.920	14.00	4.64	SG-03
Heptane	UG/M3	11	11	0.530	88.00	14.21	SG-04
Indane	UG/M3	11	3	1.70	37.00	15.60	SVSB-26
Indene	UG/M3	11	3	2.60	270.0	92.07	SVSB-26
Isopropanol	UG/M3	11	6	20.00	290.0	124.8	SG-03
Methyl tert-butyl ether	UG/M3	11	1	9.90	9.90	9.90	SG-04
Methylene chloride	UG/M3	11	7	3.80	11.00	7.17	SG-01
Naphthalene	UG/M3	11	8	0.800	210.0	54.58	SVSB-27
Styrene	UG/M3	11	4	0.660	39.00	10.27	SVSB-26
Tetrachloroethene	UG/M3	11	11	9.30	2,800	737.9	SVSB-27
Tetrahydrofuran	UG/M3	11	1	1.40	1.40	1.40	SG-01

Only Detected Results Reported.

TABLE 4-12C
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SUBSLAB SOIL VAPOR SAMPLES CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	No. of Samples	No. of Detections	Range of Detections			Location of Max Value
				Min	Max	Avg	
Volatile Organic Compounds							
Toluene	UG/M3	11	11	10.00	460.0	78.73	SG-04
Trichloroethene	UG/M3	11	8	1.40	36.00	13.73	SVSB-11
Trichlorofluoromethane	UG/M3	11	11	2.70	320.0	70.40	SVSB-11
Vinyl acetate	UG/M3	11	2	16.00	22.00	19.00	SVSB-06
Xylene (total)	UG/M3	11	10	0.870	112.0	31.55	SVSB-26
Volatile Tentatively Identified Compounds							
2-Methylpentane	UG/M3	10	3	2.70	13.00	6.63	SVSB-07

Only Detected Results Reported.

TABLE 4-13
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVMW-02B	SVMW-08A	SVMW-09	SVMW-10	SVMW-11A
Sample ID		SVMW-02B (6.5-7)	SVMW-08A (6.5-7)	SVMW-09 (6.5-7)	SVMW-10 (6.5-7)	SVMW-11A (6.5-7)
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0
Date Sampled		11/19/13	10/30/13	10/30/13	10/31/13	11/19/13
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3					
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3					
1,1-Dichloroethane	UG/M3		4.8		0.92	0.66
1,2,4-Trimethylbenzene	UG/M3	3.6	30	44	28	13
1,2-Dichloroethene (cis)	UG/M3		1.4			6.9
1,2-Dichloroethene (trans)	UG/M3					1.1
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	1.5	8.1	28	11	5.7
1,3-Butadiene	UG/M3		50			
1,3-Dichlorobenzene	UG/M3					
1,4-Dichlorobenzene	UG/M3					2.3
1,4-Dioxane	UG/M3			36		
2,2,4-Trimethylpentane (Isooctane)	UG/M3	6.1	5.8 J		3.9 J	38
2,3-Dimethylpentane	UG/M3	2.0	3.4	83	3.7	12
2-Butanone	UG/M3	80	46	130	120	47
2-Hexanone	UG/M3	6.9 J	13			5.4 J
4-Ethyltoluene	UG/M3	1.2	13	11	6.1	3.6
4-Methyl-2-pentanone	UG/M3	4.4	8.2			
Acetone	UG/M3	710 J	100 J	560 J	340 J	180 J
Benzene	UG/M3	6.3	46	15	25	5.5
Bromodichloromethane	UG/M3		27		7.6	
Bromoform	UG/M3		11		5.3	
Carbon disulfide	UG/M3		20		7.2	15
Carbon tetrachloride	UG/M3		1.2			

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. NJ - Tentative identification of analyte in the sample at an estimated concentration. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-13
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVMW-02B	SVMW-08A	SVMW-09	SVMW-10	SVMW-11A
Sample ID		SVMW-02B (6.5-7)	SVMW-08A (6.5-7)	SVMW-09 (6.5-7)	SVMW-10 (6.5-7)	SVMW-11A (6.5-7)
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0
Date Sampled		11/19/13	10/30/13	10/30/13	10/31/13	11/19/13
Parameter	Units					
Volatile Organic Compounds						
Chloroethane	UG/M3		1.1			0.47
Chloroform	UG/M3		19		6.2	
Chloromethane	UG/M3	0.77	2.6		1.4	1.8
Cyclohexane	UG/M3		4.8	67	5.8	6.7
Dibromochloromethane	UG/M3		31		8.9	
Dichlorodifluoromethane	UG/M3	2.8	2.6		2.1	2.9
Ethanol	UG/M3	69 J	10 J			40 J
Ethyl Acetate	UG/M3	14			6.9	7.1
Ethylbenzene	UG/M3	2.7	26		370	5.9
Heptane	UG/M3	4.5	20	180	14	12
Hexane	UG/M3		37		28	
Indane	UG/M3		5.3		3.3	2.1 J
Indene	UG/M3					
Isopentane	UG/M3		46	140	83	
Isopropanol	UG/M3	16				11
Methyl tert-butyl ether	UG/M3		0.62			2.1
Methylene Chloride	UG/M3			35		
Naphthalene	UG/M3	3.0	5.5	6.6	5.1	3.1
Propene	UG/M3	11	330			98
Styrene	UG/M3	0.86	74		4.1	3.5
Tetrachloroethene	UG/M3	18	9.8		3.9	3.0
Tetrahydrofuran	UG/M3	0.61				
Toluene	UG/M3	19	43	32	66	35

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. NJ - Tentative identification of analyte in the sample at an estimated concentration. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-13
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVMW-02B	SVMW-08A	SVMW-09	SVMW-10	SVMW-11A
Sample ID		SVMW-02B (6.5-7)	SVMW-08A (6.5-7)	SVMW-09 (6.5-7)	SVMW-10 (6.5-7)	SVMW-11A (6.5-7)
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0
Date Sampled		11/19/13	10/30/13	10/30/13	10/31/13	11/19/13
Parameter	Units					
Volatile Organic Compounds						
Trichloroethene	UG/M3		1.5			0.95
Trichlorofluoromethane	UG/M3	1.7	1.5		1.5	1.4
Vinyl chloride	UG/M3		1.0			1.8
Xylene (total)	UG/M3	14.1	62	97	1,540	39
Total BTEX	UG/M3	42.1	177	144	2,001	85.4
Total Volatile Organic Compounds	UG/M3	1,000.04	1,123.22	1,464.6	2,708.92	613.98
Volatile Tentatively Identified Compounds						
2-Methylpentane	UG/M3	9.8 NJ	28 NJ	70 NJ	14 NJ	20 NJ

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. NJ - Tentative identification of analyte in the sample at an estimated concentration. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-13
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-01	SVSB-02	SVSB-17	SVSB-18	SVSB-31
Sample ID		SVSB-1 (6.5-7)	SVSB-02 (6.5-7)	SVSB-17 (6.5-7)	SVSB-18 (6.5-7)	SVSB-31 (6.5-7)
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0
Date Sampled		11/19/13	11/22/13	11/22/13	11/22/13	11/22/13
Parameter	**Units**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3			2.5		4.7
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3					
1,1-Dichloroethane	UG/M3					
1,2,4-Trimethylbenzene	UG/M3	5.8	21	6.7	3,400	1,000
1,2-Dichloroethene (cis)	UG/M3					
1,2-Dichloroethene (trans)	UG/M3					
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	1.9	9.7	5.0	2,500	800
1,3-Butadiene	UG/M3		2.2	12	13	25
1,3-Dichlorobenzene	UG/M3	1.1				
1,4-Dichlorobenzene	UG/M3					
1,4-Dioxane	UG/M3					
2,2,4-Trimethylpentane (Isooctane)	UG/M3	8.6				
2,3-Dimethylpentane	UG/M3	2.4	2.0	2.5	33	680
2-Butanone	UG/M3	28	18	13	23	46
2-Hexanone	UG/M3	5.7 J		2.0		
4-Ethyltoluene	UG/M3	1.8	5.0	1.2	260	670
4-Methyl-2-pentanone	UG/M3	5.2	1.9			
Acetone	UG/M3	190 J	110 J	110 J	250 J	400 J
Benzene	UG/M3	6.1	5.0	470	7,700	8,000
Bromodichloromethane	UG/M3					
Bromoform	UG/M3					
Carbon disulfide	UG/M3		9.8	16	1,300	31
Carbon tetrachloride	UG/M3					

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. NJ - Tentative identification of analyte in the sample at an estimated concentration. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-13
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-01	SVSB-02	SVSB-17	SVSB-18	SVSB-31
Sample ID		SVSB-1 (6.5-7)	SVSB-02 (6.5-7)	SVSB-17 (6.5-7)	SVSB-18 (6.5-7)	SVSB-31 (6.5-7)
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0
Date Sampled		11/19/13	11/22/13	11/22/13	11/22/13	11/22/13
Parameter	**Units**					
Volatile Organic Compounds						
Chloroethane	UG/M3	0.60				
Chloroform	UG/M3		0.60			
Chloromethane	UG/M3	1.8				
Cyclohexane	UG/M3	4.3	7.1	7.2	140	830
Dibromochloromethane	UG/M3					
Dichlorodifluoromethane	UG/M3	2.8	6.9	9.7	6.0	8.2
Ethanol	UG/M3	34 J	7.5 J	20 J	11 J	28 J
Ethyl Acetate	UG/M3					
Ethylbenzene	UG/M3	3.2	4.1	6.9	1,300	5,600
Heptane	UG/M3	6.6	2.5	4.8	78	7,400
Hexane	UG/M3	23			91	3,200
Indane	UG/M3		3.0		210	190
Indene	UG/M3		2.7		4,300	1,400
Isopentane	UG/M3				110	210
Isopropanol	UG/M3					
Methyl tert-butyl ether	UG/M3					
Methylene Chloride	UG/M3					
Naphthalene	UG/M3	3.4	0.89	4.0	670	480
Propene	UG/M3	40	36	180	170	250
Styrene	UG/M3	17	1.7	1.1	3,100	470
Tetrachloroethene	UG/M3	1.2	8.7	23	25	42
Tetrahydrofuran	UG/M3					
Toluene	UG/M3	19	11	80	20,000	9,300

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. NJ - Tentative identification of analyte in the sample at an estimated concentration. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-13
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-01	SVSB-02	SVSB-17	SVSB-18	SVSB-31
Sample ID		SVSB-1 (6.5-7)	SVSB-02 (6.5-7)	SVSB-17 (6.5-7)	SVSB-18 (6.5-7)	SVSB-31 (6.5-7)
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0
Date Sampled		11/19/13	11/22/13	11/22/13	11/22/13	11/22/13
Parameter	**Units**					
Volatile Organic Compounds						
Trichloroethene	UG/M3					
Trichlorofluoromethane	UG/M3	1.6	26	13	21	59
Vinyl chloride	UG/M3					
Xylene (total)	UG/M3	14.8	31.7	42	25,900	9,900
Total BTEX	UG/M3	43.1	51.8	598.9	54,900	32,800
Total Volatile Organic Compounds	UG/M3	429.9	334.99	1,032.6	71,611	51,023.9
Volatile Tentatively Identified Compounds						
2-Methylpentane	UG/M3	30 NJ	8.5 NJ	9.0 NJ	160 NJ	1,800 NJ

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. NJ - Tentative identification of analyte in the sample at an estimated concentration. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-13
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-32	SVSB-32
Sample ID		111913-Dup-1	SVSB-32 (6.5-7)
Matrix		Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0
Date Sampled		11/19/13	11/19/13
Parameter	**Units**	Field Duplicate (1-1)	
Volatile Organic Compounds			
1,1,1-Trichloroethane	UG/M3		
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.84	
1,1-Dichloroethane	UG/M3		
1,2,4-Trimethylbenzene	UG/M3	8.0	8.9
1,2-Dichloroethene (cis)	UG/M3		
1,2-Dichloroethene (trans)	UG/M3		
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	2.4	2.8
1,3-Butadiene	UG/M3		
1,3-Dichlorobenzene	UG/M3		
1,4-Dichlorobenzene	UG/M3		
1,4-Dioxane	UG/M3		
2,2,4-Trimethylpentane (Isooctane)	UG/M3	3.1	4.3
2,3-Dimethylpentane	UG/M3		2.8
2-Butanone	UG/M3	41	45
2-Hexanone	UG/M3	13 J	14 J
4-Ethyltoluene	UG/M3	2.1	2.3
4-Methyl-2-pentanone	UG/M3	9.8	10
Acetone	UG/M3	180 J	240 J
Benzene	UG/M3	7.0	13
Bromodichloromethane	UG/M3		
Bromoform	UG/M3		
Carbon disulfide	UG/M3	4.2	7.0
Carbon tetrachloride	UG/M3		

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. NJ - Tentative identification of analyte in the sample at an estimated concentration. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-13
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-32	SVSB-32
Sample ID		111913-Dup-1	SVSB-32 (6.5-7)
Matrix		Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0
Date Sampled		11/19/13	11/19/13
Parameter	**Units**	Field Duplicate (1-1)	
Volatile Organic Compounds			
Chloroethane	UG/M3		1.0
Chloroform	UG/M3		
Chloromethane	UG/M3	2.4	3.6
Cyclohexane	UG/M3	3.2	4.9
Dibromochloromethane	UG/M3		
Dichlorodifluoromethane	UG/M3	2.8	2.8
Ethanol	UG/M3	23 J	25 J
Ethyl Acetate	UG/M3		6.9
Ethylbenzene	UG/M3	3.4	4.7
Heptane	UG/M3	6.8	13
Hexane	UG/M3		21
Indane	UG/M3	1.4 J	1.5 J
Indene	UG/M3		
Isopentane	UG/M3		
Isopropanol	UG/M3	11	12
Methyl tert-butyl ether	UG/M3		
Methylene Chloride	UG/M3		
Naphthalene	UG/M3	4.0	4.2
Propene	UG/M3	61	130
Styrene	UG/M3	4.8	6.2
Tetrachloroethene	UG/M3	0.72	0.95
Tetrahydrofuran	UG/M3		0.34
Toluene	UG/M3	34	44

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. NJ - Tentative identification of analyte in the sample at an estimated concentration. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-13
SUMMARY OF DETECTED COMPOUNDS IN REMEDIAL INVESTIGATION SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-32	SVSB-32
Sample ID		111913-Dup-1	SVSB-32 (6.5-7)
Matrix		Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0
Date Sampled		11/19/13	11/19/13
Parameter	**Units**	Field Duplicate (1-1)	
Volatile Organic Compounds			
Trichloroethene	UG/M3		
Trichlorofluoromethane	UG/M3	1.4	1.5
Vinyl chloride	UG/M3	0.80	1.7
Xylene (total)	UG/M3	14.2	18.2
Total BTEX	UG/M3	58.6	79.9
Total Volatile Organic Compounds	UG/M3	446.36	653.59
Volatile Tentatively Identified Compounds			
2-Methylpentane	UG/M3	6.7 NJ	16 NJ

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. NJ - Tentative identification of analyte in the sample at an estimated concentration. Blank cell or ND - Not detected.

Only Detected Results Reported.

TABLE 4-14
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	No. of Samples	No. of Detections	Range of Detections			Location of Max Value
				Min	Max	Avg	
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/M3	12	2	2.50	4.70	3.60	SVSB-31
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	12	1	0.840	0.840	0.840	SVSB-32
1,1-Dichloroethane	UG/M3	12	3	0.660	4.80	2.13	SVMW-08A
1,2,4-Trimethylbenzene	UG/M3	12	12	3.60	3,400	380.8	SVSB-18
1,2-Dichloroethene (cis)	UG/M3	12	2	1.40	6.90	4.15	SVMW-11A
1,2-Dichloroethene (trans)	UG/M3	12	1	1.10	1.10	1.10	SVMW-11A
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	12	12	1.50	2,500	281.3	SVSB-18
1,3-Butadiene	UG/M3	12	5	2.20	50.00	20.44	SVMW-08A
1,3-Dichlorobenzene	UG/M3	12	1	1.10	1.10	1.10	SVSB-01
1,4-Dichlorobenzene	UG/M3	12	1	2.30	2.30	2.30	SVMW-11A
1,4-Dioxane	UG/M3	12	1	36.00	36.00	36.00	SVMW-09
2,2,4-Trimethylpentane (Isooctane)	UG/M3	12	7	3.10	38.00	9.97	SVMW-11A
2,3-Dimethylpentane	UG/M3	12	11	2.00	680.0	75.16	SVSB-31
2-Butanone	UG/M3	12	12	13.00	130.0	53.08	SVMW-09
2-Hexanone	UG/M3	12	7	2.00	14.00	8.57	SVSB-32
4-Ethyltoluene	UG/M3	12	12	1.20	670.0	81.44	SVSB-31
4-Methyl-2-pentanone	UG/M3	12	6	1.90	10.00	6.58	SVSB-32
Acetone	UG/M3	12	12	100.0	710.0	280.8	SVMW-02B

Only Detected Results Reported.

TABLE 4-14
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	No. of Samples	No. of Detections	Range of Detections			Location of Max Value
				Min	Max	Avg	
Volatile Organic Compounds							
Benzene	UG/M3	12	12	5.00	8,000	1,358	SVSB-31
Bromodichloromethane	UG/M3	12	2	7.60	27.00	17.30	SVMW-08A
Bromoform	UG/M3	12	2	5.30	11.00	8.15	SVMW-08A
Carbon disulfide	UG/M3	12	9	4.20	1,300	156.7	SVSB-18
Carbon tetrachloride	UG/M3	12	1	1.20	1.20	1.20	SVMW-08A
Chloroethane	UG/M3	12	4	0.470	1.10	0.793	SVMW-08A
Chloroform	UG/M3	12	3	0.600	19.00	8.60	SVMW-08A
Chloromethane	UG/M3	12	7	0.770	3.60	2.05	SVSB-32
Cyclohexane	UG/M3	12	11	3.20	830.0	98.27	SVSB-31
Dibromochloromethane	UG/M3	12	2	8.90	31.00	19.95	SVMW-08A
Dichlorodifluoromethane	UG/M3	12	11	2.10	9.70	4.51	SVSB-17
Ethanol	UG/M3	12	10	7.50	69.00	26.75	SVMW-02B
Ethyl Acetate	UG/M3	12	4	6.90	14.00	8.73	SVMW-02B
Ethylbenzene	UG/M3	12	11	2.70	5,600	666.1	SVSB-31
Heptane	UG/M3	12	12	2.50	7,400	645.2	SVSB-31
Hexane	UG/M3	12	6	21.00	3,200	566.7	SVSB-31
Indane	UG/M3	12	8	1.40	210.0	52.08	SVSB-18
Indene	UG/M3	12	3	2.70	4,300	1,901	SVSB-18

Only Detected Results Reported.

TABLE 4-14
STATISTICAL SUMMARY OF COMPOUNDS DETECTED IN REMEDIAL INVESTIGATION SOIL VAPOR SAMPLES
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Parameter	Units	No. of Samples	No. of Detections	Range of Detections			Location of Max Value
				Min	Max	Avg	
Volatile Organic Compounds							
Isopentane	UG/M3	12	5	46.00	210.0	117.8	SVSB-31
Isopropanol	UG/M3	12	4	11.00	16.00	12.50	SVMW-02B
Methyl tert-butyl ether	UG/M3	12	2	0.620	2.10	1.36	SVMW-11A
Methylene Chloride	UG/M3	12	1	35.00	35.00	35.00	SVMW-09
Naphthalene	UG/M3	12	12	0.890	670.0	99.15	SVSB-18
Propene	UG/M3	12	10	11.00	330.0	130.6	SVMW-08A
Styrene	UG/M3	12	11	0.860	3,100	334.8	SVSB-18
Tetrachloroethene	UG/M3	12	11	0.720	42.00	12.39	SVSB-31
Tetrahydrofuran	UG/M3	12	2	0.340	0.610	0.475	SVMW-02B
Toluene	UG/M3	12	12	11.00	2.00E+04	2,474	SVSB-18
Trichloroethene	UG/M3	12	2	0.950	1.50	1.23	SVMW-08A
Trichlorofluoromethane	UG/M3	12	11	1.40	59.00	11.78	SVSB-31
Vinyl chloride	UG/M3	12	4	0.800	1.80	1.33	SVMW-11A
Xylene (total)	UG/M3	12	12	14.10	2.59E+04	3,139	SVSB-18
Volatile Tentatively Identified Compounds							
2-Methylpentane	UG/M3	12	12	6.70	1,800	181.0	SVSB-31

Only Detected Results Reported.

Table 4-15
NYSDOH Indoor Air/Soil Vapor Decision Matrices

Soil Vapor/Indoor Air Matrix 1 (for carbon tetrachloride, trichloroethene, vinyl chloride)

	Indoor Air Concentration of Compound (ug/m^3)			
Sub-Slab Vapor Concentration of Compound (ug/m^3)	< 0.25	0.25 to < 1	1 to < 5.0	5.0 and above
< 5	1. No further action	2. Take reasonable and practical actions to identify source(s) and reduce exposures	3. Take reasonable and practical actions to identify source(s) and reduce exposures	4. Take reasonable and practical actions to identify source(s) and reduce exposures
5 to 50	5. No further action	6. Monitor	7. Monitor	8. Mitigate
50 to 250	9. Monitor	10. Monitor/Mitigate	11. Mitigate	12. Mitigate
250 and above	13. Mitigate	14. Mitigate	15. Mitigate	16. Mitigate

Soil Vapor/Indoor Air Matrix 2 (for 1,1-dichloroethene, cis-1,2-dichloroethene, tetrachloroethene, 1,1,1-trichloroethane)

	Indoor Air Concentration of Compound (ug/m^3)			
Sub-Slab Vapor Concentration of Compound (ug/m^3)	< 3	3 to < 30	30 to < 100	100 and above
< 100	1. No further action	2. Take reasonable and practical actions to identify source(s) and reduce exposures	3. Take reasonable and practical actions to identify source(s) and reduce exposures	4. Take reasonable and practical actions to identify source(s) and reduce exposures
100 to <1,000	5. Monitor	6. Monitor/Mitigate	7. Mitigate	8. Mitigate
1,000 and above	9. Mitigate	10. Mitigate	11. Mitigate	12. Mitigate

Table 4-16
NYSDOH Air Matrices Results

		Soil Vapor/Indoor Air Matrix 1			Soil Vapor/Indoor Air Matrix 2			
		Carbon Tetrachloride	TCE	Vinyl Chloride	1,1-DCE	cis-1,2-DCE	PCE	1,1,1-TCA
Showroom/Office Space	IA-1	0.48	0.88	ND	ND	ND	6.7	ND
	IA-2	0.54	0.68	ND	ND	ND	1.4	ND
	SG-1	ND	ND	ND	ND	ND	11	0.64
	IA-3	0.38	0.64	ND	ND	ND	3.6	ND
	IA-4	0.47	2.1	ND	ND	ND	6.5	ND
	SG-2	ND	13	ND	ND	ND	360	4.7
	IA-5	0.46	0.69	ND	ND	ND	4.1	ND
	IA-6	0.3	1.7	ND	ND	ND	4.9	ND
	SG-3	ND	2.6	ND	ND	ND	210	17
Service Area	IA-7	0.43	4.9	ND	ND	ND	3.2	ND
	SVSB-07	ND	19	ND	ND	1.6	370	5.9
	IA-8	0.47	4.8	ND	ND	ND	3.2	ND
	SVSB-11	ND	36	ND	ND	ND	2500	48
	SVSB-27	ND	15	ND	ND	ND	2800	21
	IA-9	0.44	5.2	ND	ND	ND	3.4	ND
	SVSB-26	ND	1.4	ND	ND	ND	460	31
	IA-10	0.35	5.6	ND	ND	ND	3.3	ND
	SG-4	ND	17	ND	ND	ND	1000	14
	IA-11	0.46	4.6	ND	ND	ND	3.3	ND
	SVSB-4	ND	5.8	ND	ND	ND	380	7.6
	IA-12	0.5	3.1	ND	ND	ND	2.6	ND
	SVSB-6	ND	ND	ND	ND	ND	17	1.7

ND: not detected

No further action
Identify source and reduce exposure
Monitor
Monitor/Mitigate
Mitigate

J:\Projects\11176944\Excel\Tables 4-13 and 4-14 NYSDOH Air Matrices.xlsx

N

CEDAR ST

SPRING ST

COMMERCE DR

PALMER AVE

PALMER AVE

RIVER ST

RIVER ST

CONCRETE CURB

CONCRETE SIDEWALK

CONCRETE RETAINING WALL

AA-1
Total VOCs....38
Total MGP.....5
Total Petro...21
Total CFCs.....4

IA-9
Total VOCs...966
Total MGP....340
Total Petro..608
Total CFCs....11

SVSB-07
Total VOCs...978
Total MGP....120
Total Petro..155
Total CFCs....14

IA-7
Total VOCs...869
Total MGP....301
Total Petro..545
Total CFCs....11

SVSB-27
Total VOCs..3246
Total MGP....255
Total Petro..276
Total CFCs....73

SVSB-04
Total VOCs...776
Total MGP.....20
Total Petro...67
Total CFCs...193

IA-11
Total VOCs...842
Total MGP....299
Total Petro..518
Total CFCs....10

SG-01
Total VOCs...850
Total MGP.....46
Total Petro..121
Total CFCs.....9

IA-1 (1ST FLOOR)
Total VOCs...735
Total MGP....125
Total Petro..261
Total CFCs.....5

IA-2 (2ND FLOOR)
Total VOCs...620
Total MGP.....86
Total Petro..263
Total CFCs.....9

IA-3 (1ST FLOOR)
Total VOCs...562
Total MGP.....86
Total Petro..191
Total CFCs.....5

IA-4 (2ND FLOOR)
Total VOCs...934
Total MGP.....75
Total Petro..433
Total CFCs....12

SG-02
Total VOCs...3208
Total MGP.....205
Total Petro..1027
Total CFCs.....11

SVSB-26
Total VOCs..2241
Total MGP...1215
Total Petro..922
Total CFCs....66

SG-04
Total VOCs..3563
Total MGP....478
Total Petro..880
Total CFCs....89

IA-10
Total VOCs...895
Total MGP....315
Total Petro..560
Total CFCs....11

SVSB-11
Total VOCs..3659
Total MGP....100
Total Petro..179
Total CFCs...372

IA-8
Total VOCs...873
Total MGP....296
Total Petro..541
Total CFCs....10

SVSB-06
Total VOCs...292
Total MGP.....28
Total Petro...50
Total CFCs....67

IA-12
Total VOCs...769
Total MGP....220
Total Petro..481
Total CFCs.....9

SG-03
Total VOCs....4311
Total MGP.....270
Total Petro...1791
Total CFCs.....7

IA-6 (2ND FLOOR)
Total VOCs.....866
Total MGP......190
Total Petro....385
Total CFCs......11

IA-5 (1ST FLOOR)
Total VOCs.....616
Total MGP.......87
Total Petro....210
Total CFCs.......6

AA-2
Total VOCs....35
Total MGP.....4
Total Petro...17
Total CFCs.....5

PARKING LOT

PARKING LOT

PARKING LOT

CONCRETE APRON

CONCRETE APRON

SHED

1 STORY BLOCK BUILDING

1 STORY BRICK BUILDING

2 STORY BRICK BUILDING

CONCRETE RETAINING WALL

CONCRETE RETAINING WALL

CONCRETE RAMP

CONCRETE SIDEWALK

CONCRETE CURB

RADISSON PLZ

Legend

- Ambient Air Sampling Location (RI)
- Indoor Air Sampling Location (RI)
- Sub-Slab Soil Vapor Sampling Location (RI)
- Former MGP Structure

Notes:
VOCs - Volatile Organic Compounds
MGP - MGP-related
Petro - Petroleum-related
CFCs - Chlorofluorocarbons
Units - µg/m^3

50 0 50 Feet

CONSOLIDATED EDISON CEDAR STREET WORKS REMEDIAL INVESTIGATION INDOOR AIR/ SUB-SLAB SOIL VAPOR RESULTS

conEdison URS

FIGURE 4-9

J:\Projects\11176944\GIS\Maps\RI\04-08 GS ANALYTICAL.mxd 9/18/2014

N

SVMW-08A
Total VOCs..1123
Total MGP....226
Total Petro..311
Total CFCs...177

SVMW-09
Total VOCs..1465
Total MGP....223
Total Petro..481
Total CFCs....ND

CEDAR ST

SPRING ST

PALMER AVE

COMMERCE DR

CONCRETE CURB
CONCRETE SIDEWALK
CONCRETE RETAINING WALL

RIVER ST

PALMER AVE

SVSB-18
Total VOCs....76611
Total MGP.....65980
Total Petro...62050
Total CFCs.....27

CONCRETE APRON

1 STORY BLOCK BUILDING

SVMW-10
Total VOCs...2709
Total MGP....2048
Total Petro..2103
Total CFCs.....4

SVSB-17
Total VOCs..1033
Total MGP....615
Total Petro..648
Total CFCs....23

SHED

1 STORY BRICK BUILDING

SVSB-31
Total VOCs....51024
Total MGP.....36670
Total Petro...47208
Total CFCs.....67

SVSB-01
Total VOCs...430
Total MGP.....54
Total Petro..133
Total CFCs.....4

CONCRETE RETAINING WALL

CONCRETE RETAINING WALL

SVMW-02B
Total VOCs..1000
Total MGP.....50
Total Petro..131
Total CFCs.....5

PARKING LOT

SVSB-02
Total VOCs...335
Total MGP.....89
Total Petro..105
Total CFCs....33

CONCRETE RAMP

SVSB-32
Total VOCs...654
Total MGP.....97
Total Petro..166
Total CFCs.....4

2 STORY BRICK BUILDING

SVMW-11A
Total VOCs...614
Total MGP....109
Total Petro..210
Total CFCs.....4

PARKING LOT

CEDAR ST

RIVER ST

CONCRETE APRON

CONCRETE SIDEWALK

CONCRETE CURB

RADISSON PLZ

Legend

- Ambient Air Sampling Location (RI)
- Soil Vapor Sampling Location (RI)
- Former MGP Structure

Notes:
VOCs - Volatile Organic Compounds
MGP - MGP-related
Petro - Petroleum-related
CFCs - Chlorofluorocarbons
Units - µg/m^3

50 0 50 Feet

CONSOLIDATED EDISON
CEDAR STREET WORKS
REMEDIAL INVESTIGATION
SOIL VAPOR RESULTS

conEdison URS

FIGURE 4-10

J:\Projects\11176944\GIS\Maps\RI\04-09 GS ANALYTICAL.mxd 9/17/2014

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		AA-1	AA-2	IA-1	IA-1	IA-10
Sample ID		AA-1	AA-2	011214-DUP-1	IA-1	IA-10
Matrix		Ambient Air	Ambient Air	Indoor Air	Indoor Air	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/13/14
Parameter	Units			Field Duplicate (1-1)		
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1,2,2-Tetrachloroethane	UG/M3	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.87	0.66	0.62	0.62	1.1
1,1,2-Trichloroethane	UG/M3	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1-Dichloroethane	UG/M3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,1-Dichloroethene	UG/M3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,4-Trichlorobenzene	UG/M3	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
1,2,4-Trimethylbenzene	UG/M3	0.47	0.28	3.7	5.0	22
1,2-Dibromoethane (Ethylene dibromide)	UG/M3	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dichlorobenzene	UG/M3	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethane	UG/M3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2-Dichloroethene (cis)	UG/M3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2-Dichloroethene (trans)	UG/M3	0.14 U	0.14 U	0.70	0.71	0.14 U
1,2-Dichloropropane	UG/M3	0.16 UJ	0.16 UJ	0.16 UJ	0.16 UJ	0.16 UJ
1,2-Dichlorotetrafluoroethane	UG/M3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	0.17 U	0.17 U	1.1	1.5	6.5
1,3-Butadiene	UG/M3	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U
1,3-Dichlorobenzene	UG/M3	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,3-Dichloropropene (cis)	UG/M3	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,3-Dichloropropene (trans)	UG/M3	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,4-Dichlorobenzene	UG/M3	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,4-Dioxane	UG/M3	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
2,2,4-Trimethylpentane (Isooctane)	UG/M3	0.57	0.44 U	4.4	4.8	19
2,3-Dimethylpentane	UG/M3	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		AA-1	AA-2	IA-1	IA-1	IA-10
Sample ID		AA-1	AA-2	011214-DUP-1	IA-1	IA-10
Matrix		Ambient Air	Ambient Air	Indoor Air	Indoor Air	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/13/14
Parameter	Units			Field Duplicate (1-1)		
Volatile Organic Compounds						
2-Butanone	UG/M3	4.1 U	4.1 U	9.3	11	8.4
2-Hexanone	UG/M3	0.14 U	0.14 U	0.14 U	0.88	0.14 U
4-Ethyltoluene	UG/M3	0.17 U	0.17 U	0.98	1.3	6.1
4-Methyl-2-pentanone	UG/M3	0.14 U	0.14 U	0.14 U	1.7	5.3
Acetone	UG/M3	11 J	11 J	380 J	390 J	270 J
Benzene	UG/M3	0.99	0.76	1.4	1.7	5.2
Benzyl chloride	UG/M3	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromodichloromethane	UG/M3	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Bromoform	UG/M3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Bromomethane	UG/M3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Carbon disulfide	UG/M3	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Carbon tetrachloride	UG/M3	0.38	0.51	0.48	0.48	0.35
Chlorobenzene	UG/M3	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Chloroethane	UG/M3	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U
Chloroform	UG/M3	0.17 U	0.17 U	0.17 U	0.17 U	0.18
Chloromethane	UG/M3	1.0	0.99	1.2	1.3	1.2
Cyclohexane	UG/M3	0.12 U	0.12 U	0.73	0.85	3.1
Dibromochloromethane	UG/M3	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
Dichlorodifluoromethane	UG/M3	2.2	2.7	2.6	2.8	3.8
Ethanol	UG/M3	15	13	110	120	170
Ethyl Acetate	UG/M3	0.13 U	0.19	0.78	0.97	0.90
Ethylbenzene	UG/M3	0.32	0.21	2.4	3.2	10
Heptane	UG/M3	0.46	0.37	9.2	9.3	32
Hexachlorobutadiene	UG/M3	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		AA-1	AA-2	IA-1	IA-1	IA-10
Sample ID		AA-1	AA-2	011214-DUP-1	IA-1	IA-10
Matrix		Ambient Air	Ambient Air	Indoor Air	Indoor Air	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/13/14
Parameter	Units			Field Duplicate (1-1)		
Volatile Organic Compounds						
Hexane	UG/M3	4.9 U	4.9 U	4.9 U	4.9 U	17
Indane	UG/M3	0.44 U	0.44 U	0.44 U	0.54	2.3
Indene	UG/M3	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
Isopentane	UG/M3	NA	NA	NA	NA	NA
Isopropanol	UG/M3	3.4 U	3.4 U	49	49	23
Methyl tert-butyl ether	UG/M3	0.13 U	0.13 U	0.33	0.35	0.13 U
Methylene chloride	UG/M3	1.2 U	1.2 U	2.2	3.6	3.3
Naphthalene	UG/M3	0.18 U	0.21	1.4	1.7	2.6
Propene	UG/M3	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Styrene	UG/M3	0.17	0.15 U	0.28	0.37	0.44
Tetrachloroethene	UG/M3	0.24 U	0.24 U	4.9	6.7	3.3
Tetrahydrofuran	UG/M3	0.10 U	0.10 U	0.10 U	0.10 U	0.31
Toluene	UG/M3	2.1	1.7	72	97	210
Trichloroethene	UG/M3	0.19 U	0.19 U	0.83	0.88	5.6
Trichlorofluoromethane	UG/M3	1.4	1.5	2.1	2.1	5.9
Vinyl Acetate	UG/M3	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Vinyl chloride	UG/M3	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U
Xylene (total)	UG/M3	1.36	0.91	11.1	14.7	56
Volatile Tentatively Identified Compounds						
2-Methylpentane	UG/M3	4 NJ	3.1 NJ	15 NJ	15 NJ	100 NJ
Thiophene	UG/M3	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ
2,3-Dimethylpentane	UG/M3	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ
Isopentane	UG/M3	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		IA-11	IA-12	IA-2	IA-3	IA-4
Sample ID		IA-11	IA-12	IA-2	IA-3	IA-4
Matrix		Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/13/14
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1,2,2-Tetrachloroethane	UG/M3	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.68	0.56	0.88	0.58	1.2
1,1,2-Trichloroethane	UG/M3	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1-Dichloroethane	UG/M3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,1-Dichloroethene	UG/M3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,4-Trichlorobenzene	UG/M3	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
1,2,4-Trimethylbenzene	UG/M3	21	15	4.5	3.0	17
1,2-Dibromoethane (Ethylene dibromide)	UG/M3	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dichlorobenzene	UG/M3	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethane	UG/M3	0.15	0.14 U	0.59	0.14 U	0.14 U
1,2-Dichloroethene (cis)	UG/M3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2-Dichloroethene (trans)	UG/M3	0.14 U	0.14 U	0.14 U	0.46	0.31
1,2-Dichloropropane	UG/M3	0.16 UJ	0.16 UJ	0.16 UJ	0.16 UJ	0.16 UJ
1,2-Dichlorotetrafluoroethane	UG/M3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	6.1	4.4	1.3	0.92	4.9
1,3-Butadiene	UG/M3	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U
1,3-Dichlorobenzene	UG/M3	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,3-Dichloropropene (cis)	UG/M3	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,3-Dichloropropene (trans)	UG/M3	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,4-Dichlorobenzene	UG/M3	0.21 U	0.21 U	0.21 U	0.21 U	0.45
1,4-Dioxane	UG/M3	1.3 U	R	R	1.3 U	1.3 U
2,2,4-Trimethylpentane (Isooctane)	UG/M3	17	11	15	3.3	16
2,3-Dimethylpentane	UG/M3	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		IA-11	IA-12	IA-2	IA-3	IA-4
Sample ID		IA-11	IA-12	IA-2	IA-3	IA-4
Matrix		Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/13/14
Parameter	**Units**					
Volatile Organic Compounds						
2-Butanone	UG/M3	7.3	5.7	8.4	9.2	8.3
2-Hexanone	UG/M3	0.14 U	0.14 U	0.14 U	0.74	0.43
4-Ethyltoluene	UG/M3	5.7	4.0	1.3	0.76	4.6
4-Methyl-2-pentanone	UG/M3	5.1	3.8	1.9	1.3	5.5
Acetone	UG/M3	260 J	230 J	230 J	310 J	400 J
Benzene	UG/M3	4.6	3.5	2.3	1.1	4.4
Benzyl chloride	UG/M3	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromodichloromethane	UG/M3	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Bromoform	UG/M3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Bromomethane	UG/M3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Carbon disulfide	UG/M3	1.1 U	1.1 U	1.4	1.1 U	1.1 U
Carbon tetrachloride	UG/M3	0.46	0.50	0.54	0.38	0.47
Chlorobenzene	UG/M3	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Chloroethane	UG/M3	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U
Chloroform	UG/M3	0.17 U	0.17 U	0.18	0.17 U	0.21
Chloromethane	UG/M3	1.0	0.99	1.2	1.0	1.2
Cyclohexane	UG/M3	3.0	2.1	1.9	0.55	2.2
Dibromochloromethane	UG/M3	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
Dichlorodifluoromethane	UG/M3	3.8	3.7	3.2	2.4	3.7
Ethanol	UG/M3	150	210	100	95	160
Ethyl Acetate	UG/M3	1.1	1.3	7.9	0.13 U	0.13 U
Ethylbenzene	UG/M3	9.6	6.6	3.0	1.9	10
Heptane	UG/M3	31	24	6.4	6.4	20
Hexachlorobutadiene	UG/M3	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		IA-11	IA-12	IA-2	IA-3	IA-4
Sample ID		IA-11	IA-12	IA-2	IA-3	IA-4
Matrix		Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/13/14
Parameter	**Units**					
Volatile Organic Compounds						
Hexane	UG/M3	15	11	53	10	10
Indane	UG/M3	2.1	1.5	0.47	0.44 U	1.8
Indene	UG/M3	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
Isopentane	UG/M3	NA	NA	NA	NA	NA
Isopropanol	UG/M3	25	27	32	37	57
Methyl tert-butyl ether	UG/M3	0.13 U	0.13 U	0.13 U	0.23	0.20
Methylene chloride	UG/M3	2.8	2.5	60	1.8	2.1
Naphthalene	UG/M3	2.7	1.9	0.78	1.1	2.3
Propene	UG/M3	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Styrene	UG/M3	0.38	0.33	0.80	0.24	1.2
Tetrachloroethene	UG/M3	3.3	2.6	1.4	3.6	6.5
Tetrahydrofuran	UG/M3	0.25	0.10 U	0.26	0.10 U	0.24
Toluene	UG/M3	200	150	59	58	130
Trichloroethene	UG/M3	4.6	3.1	0.68	0.64	2.1
Trichlorofluoromethane	UG/M3	5.6	5.0	5.4	1.9	7.4
Vinyl Acetate	UG/M3	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Vinyl chloride	UG/M3	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U
Xylene (total)	UG/M3	53	37	14.7	8.9	51
Volatile Tentatively Identified Compounds						
2-Methylpentane	UG/M3	92 NJ	62 NJ	46 NJ	15 NJ	57 NJ
Thiophene	UG/M3	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ
2,3-Dimethylpentane	UG/M3	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ
Isopentane	UG/M3	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		IA-5	IA-6	IA-7	IA-8	IA-9
Sample ID		IA-5	IA-6	IA-7	IA-8	IA-9
Matrix		Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/13/14
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1,2,2-Tetrachloroethane	UG/M3	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.90	1.3	0.85	0.92	0.54
1,1,2-Trichloroethane	UG/M3	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1-Dichloroethane	UG/M3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,1-Dichloroethene	UG/M3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,4-Trichlorobenzene	UG/M3	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
1,2,4-Trimethylbenzene	UG/M3	3.5	13	21	20	23
1,2-Dibromoethane (Ethylene dibromide)	UG/M3	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dichlorobenzene	UG/M3	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethane	UG/M3	0.17	0.14 U	0.14 U	0.16	0.14 U
1,2-Dichloroethene (cis)	UG/M3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2-Dichloroethene (trans)	UG/M3	0.49	0.29	0.14 U	0.14 U	0.14 U
1,2-Dichloropropane	UG/M3	0.16 UJ	0.16 UJ	0.16 UJ	0.16 UJ	0.16 UJ
1,2-Dichlorotetrafluoroethane	UG/M3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	1.1	3.7	6.3	6.1	7.0
1,3-Butadiene	UG/M3	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U
1,3-Dichlorobenzene	UG/M3	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,3-Dichloropropene (cis)	UG/M3	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,3-Dichloropropene (trans)	UG/M3	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,4-Dichlorobenzene	UG/M3	0.21 U	0.34	0.21 U	0.21 U	0.21 U
1,4-Dioxane	UG/M3	1.3 U	1.3 U	R	1.3 U	1.3 U
2,2,4-Trimethylpentane (Isooctane)	UG/M3	3.9	14	20	19	21
2,3-Dimethylpentane	UG/M3	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		IA-5	IA-6	IA-7	IA-8	IA-9
Sample ID		IA-5	IA-6	IA-7	IA-8	IA-9
Matrix		Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/13/14
Parameter	**Units**					
Volatile Organic Compounds						
2-Butanone	UG/M3	10	12	7.4	8.0	6.9
2-Hexanone	UG/M3	0.97	0.66	0.14 U	0.70	0.14 U
4-Ethyltoluene	UG/M3	0.90	3.7	5.9	5.7	6.5
4-Methyl-2-pentanone	UG/M3	0.14 U	4.5	5.1	5.0	5.4
Acetone	UG/M3	330 J	390 J	260 J	260 J	290 J
Benzene	UG/M3	1.3	4.0	4.5	4.4	4.5
Benzyl chloride	UG/M3	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromodichloromethane	UG/M3	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Bromoform	UG/M3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Bromomethane	UG/M3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Carbon disulfide	UG/M3	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Carbon tetrachloride	UG/M3	0.46	0.30	0.43	0.47	0.44
Chlorobenzene	UG/M3	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Chloroethane	UG/M3	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U
Chloroform	UG/M3	0.17 U	0.19	0.17 U	0.17 U	0.17 U
Chloromethane	UG/M3	1.1	1.0	1.0	1.1	1.1
Cyclohexane	UG/M3	1.3	1.8	3.2	4.0	3.3
Dibromochloromethane	UG/M3	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U
Dichlorodifluoromethane	UG/M3	2.6	3.6	3.7	3.7	3.9
Ethanol	UG/M3	110	150	170	170	190
Ethyl Acetate	UG/M3	2.2	0.13 U	0.88	2.0	0.13 U
Ethylbenzene	UG/M3	2.2	7.5	10	9.9	11
Heptane	UG/M3	7.4	17	30	30	33
Hexachlorobutadiene	UG/M3	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		IA-5	IA-6	IA-7	IA-8	IA-9
Sample ID		IA-5	IA-6	IA-7	IA-8	IA-9
Matrix		Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/13/14	01/13/14	01/13/14	01/13/14	01/13/14
Parameter	**Units**					
Volatile Organic Compounds						
Hexane	UG/M3	4.9 U	9.3	17	18	17
Indane	UG/M3	0.44 U	1.4	2.2	2.1	2.5
Indene	UG/M3	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
Isopentane	UG/M3	NA	NA	NA	NA	NA
Isopropanol	UG/M3	44	50	24	26	28
Methyl tert-butyl ether	UG/M3	0.24	0.18	0.13 U	0.13 U	0.13 U
Methylene chloride	UG/M3	5.6	1.7	3.4	7.1	3.0
Naphthalene	UG/M3	1.3	1.9	1.9	0.93	3.0
Propene	UG/M3	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Styrene	UG/M3	0.30	0.94	0.36	0.34	0.48
Tetrachloroethene	UG/M3	4.1	4.9	3.2	3.2	3.4
Tetrahydrofuran	UG/M3	0.11	0.23	0.29	0.30	0.26
Toluene	UG/M3	67	120	200	200	230
Trichloroethene	UG/M3	0.69	1.7	4.9	4.8	5.2
Trichlorofluoromethane	UG/M3	2.2	6.2	6.0	5.8	6.5
Vinyl Acetate	UG/M3	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Vinyl chloride	UG/M3	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U
Xylene (total)	UG/M3	10.3	38.9	55	53	59
Volatile Tentatively Identified Compounds						
2-Methylpentane	UG/M3	13 NJ	52 NJ	100 NJ	99 NJ	100 NJ
Thiophene	UG/M3	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ
2,3-Dimethylpentane	UG/M3	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ
Isopentane	UG/M3	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SG-01	SG-01	SG-02	SG-03	SG-04
Sample ID		011314-DUP-1	SG-1	SG-2	SG-3	SG-4
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/14/14	01/14/14	01/13/14	01/13/14	01/13/14
Parameter	Units	Field Duplicate (1-1)				
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3	1.1 U	0.64	4.7	17	14
1,1,2,2-Tetrachloroethane	UG/M3	1.4 U	0.69 U	0.69 U	0.69 U	1.4
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	1.5 U	1.3	0.77 U	1.3	1.5 U
1,1,2-Trichloroethane	UG/M3	1.1 U	0.55 U	0.55 U	0.82	1.1 U
1,1-Dichloroethane	UG/M3	0.81 U	0.40 U	1.1	3.0	0.81 U
1,1-Dichloroethene	UG/M3	0.79 U	0.40 U	0.40 U	0.40 U	0.79 U
1,2,4-Trichlorobenzene	UG/M3	1.5 U	0.74 U	0.74 U	0.74 U	1.5 U
1,2,4-Trimethylbenzene	UG/M3	0.98 U	0.49 U	94	74	2.9
1,2-Dibromoethane (Ethylene dibromide)	UG/M3	1.5 U	0.77 U	0.77 U	0.77 U	1.5 U
1,2-Dichlorobenzene	UG/M3	1.2 U	0.60 U	0.60 U	0.60 U	1.2 U
1,2-Dichloroethane	UG/M3	0.81 U	0.40 U	0.77	0.87	0.81 U
1,2-Dichloroethene (cis)	UG/M3	0.79 U	0.40 U	0.40 U	0.40 U	0.79 U
1,2-Dichloroethene (trans)	UG/M3	0.79 U	0.40 U	0.40 U	0.40 U	0.79 U
1,2-Dichloropropane	UG/M3	0.92 U	0.46 U	0.46 U	0.46 U	0.92 U
1,2-Dichlorotetrafluoroethane	UG/M3	1.4 U	0.70 U	0.70 U	0.70 U	1.4 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	0.98 U	0.49 U	39	37	0.98 U
1,3-Butadiene	UG/M3	0.44 U	0.22 U	0.22 U	0.22 U	0.44 U
1,3-Dichlorobenzene	UG/M3	1.2 U	0.60 U	0.60 U	0.60 U	1.2 U
1,3-Dichloropropene (cis)	UG/M3	0.91 U	0.45 U	0.45 U	0.45 U	0.91 U
1,3-Dichloropropene (trans)	UG/M3	0.91 U	0.45 U	0.45 U	0.45 U	0.91 U
1,4-Dichlorobenzene	UG/M3	1.2 U	0.60 U	0.60 U	1.1	1.2 U
1,4-Dioxane	UG/M3	27	24	3.6 U	6.9	7.2 U
2,2,4-Trimethylpentane (Isooctane)	UG/M3	2.5 U	2.2	1.3 U	1.3 U	4.2
2,3-Dimethylpentane	UG/M3	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SG-01	SG-01	SG-02	SG-03	SG-04
Sample ID		011314-DUP-1	SG-1	SG-2	SG-3	SG-4
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/14/14	01/14/14	01/13/14	01/13/14	01/13/14
Parameter	Units	Field Duplicate (1-1)				
Volatile Organic Compounds						
2-Butanone	UG/M3	24 U	12 U	110	73	25
2-Hexanone	UG/M3	0.82 UJ	0.81	29 J	0.41 UJ	2.5 J
4-Ethyltoluene	UG/M3	0.98 U	0.49	9.4	6.8	0.98 U
4-Methyl-2-pentanone	UG/M3	0.82 UJ	0.41 U	17 J	0.41 UJ	6.3 J
Acetone	UG/M3	350	620	1,400	1,900	1,400
Benzene	UG/M3	0.77	0.91	0.32 U	0.32 U	0.64 U
Benzyl chloride	UG/M3	1.0 U	0.52 U	0.52 U	0.52 U	1.0 U
Bromodichloromethane	UG/M3	1.3 U	0.67 U	0.67 U	0.67 U	1.3 U
Bromoform	UG/M3	2.1 U	1.0 U	1.0 U	1.0 U	2.1 U
Bromomethane	UG/M3	0.78 U	0.39 U	0.39 U	0.39 U	0.78 U
Carbon disulfide	UG/M3	6.2	3.1 U	3.1 U	3.1 U	6.2 U
Carbon tetrachloride	UG/M3	1.3 U	0.63 U	0.63 U	0.63 U	1.3 U
Chlorobenzene	UG/M3	0.92 U	0.46 U	0.46 U	0.46 U	0.92 U
Chloroethane	UG/M3	0.53 U	0.64	2.9	4.6	0.53 U
Chloroform	UG/M3	0.98 U	0.49 U	2.8	2.0	0.98 U
Chloromethane	UG/M3	0.83 U	0.41 UJ	0.41 U	0.41 U	0.83 U
Cyclohexane	UG/M3	0.69 U	0.34 U	0.34 U	0.34 U	0.69 U
Dibromochloromethane	UG/M3	1.7 U	0.85 U	0.85 U	0.85 U	1.7 U
Dichlorodifluoromethane	UG/M3	5.0	4.2	7.3	2.9	10
Ethanol	UG/M3	73	69	820	1,500	300
Ethyl Acetate	UG/M3	0.72 U	0.36 U	0.36 U	0.36 U	0.72 U
Ethylbenzene	UG/M3	0.87 U	0.43 U	3.5	14	2.3
Heptane	UG/M3	1.9	3.4	4.5	16	88
Hexachlorobutadiene	UG/M3	2.1 U	1.1 U	1.1 U	1.1 U	2.1 U

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SG-01	SG-01	SG-02	SG-03	SG-04
Sample ID		011314-DUP-1	SG-1	SG-2	SG-3	SG-4
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		-	-	-	-	-
Date Sampled		01/14/14	01/14/14	01/13/14	01/13/14	01/13/14
Parameter	**Units**	Field Duplicate (1-1)				
Volatile Organic Compounds						
Hexane	UG/M3	28 U	14 U	14 U	14 U	28 U
Indane	UG/M3	2.5 U	1.2 U	8.1	1.7	2.5 U
Indene	UG/M3	2.5 U	1.3 U	3.6	1.3 U	2.5 U
Isopentane	UG/M3	NA	NA	NA	NA	NA
Isopropanol	UG/M3	55	54	210	290	120
Methyl tert-butyl ether	UG/M3	0.72 U	0.36 U	0.36 U	0.36 U	9.9
Methylene chloride	UG/M3	10	11	6.2	3.5 U	7.8
Naphthalene	UG/M3	1.0 U	0.80	18	20	2.3
Propene	UG/M3	14 U	6.9 U	6.9 U	6.9 U	14 U
Styrene	UG/M3	0.85 U	0.43 U	0.66	0.43 U	0.85 U
Tetrachloroethene	UG/M3	11	9.3	360	210	1,000
Tetrahydrofuran	UG/M3	1.4	0.29 U	0.29 U	0.29 U	0.59 U
Toluene	UG/M3	37	42	15	14	460
Trichloroethene	UG/M3	1.1 U	0.54 U	13	2.6	17
Trichlorofluoromethane	UG/M3	4.5	3.6	3.6	2.7	79
Vinyl Acetate	UG/M3	14 U	7.0 U	7.0 U	7.0 U	14 U
Vinyl chloride	UG/M3	0.51 U	0.26 U	0.26 U	0.26 U	0.51 U
Xylene (total)	UG/M3	0.87 J	1.99	23.9	109	10.8
Volatile Tentatively Identified Compounds						
2-Methylpentane	UG/M3	NA	0 UJ	0 UJ	0 UJ	0 UJ
Thiophene	UG/M3	NA	0 UJ	0 UJ	0 UJ	0 UJ
2,3-Dimethylpentane	UG/M3	NA	0 UJ	0 UJ	0 UJ	0 UJ
Isopentane	UG/M3	NA	0 UJ	0 UJ	0 UJ	0 UJ

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVMW-02B	SVMW-08A	SVMW-09	SVMW-10	SVMW-11A
Sample ID		SVMW-02B (6.5-7)	SVMW-08A (6.5-7)	SVMW-09 (6.5-7)	SVMW-10 (6.5-7)	SVMW-11A (6.5-7)
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0
Date Sampled		11/19/13	10/30/13	10/30/13	10/31/13	11/19/13
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3	0.55 U	0.55 U	5.5 U	1.1 U	0.55 U
1,1,2,2-Tetrachloroethane	UG/M3	0.69 U	0.69 U	6.9 U	1.4 U	0.69 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.77 U	0.77 U	7.7 U	1.5 U	0.77 U
1,1,2-Trichloroethane	UG/M3	0.55 U	0.55 U	5.5 U	1.1 U	0.55 U
1,1-Dichloroethane	UG/M3	0.40 U	4.8	4.0 U	0.92	0.66
1,1-Dichloroethene	UG/M3	0.40 U	0.40 U	4.0 U	0.79 U	0.40 U
1,2,4-Trichlorobenzene	UG/M3	0.74 U	0.74 U	7.4 U	1.5 U	0.74 U
1,2,4-Trimethylbenzene	UG/M3	3.6	30	44	28	13
1,2-Dibromoethane (Ethylene dibromide)	UG/M3	0.77 U	0.77 U	7.7 U	1.5 U	0.77 U
1,2-Dichlorobenzene	UG/M3	0.60 U	0.60 U	6.0 U	1.2 U	0.60 U
1,2-Dichloroethane	UG/M3	0.40 U	0.40 U	4.0 U	0.81 U	0.40 U
1,2-Dichloroethene (cis)	UG/M3	0.40 U	1.4	4.0 U	0.79 U	6.9
1,2-Dichloroethene (trans)	UG/M3	0.40 U	0.40 U	4.0 U	0.79 U	1.1
1,2-Dichloropropane	UG/M3	0.46 U	0.46 U	4.6 U	0.92 U	0.46 U
1,2-Dichlorotetrafluoroethane	UG/M3	0.70 U	0.70 U	7.0 U	1.4 U	0.70 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	1.5	8.1	28	11	5.7
1,3-Butadiene	UG/M3	0.22 U	50	2.2 U	0.44 U	0.22 U
1,3-Dichlorobenzene	UG/M3	0.60 U	0.60 U	6.0 U	1.2 U	0.60 U
1,3-Dichloropropene (cis)	UG/M3	0.45 U	0.45 U	4.5 U	0.91 U	0.45 U
1,3-Dichloropropene (trans)	UG/M3	0.45 U	0.45 U	4.5 U	0.91 U	0.45 U
1,4-Dichlorobenzene	UG/M3	0.60 U	0.60 U	6.0 U	1.2 U	2.3
1,4-Dioxane	UG/M3	3.6 U	3.6 U	36	7.2 U	R
2,2,4-Trimethylpentane (Isooctane)	UG/M3	6.1	5.8 J	13 U	3.9 J	38
2,3-Dimethylpentane	UG/M3	2.0	3.4	83	3.7	12

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVMW-02B	SVMW-08A	SVMW-09	SVMW-10	SVMW-11A
Sample ID		SVMW-02B (6.5-7)	SVMW-08A (6.5-7)	SVMW-09 (6.5-7)	SVMW-10 (6.5-7)	SVMW-11A (6.5-7)
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0
Date Sampled		11/19/13	10/30/13	10/30/13	10/31/13	11/19/13
Parameter	Units					
Volatile Organic Compounds						
2-Butanone	UG/M3	80	46	130	120	47
2-Hexanone	UG/M3	6.9 J	13	4.1 U	0.82 U	5.4 J
4-Ethyltoluene	UG/M3	1.2	13	11	6.1	3.6
4-Methyl-2-pentanone	UG/M3	4.4	8.2	4.1 U	0.82 U	0.41 U
Acetone	UG/M3	710 J	100 J	560 J	340 J	180 J
Benzene	UG/M3	6.3	46	15	25	5.5
Benzyl chloride	UG/M3	0.52 U	0.52 UJ	5.2 UJ	1.0 UJ	0.52 U
Bromodichloromethane	UG/M3	0.67 U	27	6.7 U	7.6	0.67 U
Bromoform	UG/M3	1.0 U	11	10 U	5.3	1.0 U
Bromomethane	UG/M3	0.39 U	0.39 U	3.9 U	0.78 U	0.39 U
Carbon disulfide	UG/M3	3.1 U	20	31 U	7.2	15
Carbon tetrachloride	UG/M3	0.63 U	1.2	6.3 U	1.3 U	0.63 U
Chlorobenzene	UG/M3	0.46 U	0.46 U	4.6 U	0.92 U	0.46 U
Chloroethane	UG/M3	0.26 U	1.1	2.6 U	0.53 U	0.47
Chloroform	UG/M3	0.49 U	19	4.9 U	6.2	0.49 U
Chloromethane	UG/M3	0.77	2.6	4.1 U	1.4	1.8
Cyclohexane	UG/M3	0.34 U	4.8	67	5.8	6.7
Dibromochloromethane	UG/M3	0.85 U	31	8.5 U	8.9	0.85 U
Dichlorodifluoromethane	UG/M3	2.8	2.6	4.9 U	2.1	2.9
Ethanol	UG/M3	69 J	10 J	75 U	15 U	40 J
Ethyl Acetate	UG/M3	14	0.36 U	3.6 U	6.9	7.1
Ethylbenzene	UG/M3	2.7	26	4.3 U	370	5.9
Heptane	UG/M3	4.5	20	180	14	12
Hexachlorobutadiene	UG/M3	1.1 U	1.1 U	11 U	2.1 U	1.1 U

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVMW-02B	SVMW-08A	SVMW-09	SVMW-10	SVMW-11A
Sample ID		SVMW-02B (6.5-7)	SVMW-08A (6.5-7)	SVMW-09 (6.5-7)	SVMW-10 (6.5-7)	SVMW-11A (6.5-7)
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0	6.5-7.0
Date Sampled		11/19/13	10/30/13	10/30/13	10/31/13	11/19/13
Parameter	Units					
Volatile Organic Compounds						
Hexane	UG/M3	14 U	37	140 U	28	14 U
Indane	UG/M3	1.2 U	5.3	12 U	3.3	2.1 J
Indene	UG/M3	1.3 U	1.3 U	13 U	2.5 U	1.3 U
Isopentane	UG/M3	2.2 U	46	140	83	2.2 U
Isopropanol	UG/M3	16	9.8 U	98 U	20 U	11
Methyl tert-butyl ether	UG/M3	0.36 U	0.62	3.6 U	0.72 U	2.1
Methylene chloride	UG/M3	3.5 U	3.5 U	35	6.9 U	3.5 U
Naphthalene	UG/M3	3.0	5.5	6.6	5.1	3.1
Propene	UG/M3	11	330	69 U	14 U	98
Styrene	UG/M3	0.86	74	4.3 U	4.1	3.5
Tetrachloroethene	UG/M3	18	9.8	6.8 U	3.9	3.0
Tetrahydrofuran	UG/M3	0.61	0.29 U	2.9 U	0.59 U	0.29 U
Toluene	UG/M3	19	43	32	66	35
Trichloroethene	UG/M3	0.54 U	1.5	5.4 U	1.1 U	0.95
Trichlorofluoromethane	UG/M3	1.7	1.5	5.6 U	1.5	1.4
Vinyl Acetate	UG/M3	7.0 U	7.0 U	70 U	14 U	7.0 U
Vinyl chloride	UG/M3	0.26 U	1.0	2.6 U	0.51 U	1.8
Xylene (total)	UG/M3	14.1	62	97	1,540	39
Volatile Tentatively Identified Compounds						
2-Methylpentane	UG/M3	9.8 NJ	28 NJ	70 NJ	14 NJ	20 NJ
Thiophene	UG/M3	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ
2,3-Dimethylpentane	UG/M3	NA	NA	NA	NA	NA
Isopentane	UG/M3	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-01	SVSB-02	SVSB-04	SVSB-06	SVSB-07
Sample ID		SVSB-1 (6.5-7)	SVSB-02 (6.5-7)	SB-4	SB-6	SB-7
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0	-	-	-
Date Sampled		11/19/13	11/22/13	01/13/14	01/13/14	01/13/14
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3	0.55 U	0.55 U	7.6	1.7	5.9
1,1,2,2-Tetrachloroethane	UG/M3	0.69 U	0.69 U	1.4	0.69 U	0.69 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.77 U	0.77 U	1.5 U	0.77 U	0.77 U
1,1,2-Trichloroethane	UG/M3	0.55 U	0.55 U	1.1 U	0.55 U	0.55 U
1,1-Dichloroethane	UG/M3	0.40 U	0.40 U	0.81 U	0.40 U	0.40 U
1,1-Dichloroethene	UG/M3	0.40 U	0.40 U	0.79 U	0.40 U	0.40 U
1,2,4-Trichlorobenzene	UG/M3	0.74 U	0.74 U	1.5 U	0.74 U	0.74 U
1,2,4-Trimethylbenzene	UG/M3	5.8	21	1.6	1.4	3.5
1,2-Dibromoethane (Ethylene dibromide)	UG/M3	0.77 U	0.77 U	1.5 U	0.77 U	0.77 U
1,2-Dichlorobenzene	UG/M3	0.60 U	0.60 U	1.2 U	0.60 U	0.60 U
1,2-Dichloroethane	UG/M3	0.40 U	0.40 U	0.81 U	0.40 U	1.6
1,2-Dichloroethene (cis)	UG/M3	0.40 U	0.40 U	0.79 U	0.40 U	1.6
1,2-Dichloroethene (trans)	UG/M3	0.40 U	0.40 U	0.79 U	0.40 U	0.40 U
1,2-Dichloropropane	UG/M3	0.46 U	0.46 U	0.92 U	0.46 U	0.46 U
1,2-Dichlorotetrafluoroethane	UG/M3	0.70 U	0.70 U	1.4 U	0.70 U	0.70 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	1.9	9.7	0.98 U	0.62	1.3
1,3-Butadiene	UG/M3	0.22 U	2.2	0.44 U	0.22 U	0.22 U
1,3-Dichlorobenzene	UG/M3	1.1	0.60 U	1.2 U	0.60 U	0.60 U
1,3-Dichloropropene (cis)	UG/M3	0.45 U	0.45 U	0.91 U	0.45 U	0.45 U
1,3-Dichloropropene (trans)	UG/M3	0.45 U	0.45 U	0.91 U	0.45 U	0.45 U
1,4-Dichlorobenzene	UG/M3	0.60 U	0.60 U	1.2 U	0.60 U	0.60 U
1,4-Dioxane	UG/M3	3.6 U	3.6 U	7.2 U	R	3.6 U
2,2,4-Trimethylpentane (Isooctane)	UG/M3	8.6	1.3 U	2.5 U	1.3 U	17
2,3-Dimethylpentane	UG/M3	2.4	2.0	NA	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-01	SVSB-02	SVSB-04	SVSB-06	SVSB-07
Sample ID		SVSB-1 (6.5-7)	SVSB-02 (6.5-7)	SB-4	SB-6	SB-7
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0	-	-	-
Date Sampled		11/19/13	11/22/13	01/13/14	01/13/14	01/13/14
Parameter	**Units**					
Volatile Organic Compounds						
2-Butanone	UG/M3	28	18	24 U	12 U	33
2-Hexanone	UG/M3	5.7 J	0.41 U	0.82 UJ	0.60 J	0.41 U
4-Ethyltoluene	UG/M3	1.8	5.0	0.98 U	0.49 U	0.72
4-Methyl-2-pentanone	UG/M3	5.2	1.9	0.82 UJ	0.50 J	18
Acetone	UG/M3	190 J	110 J	99	110	350
Benzene	UG/M3	6.1	5.0	0.64 U	0.32 U	3.0
Benzyl chloride	UG/M3	0.52 U	0.52 U	1.0 U	0.52 U	0.52 U
Bromodichloromethane	UG/M3	0.67 U	0.67 U	1.3 U	0.67 U	0.67 U
Bromoform	UG/M3	1.0 U	1.0 U	2.1 U	1.0 U	1.0 U
Bromomethane	UG/M3	0.39 U	0.39 U	0.78 U	0.39 U	0.39 U
Carbon disulfide	UG/M3	3.1 U	9.8	6.2 U	3.1 U	3.1 U
Carbon tetrachloride	UG/M3	0.63 U	0.63 U	1.3 U	0.63 U	0.63 U
Chlorobenzene	UG/M3	0.46 U	0.46 U	0.92 U	0.46 U	0.46 U
Chloroethane	UG/M3	0.60	0.26 U	0.53 U	0.26 U	0.26 U
Chloroform	UG/M3	0.49 U	0.60	6.0	7.7	1.4
Chloromethane	UG/M3	1.8	0.41 U	0.83 U	0.41 U	0.76 J
Cyclohexane	UG/M3	4.3	7.1	0.69 U	0.34 U	0.34 U
Dibromochloromethane	UG/M3	0.85 U	0.85 U	1.7 U	0.85 U	0.85 U
Dichlorodifluoromethane	UG/M3	2.8	6.9	23	18	3.6
Ethanol	UG/M3	34 J	7.5 J	45	21	7.5 U
Ethyl Acetate	UG/M3	0.36 U	0.36 U	0.72 U	16	0.36 U
Ethylbenzene	UG/M3	3.2	4.1	0.92	2.4	6.1
Heptane	UG/M3	6.6	2.5	2.3	0.53	17
Hexachlorobutadiene	UG/M3	1.1 U	1.1 U	2.1 U	1.1 U	1.1 U

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-01	SVSB-02	SVSB-04	SVSB-06	SVSB-07
Sample ID		SVSB-1 (6.5-7)	SVSB-02 (6.5-7)	SB-4	SB-6	SB-7
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0	-	-	-
Date Sampled		11/19/13	11/22/13	01/13/14	01/13/14	01/13/14
Parameter	**Units**					
Volatile Organic Compounds						
Hexane	UG/M3	23	14 U	28 U	14 U	14 U
Indane	UG/M3	1.2 U	3.0	2.5 U	1.2 U	1.2 U
Indene	UG/M3	1.3 U	2.7	2.5 U	1.3 U	1.3 U
Isopentane	UG/M3	2.2 U	2.2 U	NA	NA	NA
Isopropanol	UG/M3	9.8 U	9.8 UJ	20 U	9.8 U	9.8 U
Methyl tert-butyl ether	UG/M3	0.36 U	0.36 U	0.72 U	0.36 U	0.36 U
Methylene chloride	UG/M3	3.5 U	3.5 U	6.9 U	3.5 U	7.2
Naphthalene	UG/M3	3.4	0.89	1.0 U	1.5	0.52 U
Propene	UG/M3	40	36	14 U	6.9 U	6.9 U
Styrene	UG/M3	17	1.7	0.85 U	0.43 U	0.72
Tetrachloroethene	UG/M3	1.2	8.7	380	17	370
Tetrahydrofuran	UG/M3	0.29 U	0.29 U	0.59 U	0.29 U	0.29 U
Toluene	UG/M3	19	11	13	10	77
Trichloroethene	UG/M3	0.54 U	0.54 U	5.8	0.54 U	19
Trichlorofluoromethane	UG/M3	1.6	26	170	49	10
Vinyl Acetate	UG/M3	7.0 U	7.0 U	16	22	7.0 U
Vinyl chloride	UG/M3	0.26 U	0.26 U	0.51 U	0.26 U	0.26 U
Xylene (total)	UG/M3	14.8	31.7	4.7	12.4	29.3
Volatile Tentatively Identified Compounds						
2-Methylpentane	UG/M3	30 NJ	8.5 NJ	0 UJ	0 UJ	13 NJ
Thiophene	UG/M3	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ
2,3-Dimethylpentane	UG/M3	NA	NA	0 UJ	0 UJ	0 UJ
Isopentane	UG/M3	NA	NA	0 UJ	0 UJ	0 UJ

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-11	SVSB-17	SVSB-18	SVSB-26	SVSB-27
Sample ID		SB-11	SVSB-17 (6.5-7)	SVSB-18 (6.5-7)	SG-26	SG-27
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		-	6.5-7.0	6.5-7.0	-	-
Date Sampled		01/13/14	11/22/13	11/22/13	01/11/14	01/11/14
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/M3	48	2.5	0.55 U	31	21
1,1,2,2-Tetrachloroethane	UG/M3	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	1.6	0.77 U	0.77 U	0.77 U	0.77 U
1,1,2-Trichloroethane	UG/M3	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U
1,1-Dichloroethane	UG/M3	0.83	0.40 U	0.40 U	0.61	0.40 U
1,1-Dichloroethene	UG/M3	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
1,2,4-Trichlorobenzene	UG/M3	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
1,2,4-Trimethylbenzene	UG/M3	2.1	6.7	3,400	300	4.7
1,2-Dibromoethane (Ethylene dibromide)	UG/M3	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U
1,2-Dichlorobenzene	UG/M3	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloroethane	UG/M3	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
1,2-Dichloroethene (cis)	UG/M3	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
1,2-Dichloroethene (trans)	UG/M3	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
1,2-Dichloropropane	UG/M3	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
1,2-Dichlorotetrafluoroethane	UG/M3	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	0.87	5.0	2,500	170	1.7
1,3-Butadiene	UG/M3	0.22 U	12	13	0.22 U	0.22 U
1,3-Dichlorobenzene	UG/M3	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U
1,3-Dichloropropene (cis)	UG/M3	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
1,3-Dichloropropene (trans)	UG/M3	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
1,4-Dichlorobenzene	UG/M3	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U
1,4-Dioxane	UG/M3	3.6 U	R	3.6 U	3.6 U	3.6 U
2,2,4-Trimethylpentane (Isooctane)	UG/M3	3.9	1.3 U	1.3 U	2.3	1.4
2,3-Dimethylpentane	UG/M3	NA	2.5	33	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-11	SVSB-17	SVSB-18	SVSB-26	SVSB-27
Sample ID		SB-11	SVSB-17 (6.5-7)	SVSB-18 (6.5-7)	SG-26	SG-27
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		-	6.5-7.0	6.5-7.0	-	-
Date Sampled		01/13/14	11/22/13	11/22/13	01/11/14	01/11/14
Parameter	Units					
Volatile Organic Compounds						
2-Butanone	UG/M3	15	13	23	22	12 U
2-Hexanone	UG/M3	1.6 J	2.0	0.41 U	1.2	0.41 UJ
4-Ethyltoluene	UG/M3	0.49 U	1.2	260	7.7	0.60
4-Methyl-2-pentanone	UG/M3	4.6 J	0.41 U	0.41 U	2.2	0.41 UJ
Acetone	UG/M3	460	110 J	250 J	380	52
Benzene	UG/M3	8.1	470	7,700	51	0.32 U
Benzyl chloride	UG/M3	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
Bromodichloromethane	UG/M3	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
Bromoform	UG/M3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	UG/M3	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U
Carbon disulfide	UG/M3	3.6	16	1,300	3.9	6.5
Carbon tetrachloride	UG/M3	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Chlorobenzene	UG/M3	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
Chloroethane	UG/M3	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Chloroform	UG/M3	7.4	0.49 U	0.49 U	1.2	0.49 U
Chloromethane	UG/M3	0.47	0.41 U	0.41 U	0.41 UJ	0.41 U
Cyclohexane	UG/M3	0.34 U	7.2	140	0.34 U	0.34 U
Dibromochloromethane	UG/M3	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Dichlorodifluoromethane	UG/M3	50	9.7	6.0	6.6	0.49 U
Ethanol	UG/M3	64	20 J	11 J	7.5 U	14
Ethyl Acetate	UG/M3	5.8	0.36 U	0.36 U	0.36 U	0.36 U
Ethylbenzene	UG/M3	2.5	6.9	1,300	5.4	0.43 U
Heptane	UG/M3	11	4.8	78	3.9	7.8
Hexachlorobutadiene	UG/M3	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-11	SVSB-17	SVSB-18	SVSB-26	SVSB-27
Sample ID		SB-11	SVSB-17 (6.5-7)	SVSB-18 (6.5-7)	SG-26	SG-27
Matrix		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		-	6.5-7.0	6.5-7.0	-	-
Date Sampled		01/13/14	11/22/13	11/22/13	01/11/14	01/11/14
Parameter	Units					
Volatile Organic Compounds						
Hexane	UG/M3	14 U	14 U	91	14 U	14 U
Indane	UG/M3	1.2 U	1.2 U	210	37	1.2 U
Indene	UG/M3	1.3 U	1.3 U	4,300	270	2.6
Isopentane	UG/M3	NA	2.2 U	110	NA	NA
Isopropanol	UG/M3	20	9.8 UJ	9.8 UJ	9.8 U	9.8 U
Methyl tert-butyl ether	UG/M3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Methylene chloride	UG/M3	4.2	3.5 U	3.5 U	3.8	3.5 U
Naphthalene	UG/M3	14	4.0	670	170	210
Propene	UG/M3	6.9 U	180	170	6.9 U	6.9 U
Styrene	UG/M3	0.71	1.1	3,100	39	0.43 U
Tetrachloroethene	UG/M3	2,500	23	25	460	2,800
Tetrahydrofuran	UG/M3	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
Toluene	UG/M3	62	80	20,000	100	36
Trichloroethene	UG/M3	36	0.54 U	0.54 U	1.4	15
Trichlorofluoromethane	UG/M3	320	13	21	59	73
Vinyl Acetate	UG/M3	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U
Vinyl chloride	UG/M3	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Xylene (total)	UG/M3	10.5	42	25,900	112	0.87 U
Volatile Tentatively Identified Compounds						
2-Methylpentane	UG/M3	4.2 NJ	9.0 NJ	160 NJ	0 UJ	2.7 NJ
Thiophene	UG/M3	0 UJ	0 UJ	0 UJ	0 UJ	0 UJ
2,3-Dimethylpentane	UG/M3	0 UJ	NA	NA	0 UJ	0 UJ
Isopentane	UG/M3	0 UJ	NA	NA	0 UJ	0 UJ

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-31	SVSB-32	SVSB-32
Sample ID		SVSB-31 (6.5-7)	111913-Dup-1	SVSB-32 (6.5-7)
Matrix		Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0	6.5-7.0
Date Sampled		11/22/13	11/19/13	11/19/13
Parameter	Units		Field Duplicate (1-1)	
Volatile Organic Compounds				
1,1,1-Trichloroethane	UG/M3	4.7	0.55 U	0.55 U
1,1,2,2-Tetrachloroethane	UG/M3	0.69 U	0.69 U	0.69 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/M3	0.77 U	0.84	0.77 U
1,1,2-Trichloroethane	UG/M3	0.55 U	0.55 U	0.55 U
1,1-Dichloroethane	UG/M3	0.40 U	0.40 U	0.40 U
1,1-Dichloroethene	UG/M3	0.40 U	0.40 U	0.40 U
1,2,4-Trichlorobenzene	UG/M3	0.74 U	0.74 U	0.74 U
1,2,4-Trimethylbenzene	UG/M3	1,000	8.0	8.9
1,2-Dibromoethane (Ethylene dibromide)	UG/M3	0.77 U	0.77 U	0.77 U
1,2-Dichlorobenzene	UG/M3	0.60 U	0.60 U	0.60 U
1,2-Dichloroethane	UG/M3	0.40 U	0.40 U	0.40 U
1,2-Dichloroethene (cis)	UG/M3	0.40 U	0.40 U	0.40 U
1,2-Dichloroethene (trans)	UG/M3	0.40 U	0.40 U	0.40 U
1,2-Dichloropropane	UG/M3	0.46 U	0.46 U	0.46 U
1,2-Dichlorotetrafluoroethane	UG/M3	0.70 U	0.70 U	0.70 U
1,3,5-Trimethylbenzene (Mesitylene)	UG/M3	800	2.4	2.8
1,3-Butadiene	UG/M3	25	0.22 U	0.22 U
1,3-Dichlorobenzene	UG/M3	0.60 U	0.60 U	0.60 U
1,3-Dichloropropene (cis)	UG/M3	0.45 U	0.45 U	0.45 U
1,3-Dichloropropene (trans)	UG/M3	0.45 U	0.45 U	0.45 U
1,4-Dichlorobenzene	UG/M3	0.60 U	0.60 U	0.60 U
1,4-Dioxane	UG/M3	3.6 U	3.6 U	3.6 U
2,2,4-Trimethylpentane (Isooctane)	UG/M3	1.3 U	3.1	4.3
2,3-Dimethylpentane	UG/M3	680	1.5 U	2.8

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-31	SVSB-32	SVSB-32
Sample ID		SVSB-31 (6.5-7)	111913-Dup-1	SVSB-32 (6.5-7)
Matrix		Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0	6.5-7.0
Date Sampled		11/22/13	11/19/13	11/19/13
Parameter	Units		Field Duplicate (1-1)	
Volatile Organic Compounds				
2-Butanone	UG/M3	46	41	45
2-Hexanone	UG/M3	0.41 U	13 J	14 J
4-Ethyltoluene	UG/M3	670	2.1	2.3
4-Methyl-2-pentanone	UG/M3	0.41 U	9.8	10
Acetone	UG/M3	400 J	180 J	240 J
Benzene	UG/M3	8,000	7.0	13
Benzyl chloride	UG/M3	0.52 U	0.52 U	0.52 U
Bromodichloromethane	UG/M3	0.67 U	0.67 U	0.67 U
Bromoform	UG/M3	1.0 U	1.0 U	1.0 U
Bromomethane	UG/M3	0.39 U	0.39 U	0.39 U
Carbon disulfide	UG/M3	31	4.2	7.0
Carbon tetrachloride	UG/M3	0.63 U	0.63 U	0.63 U
Chlorobenzene	UG/M3	0.46 U	0.46 U	0.46 U
Chloroethane	UG/M3	0.26 U	0.26 U	1.0
Chloroform	UG/M3	0.49 U	0.49 U	0.49 U
Chloromethane	UG/M3	0.41 U	2.4	3.6
Cyclohexane	UG/M3	830	3.2	4.9
Dibromochloromethane	UG/M3	0.85 U	0.85 U	0.85 U
Dichlorodifluoromethane	UG/M3	8.2	2.8	2.8
Ethanol	UG/M3	28 J	23 J	25 J
Ethyl Acetate	UG/M3	0.36 U	0.36 U	6.9
Ethylbenzene	UG/M3	5,600	3.4	4.7
Heptane	UG/M3	7,400	6.8	13
Hexachlorobutadiene	UG/M3	1.1 U	1.1 U	1.1 U

Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

TABLE 2
VALIDATED AMBIENT AIR AND SOIL GAS SAMPLE RESULTS
CEDAR STREET WORKS FORMER MGP SITE - CONSOLIDATED EDISON COMPANY

Location ID		SVSB-31	SVSB-32	SVSB-32
Sample ID		SVSB-31 (6.5-7)	111913-Dup-1	SVSB-32 (6.5-7)
Matrix		Soil Gas	Soil Gas	Soil Gas
Depth Interval (ft)		6.5-7.0	6.5-7.0	6.5-7.0
Date Sampled		11/22/13	11/19/13	11/19/13
Parameter	Units		Field Duplicate (1-1)	
Volatile Organic Compounds				
Hexane	UG/M3	3,200	14 U	21
Indane	UG/M3	190	1.4 J	1.5 J
Indene	UG/M3	1,400	1.3 U	1.3 U
Isopentane	UG/M3	210	2.2 U	2.2 U
Isopropanol	UG/M3	9.8 UJ	11	12
Methyl tert-butyl ether	UG/M3	0.36 U	0.36 U	0.36 U
Methylene chloride	UG/M3	3.5 U	3.5 U	3.5 U
Naphthalene	UG/M3	480	4.0	4.2
Propene	UG/M3	250	61	130
Styrene	UG/M3	470	4.8	6.2
Tetrachloroethene	UG/M3	42	0.72	0.95
Tetrahydrofuran	UG/M3	0.29 U	0.29 U	0.34
Toluene	UG/M3	9,300	34	44
Trichloroethene	UG/M3	0.54 U	0.54 U	0.54 U
Trichlorofluoromethane	UG/M3	59	1.4	1.5
Vinyl Acetate	UG/M3	7.0 U	7.0 U	7.0 U
Vinyl chloride	UG/M3	0.26 U	0.80	1.7
Xylene (total)	UG/M3	9,900	14.2	18.2
Volatile Tentatively Identified Compounds				
2-Methylpentane	UG/M3	1,800 NJ	6.7 NJ	16 NJ
Thiophene	UG/M3	0 UJ	0 UJ	0 UJ
2,3-Dimethylpentane	UG/M3	NA	NA	NA
Isopentane	UG/M3	NA	NA	NA

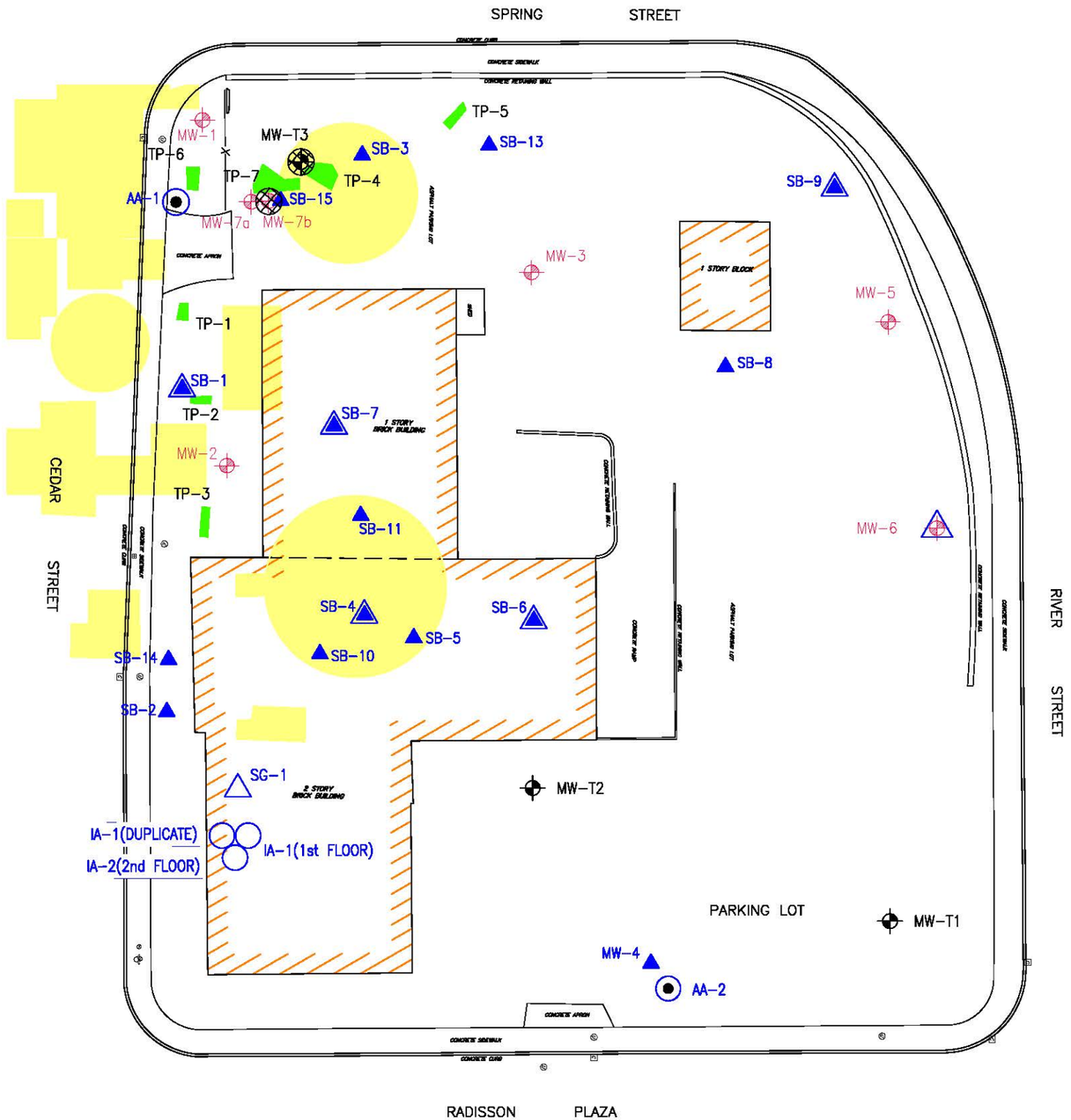
Flags assigned during chemistry validation are shown.

Made By: AMK 05/19/2014; Checked By:PRF 06/11/2014

Detection Limits shown are PQL

Boring Logs, Test Pits, and Monitoring Well Installation Logs

- Boring logs, test pits, and monitoring well installation logs (Parsons 2009)
- Boring logs, test pits, and monitoring well installation logs (URS 2017)
- Borings logs and monitoring well installation logs (Anchor QEA 2025)



LEGEND:

- SOIL BORING LOCATION
- MONITORING WELL
- HISTORIC MONITORING WELL
- TEST PIT LOCATION
- APPROXIMATE LOCATION OF FORMER MGP STRUCTURES
- SOIL GAS LOCATION
- INDOOR AIR SAMPLING LOCATION
- AMBIENT AIR SAMPLING LOCATION
- NAPL OBSERVED

NOTES:

1. SAMPLE LOCATION SG-1 AS WELL AS THE INDOOR/AMBIENT AIR SAMPLE LOCATIONS ARE APPROXIMATE.

2. HISTORIC MONITORING WELLS MW-T1 AND MW-T2 ARE DAMAGED AND NOT USEABLE.

3. BASE MAP INFORMATION BASED ON A SURVEY PROVIDED BY CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE, CO., P.C. DATED 1/20/09.

4. REFUSAL WAS ENCOUNTERED WITHIN THE TOP 2 FT AT LOCATION MW-4. THEREFORE A MONITORING WELL COULD NOT BE INSTALLED.

50 25 0 50 100

SCALE: 1"=50'

FIGURE 2

CONSOLIDATED EDISON
CEDAR STREET WORKS
NEW ROCHELLE, NY

SAMPLE LOCATION MAP

PARSONS
290 ELWOOD DAVIS ROAD, SUITE 312, LIVERPOOL, N.Y. 13088, PHONE: 315-451-9560

FILE NAME: P:\CONED\442098 - CEDAR STREET\CAD\442098-SK001.DWG
PLOT DATE: 4/16/2009 4:14 PM PLOTTED BY: WINTERS, CHRIS

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Cedar Street
PROJECT NUMBER:	442098-03000
WEATHER	Partly Cloudy, 30-40's, Wind 0-5 mph NW
DATE/TIME START:	December 4, 2008/07:40
DATE/TIME FINISH:	December 4, 2008/14:00
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Paul A. Kies

TEST PIT ID: TP-1

LOCATION:

Approximate L X W X D
= 6' X 2' X 6'
See Sample Location Map

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0 - 5" = Grass and Topsoil, some roots.	
	5"-2' = Brown fine medium SAND	
1		Headspace = 0.0 ppm
2	2-3' = Dark Gray fine medium SAND, some Slag, Cinders and Ash, little Cobble, trace Silt.	Headspace = 0.0 ppm
3	3-6' = Light Brown Clayey SILT.	Headspace = 0.0 ppm
4		
5		
6		
7		
8	Bottom of Excavation @ 7.5' bgs	
9		
10		
11		
12		

Comments: Two pipes were observed, 8" clay pipe located 3ft bgs near north end of test pit and a 1.25" metal culvert 4ft bgs.

Depth of test pit was limited to 6ft due to presence pipes and other obstructions.

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Cedar Street
PROJECT NUMBER:	442098-03000
WEATHER	Partly Cloudy, 30-40's, Wind 0-5 mph NW
DATE/TIME START:	December 4, 2008/07:40
DATE/TIME FINISH:	December 4, 2008/14:00
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Paul A. Kies

TEST PIT ID: TP-1

LOCATION:

Approximate L X W X D

= 6' X 2' X 6'

See Sample Location Map

PHOTOGRAPH

Excavation Close-up Note Clay Pipe



Excavation Close-up Note Clay Pipe



PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Cedar Street
PROJECT NUMBER:	442098-03000
WEATHER	Clear, 30-40's, Wind 0-5 mph NW
DATE/TIME START:	December 5, 2008/07:35
DATE/TIME FINISH:	December 5, 2008/14:00
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Paul A. Kies

TEST PIT ID: TP-2

LOCATION:

Approximate L X W X D
= 7.5' X 2.5' X 10.5'
See Sample Location Map

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0 - 5" = Grass and Topsoil, some roots.	
	5"-13" = Brown/Dark Brown fine SAND, little Silt, fine	
1	Gravel, Cobble stone path.	
		Headspace = 0.0 ppm
2		
	13" - 3' = Dark Gray fine medium SAND, some Slag, Cinders and	Headspace = 0.0 ppm
3	Ash, fine course Gravel, trace Silt.	
	3 - 10.5' = Light Brown Clayey SILT.	Headspace = 0.0 ppm
4		
5		
6		
7		
8		
9		
10		
	Bottom of Excavation @ 10.5' bgs	
11		
12		

Comments: Two 2" PVC pipes were observed at 8 inches bgs on eastern end of test pit, one 1" metal conduit was observed at 3 ft bgs on western end of test pit. Groundwater was observed at 10.5 ft.

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Cedar Street
PROJECT NUMBER:	442098-03000
WEATHER	Clear, 30-40's, Wind 0-5 mph NW
DATE/TIME START:	December 5, 2008/07:35
DATE/TIME FINISH:	December 5, 2008/14:00
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Paul A. Kies

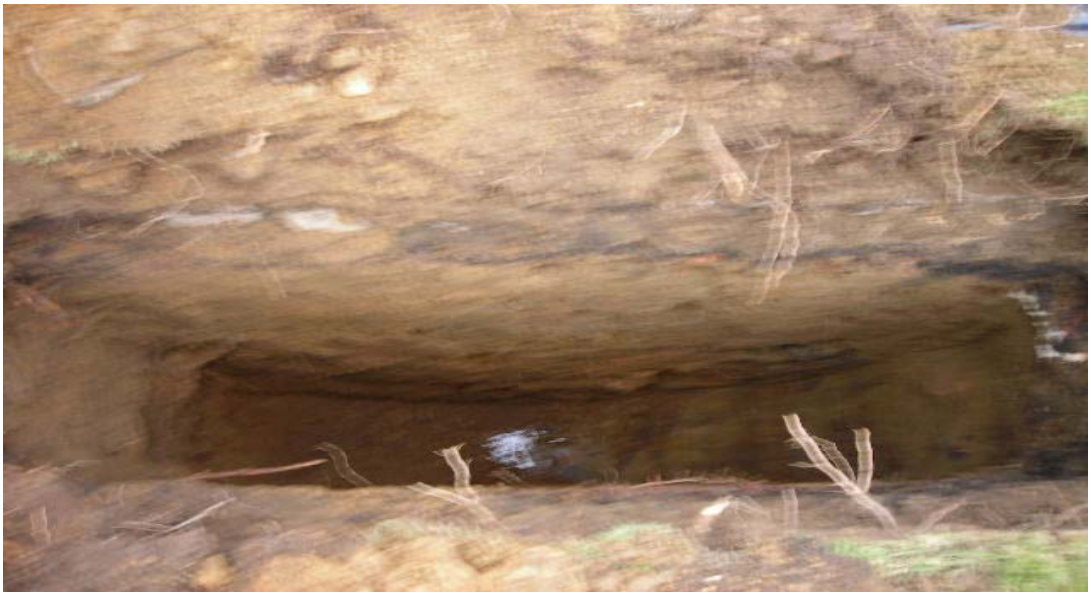
TEST PIT ID: TP-2

LOCATION:

Approximate L X W X D
= 7.5' X 2.5' X 10.5'
See Sample Location Map

PHOTOGRAPH

Excavation Close-up



Excavation Close-up



PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Cedar Street
PROJECT NUMBER:	442098-03000
WEATHER	Partly Cloudy, 30's, Wind 0-5 mph NW
DATE/TIME START:	December 9, 2008/08:05
DATE/TIME FINISH:	December 9, 2008/12:50
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	René N. Robles

TEST PIT ID: TP-3

LOCATION:

Approximate L X W X D
= 7' X 2' X 34"
See Sample Location Map

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0 - 5" = Grass and Topsoil, some roots.	
	5"-8" = Brown medium fine Sand, SILT, Gravel.	
1	8"-14" = Cobble stone foundation/path.	
	14"-34" = Brown medium fine Sand, SILT, course fine Gravel.	Headspace = 0.0 ppm
2		
		Headspace = 0.0 ppm
3	Bottom of Excavation @ 34" bgs	
4		
5		
6		
7		
8		
9		
10		
11		
12		

Comments: 1" metal pipe observed at 3 ft bgs. Test pit could not be expanded due to pipe and other obstructions.

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Cedar Street
PROJECT NUMBER:	442098-03000
WEATHER	Partly Cloudy, 30's, Wind 0-5 mph NW
DATE/TIME START:	December 9, 2008/08:05
DATE/TIME FINISH:	December 9, 2008/12:50
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	René N. Robles

TEST PIT ID: TP-3

LOCATION:

Approximate L X W X D
= 7' X 2' X 34"
See Sample Location Map

PHOTOGRAPH

Excavation Close-up Note Metal Pipe



Excavation Close-up Note Metal Pipe



PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Cedar Street
PROJECT NUMBER:	442098-03000
WEATHER	Partly cloudy, 40-50's, Wind 5-10 mph NW
DATE/TIME START:	December 1, 2008/08:20
DATE/TIME FINISH:	December 1, 2008/15:20
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Paul A. Kies

TEST PIT ID: TP-4

LOCATION:

Approximate L X W X D
= 10' X 3' X 7.5'
See Sample Location Map

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0 - 4" = Asphalt 4"-7" = Trap rock	
1	7" - 7.5' = Gray fine medium SAND, some Boulders and Cobbles (Schist), little fine course Gravel	Headspace = 0.3 ppm
2		
3		
4		
5		
6		
7		Moist @ ~7' bgs
8	Bottom of Excavation @ 7.5' bgs	
9		
10		
11		
12		

Comments: Large boulders encountered.

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Cedar Street
PROJECT NUMBER:	442098-03000
WEATHER	Partly cloudy, 40-50's, Wind 5-10 mph NW
DATE/TIME START:	December 1, 2008/08:20
DATE/TIME FINISH:	December 1, 2008/15:20
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Paul A. Kies

TEST PIT ID: TP-4

LOCATION:

Approximate L X W X D
= 10' X 3' X 7.5'
See Sample Location Map

	PHOTOGRAPH
Excavation Close-up Note Large Boulder (Southeast End of Test Pit)	

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Cedar Street
PROJECT NUMBER:	442098-03000
WEATHER	Clear, 40-50's, Wind 0-5 mph NW
DATE/TIME START:	December 2, 2008/07:40
DATE/TIME FINISH:	December 2, 2008/15:30
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Paul A. Kies

TEST PIT ID: TP-5

LOCATION:

Approximate L X W X D
= 10' X 3' X 12.5'
See Sample Location Map

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0 - 4" = Asphalt	
	4"-7" = Trap rock	
1	7" - 7' 2" = Black/Dark Gray fine medium course SAND, some Slag	
	Coal Tar (Solid Phase)	Headspace = 0.1 ppm
2		
3		
4		
5		
6		
7	7' 2" - 12' = Orange/ Light Brown Clayey SILT.	Headspace = 0.0 ppm
8		
9		
10		
11	12'-12.2' = Orange/Brown fine to medium SAND, some Silt	Headspace = 0.0 ppm
	12.2'-12.5' = Dark Gray fine/medium course SAND, some Silt	Headspace = 435 ppm
12	Bottom of Excavation @ 12' bgs	

Comments: Groundwater noted at approximately 12.2 ft bgs, sheen observed.

Pictures not available.

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Cedar Street
PROJECT NUMBER:	442098-03000
WEATHER	Clear, 30-40's, Wind 0-5 mph W
DATE/TIME START:	December 3, 2008/07:30
DATE/TIME FINISH:	December 3, 2008/12:30
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Paul A. Kies

TEST PIT ID: TP-6

LOCATION:

Approximate L X W X D
= 9' X 2.5' X 9.5'
See Sample Location Map

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0 - 4" = Grass and Topsoil	
	4"-32" = Dark Brown fine medium SAND, some fine	
1	course Gravel, trace Silt.	
		Headspace = 0.0 ppm
2		
	32"-44" = Dark Gray/Gray Slag, ash, some fine medium course	Headspace = 0.1 ppm
3	SAND, little Silt.	
	44"-7' = Brown fine medium SAND, some fine course Gravel,	
4	little Silt.	
5		
6		
7	7-9.5' = Light Brown Clayey SILT.	
8	Bottom of Excavation @ 7.5' bgs	
9		
10		
11		
12		

Comments: 12" cast iron pipe encountered at 5.5 ft bgs. Scrap metal noted on south end of test pit 3 ft bgs.

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Cedar Street
PROJECT NUMBER:	442098-03000
WEATHER	Clear, 30-40's, Wind 0-5 mph W
DATE/TIME START:	December 3, 2008/07:30
DATE/TIME FINISH:	December 3, 2008/12:30
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Paul A. Kies

TEST PIT ID: TP-6

LOCATION:

Approximate L X W X D

= 9' X 2.5' X 9.5'

See Sample Location Map

PHOTOGRAPH

Excavation Close-up Note 12" Cast Iron Pipe



Excavation Close-up Note 12" Cast Iron Pipe in Middle Scrap Metal on South End of Test Pit



PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Cedar Street
PROJECT NUMBER:	442098-03000
WEATHER	Cloudy, Light Rain, 50's, Wind 0-5 mph NW
DATE/TIME START:	December 10, 2008/07:40
DATE/TIME FINISH:	December 10, 2008/13:45
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Paul A. Kies

TEST PIT ID: TP-7

LOCATION:

Approximate L X W X D
= 7' X 3.5' X 9'
See Sample Location Map

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0 - 4" = Asphalt.	
	4"-7" = Trap Rock, Light Brown fine medium SAND.	
1	7"-9' = Boulders, Cobble, some fine course Gravel, little fine medium Sand, trace Silt.	Headspace = 0.0 ppm
2		
3		
4		
5		
6		
7		Headspace = 5.9 ppm (inside holder)
8		Headspace = 189 ppm (outside holder)
9	Bottom of Excavation @ 9' bgs	
10		
11		
12		

Comments: Metal debris noted inside holder at 6 to 8 ft bgs. Odors noted starting at 7 ft bgs.

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Cedar Street
PROJECT NUMBER:	442098-03000
WEATHER	Cloudy, Light Rain, 50's, Wind 0-5 mph NW
DATE/TIME START:	December 10, 2008/07:40
DATE/TIME FINISH:	December 10, 2008/13:45
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Paul A. Kies

TEST PIT ID: TP-7

LOCATION:

Approximate L X W X D

= 7' X 3.5' X 9'

See Sample Location Map

	PHOTOGRAPH
Excavation Close-up Inside of Holder Wall	
Excavation Close-up Outside of Holder Wall	

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Cedar Street
PROJECT NUMBER:	442098-03000
WEATHER	Rainy, 40's, Wind 0-5 mph NW
DATE/TIME START:	December 11, 2008/08:15
DATE/TIME FINISH:	December 11, 2008/14:30
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Paul A. Kies

TEST PIT ID: TP-7(Ext)

LOCATION:

Approximate L X W X D
= 16' X 3' X 8'
See Sample Location Map

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	0 - 4" = Asphalt.	
	4"-7" = Trap Rock, some fine medium SAND.	
1	7"-14" = Gray fine course SAND, some fine course Gravel,	
	Ash, Cinder, Slag, trace Silt.	Headspace = 0.0 ppm
2	14"- 8' = Light Brown Fine Medium SAND, some fine course	Headspace = 121 ppm
	Gravel and Silt.	
3		
4		
5		
6		
7		
8	Bottom of Excavation @ 8' bgs	
9		
10		
11		
12		

Comments: Test pit located on outside of holder wall and was an extension of TP-7.
12" pipe (Cast Iron) which was observed in TP-6 was not found.

PARSONS
TEST PIT RECORD

PROJECT NAME:	Con Edison: Cedar Street
PROJECT NUMBER:	442098-03000
WEATHER	Rainy, 40's, Wind 0-5 mph NW
DATE/TIME START:	December 11, 2008/08:15
DATE/TIME FINISH:	December 11, 2008/14:30
CONTRACTOR:	Environmental Closures, Inc.
INSPECTOR:	Paul A. Kies

TEST PIT ID: TP-7(Ext)

LOCATION:

Approximate L X W X D

= 16' X 3' X 8'

See Sample Location Map

PHOTOGRAPH

Excavation Close-up Outside of Holder Wall



Excavation Close-up Outside of Holder Wall



PARSONS
DRILLING RECORD

BORING/ WELL NO. MW-1 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Greg Rivera
Inspector: Paul Kies
Rig Type: LC-55

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~11.0'	DTW 7.54'		
Date	12/15/08	12/19/08		
Time	1100	0840		
Meas. From	Split Spoon	Top of Casing		

Weather: Cloudy, 40°-50°, 0-5 mph Wind (W)

Date/Time Start: 12/08/08 0915 / 12/15/08 0835

Date/Time Finish: 12/15/08 1115

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL
0					
		Hand Dug	NA	0	0-2" = GRASS
2		Hand Dug	NA	0	2-18" = Light Brown course-fine SAND, Silt, Clay, organic material, dry
		Hand Dug	NA	0	1.5-5' = Dark Brown/black course fine SAND, Silt, Gravel, Cobbles, Brick
4		Hand Dug	NA	0	
		Hand Dug	NA	0	(Fill Material)
6			25	0	Brown fine to medium SAND, some coarse Sand and fine angular Gravel (Fill)
		2-2-2-3			
8			83	0	Brown/light brown SILT, some fine to medium Sand, little fine angular Grav
		2-3-4-5			(moist at bottom of spoon)
10			83	0	0"-4" Dark Gray fine medium SAND, some Silt
	MW-1 (9-11)	2-3-9-11			4"-20" Light brown fine to medium coarse SAND
12			54	0	Gray/Olive fine to medium coarse SAND, little Silt, fine angular Gravel, wet
		11-10-10-17			
14			83	0	Gray fine to medium coarse SAND, some fine angular Gravel, trace Silt
		7-8-7-5			
16			83	0	Gray fine to medium coarse SAND, some fine angular Gravel, trace Silt
	MW-1 (17-19)	7-7-6-9			
18			75	0	Gray fine to medium coarse SAND, some fine angular Gravel, trace Sil
		10-14-13-12			
20					**End of boring @ 18' bgs**
22					
24					
26					
28					
30					
32					
34					
36					

SCHEMATIC

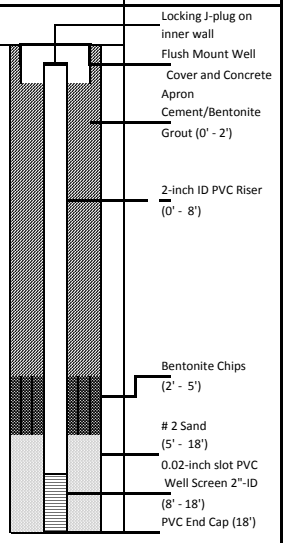


Diagram Not To Scale

COMMENTS

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-18' = continuous sampling with split spoons
Duplicate sample collected from 17-19' interval.

PARSONS
DRILLING RECORD

BORING/ WELL NO. MW-2 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Greg Rivera
Inspector: Paul Kies
Rig Type: LC-55

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10.0'	DTW 7.54'		
Date	12/15/08	12/19/08		
Time	1400	0840		
Meas. From	Split Spoon	Top of Casing		

Weather: Cloudy, 40°-50°, 0-5 mph Wind (W)

Date/Time Start: 12/10/08 0800 / 12/15/08 1300

Date/Time Finish: 12/15/08 1450

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL
0					
		Hand Dug	NA	0	0"-2" = GRASS
2		Hand Dug	NA	0	2"-12" = Light brown medium to fine SAND, SILT, CLAY and Organic material (topsoil)
		Hand Dug	NA	0	dry; 1'-5' = Brown course fine SAND and SILT, some coarse to medium fine Gravel
4		Hand Dug	NA	0	and Brick, little coarse to medium fine Cobbles
		Hand Dug	NA	0	(Fill Material)
6			75	0	0"-12" Brown fine to medium SAND, little Silt
	MW-2 (7-9)	2-2-3-3			12"-18" Brown SAND and SILT, some Gravel
8			75	0	0"-6" Brown SAND and SILT, some Gravel
		3-3-11-9			6"-18" Brown fine to medium SAND, some angular Gravel, little Silt
10			92	0	Dark Brown fine to medium SAND, some Silt, fine angular Gravel
		9-5-9-15			
12			83	0	Light gray/light brown fine to medium SAND, some Silt
		14-11-11-16			
14	MW-2 (13-15)		38	0	0"-6" Brown fine to medium SAND, some Silt
		4-50/3			6"-9" Weathered ROCK (Schist/Mica Fragments)
16					**End of boring @ 14' bgs**
18					
20					
22					
24					
26					
28					
30					
32					
34					
36					

SCHEMATIC

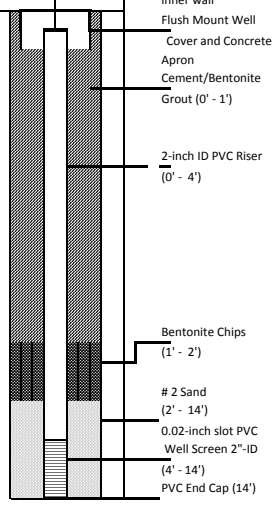


Diagram Not To Scale

COMMENTS

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-14' = continuous sampling with split spoons
Refusal at 14' due to possible bedrock.

PARSONS
DRILLING RECORD

BORING/ WELL NO. MW-3 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Chris Stratton
Inspector: René Robles
Rig Type: CME-75

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10.0'	DTW 7.54'		
Date	12/12/08	12/19/08		
Time	0915	0840		
Meas. From	Split Spoon	Top of Casing		

Weather: Cloudy, Wet, 58°, 0-10 mph Wind (W)

Date/Time Start: 12/05/08 0920 / 12/15/08 1020

Date/Time Finish: 12/15/08 1135

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL
0					
		Hand Dug	NA	0	0-2" = ASPHALT
2		Hand Dug	NA	0	3"-4' = Brown coarse to fine SAND, SILT, and GRAVEL(Gravel Subbase).
		Hand Dug	NA	0	4-5' = Dark brown course to fine SAND, SILT, GRAVEL, COBBLE, and BRICK, dry
4		Hand Dug	NA	0	
		Hand Dug	NA	0	(Fill Material)
6			25	10.5	Dark brown coarse fine SAND, some angular medium to fine Gravel, trace Silt and Asphalt (Fill)
		10-6-2-2			
8			50		Brown/light brown fine SAND, Silt, some coarse to fine Sand, trace Asphalt, dry (Fill
		1-2-2-16			
10			58		Brown/light brown coarse to fine SAND, some Silt and Gneiss, dry (Fill)
		26-27-50/3"			
12					GNEISS
		Auger			
14	MW-3 (14-14.5)	50/4"-50/5"	50		White and black SCHIST and dark brown coarse to fine SAND, some angular Gravel, wet
			17		White and Black SCHIST and dark brown coarse to fine SAND, some angular Gravel, wet
16	MW-3 (16')	50/0"			GNEISS
					End of boring @ 16' bgs
18					
20					
22					
24					
26					
28					
30					
32					
34					
36					

SCHEMATIC

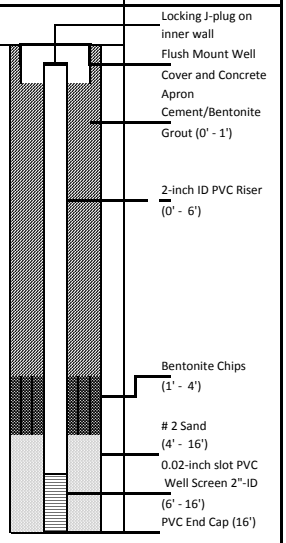


Diagram Not To Scale

COMMENTS

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-16' = continuous sampling with split spoons
Gneiss in tip of spoon at 16' bgs.

Contractor: ADT
Driller: Bernard Cruz/ Chris Iodice
Inspector: Rene Robles
Rig Type: Vac-tron

PARSONS
DRILLING RECORD

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

BORING/ WELL NO. MW - 4 Sheet 1 of 1
Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather: Clear, Cold, 30's-40's, Winds W 0-5 mph
Date/Time Start: 12/3/08 1220
Date/Time Finish: 12/3/08 1250

Location Plan
See Site Plan

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+3							
+2							
+1							
0		Vac-tron		NA	0"-4" = Asphalt; 4"-8" = Gravel sub-base, (trap rock).		
1		Vac-tron		0.0	8"-18" = Brown course fine SAND, some Silt, Gravel, Broken Concrete, Brick.		
2		Vac-tron		0.0	Fill Material.		
3					**End of Boring at 18" bgs**		
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							

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

COMMENTS:
Boring was hand cleared to 18"bgs;
Refusal at 18" due to possible bedrock.

PARSONS

DRILLING RECORD

BORING/ WELL NO. MW-5 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Chris Stratton
Inspector: René Robles
Rig Type: CME-75

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10.0'	DTW 7.54'		
Date	12/12/08	12/19/08		
Time	0915	0840		
Meas. From	Split Spoon	Top of Casing		

Weather: Rainy, 40°'s, 0-5 mph Wind (W)

Date/Time Start: 12/05/08 0920 / 12/12/08 0915

Date/Time Finish: 12/12/08 1130

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL
0					
		Hand Dug	NA	0	0-3" = ASPHALT
2	MW-5 (2-3)	Hand Dug	NA		3"-12" = Brown coarse to fine SAND, SILT, and GRAVEL
		Hand Dug	NA	0.6	1-5' = Dark brown coarse to fine SAND, SILT, GRAVEL, some Metal and Wood, little Cobble
4		Hand Dug	NA		
		Hand Dug	NA		(Fill Material)
6			42	0	Brown fine to medium SAND, some medium to fine Gravel (Fill)
		43-16-6-3			
8			50	0	Brown/dark brown fine to medium SAND and SILT, some angular Gravel and coarse Sand, moi:
		4-4-4-4			
10			33	0	Dark gray/gray fine SAND and SILT, some fine angular Gravel, wet, hydrocarbon like odor
	MW-5 (11-13)	1-1-2-1			
12			42	28.7	Dark gray/gray fine SAND and SILT, some fine angular Gravel, wet, hydrocarbon like odor
	MW-5 (13-15)	4-3-4-5			
14			33	27.9	Dark gray/gray fine SAND and SILT, some fine angular Gravel, wet
		4-2-5/1"			
16					**End of boring @ 14' bgs**
18					
20					
22					
24					
26					
28					
30					
32					
34					
36					

SCHEMATIC

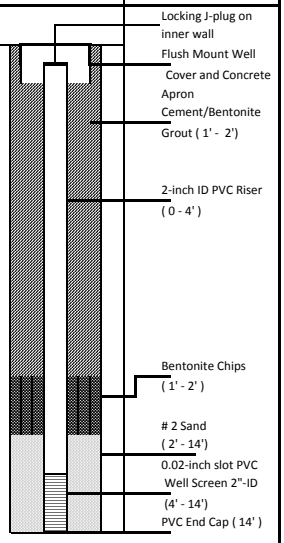


Diagram Not To Scale

COMMENTS

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-14' = continuous sampling with split spoons

Refusal at 14' due to possible bedrock.

PARSONS
DRILLING RECORD

BORING/ WELL NO. MW-6 — Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Chris Stratton
Inspector: René Robles
Rig Type: CME-75

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10.0'	DTW 7.54'		
Date	12/12/08	12/19/08		
Time	0915	0840		
Meas. From	Split Spoon	Top of Casing		

Weather: Rainy, 40°'s, 0-5 mph Wind (W)

Date/Time Start: 12/02/08 1300 / 12/12/08 0915

Date/Time Finish: 12/12/08 1130

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL
0					
		Hand Dug	NA	0.0	0"-3" = ASPHALT
2		Hand Dug	NA		3"-8" = GRAVEL SUBBASE.
		Hand Dug	NA		8"-5' = Light brown coarse to fine SAND, SILT, GRAVEL, CONCRETE, and BRICK
4		Hand Dug	NA		
		Hand Dug	NA		(Fill Material)
6			33	1.5	Brown fine SAND and SILT, some rounded fine Gravel (Fill)
		1-2-4-9			
8			0	0.0	Brown coarse angular GRAVEL and BRICK (Fill)
		4-4-17-8			
10			58	1.4	Dark brown/gray coarse to fine SAND, and SILT, some fine angular Gravel, (Fill)
		4-3-8-15			Hydrocarbon like odor, wet
12			58	7.8	Gray coarse to fine SAND, some Silt and rounded Gravel, wet (Fill)
		45-35-50/2'			
14			67	32.9	Brown/gray medium to fine SAND, some Silt, coarse to fine Gravel, and Brick (Fill)
		5-6-7-17			
16	MW-16 (15-17)		75	46.5	Brown/gray coarse to fine SAND, some Silt and rounded Gravel, Hydrocarbon like odor
		6-6-12-50/1"			and Staining at 16' bgs
18	MW-16 (17-19)	50/4"	17	46.5	Brown/gray coarse to fine SAND, some Silt and rounded Gravel, Hydrocarbon like odor
					End of boring @ 17.4' bgs
20					
22					
24					
26					
28					
30					
32					
34					
36					

SCHEMATIC

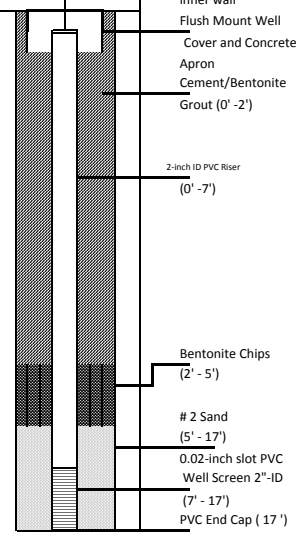


Diagram Not To Scale

COMMENTS

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-17.4' = continuous sampling with split spoons
Refusal at 17.4' due to possible bedrock.

PARSONS
DRILLING RECORD

BORING/ WELL NO. MW-7a Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Chris Stratton
Inspector: René Robles
Rig Type: CME-75

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

Location Plan

See Site Plan

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10.0'	DTW 7.54'		
Date	1/09/08	12/19/08		
Time	0915	0840		
Meas. From	Split Spoon	Top of Casing		

Weather: Rainy, 40°'s, 0-5 mph Wind (W)

Date/Time Start: 1/06/09 0840 / 1/07/09 1325

Date/Time Finish: 1/07/09 1600

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL
0					
		Hand Dug	NA	0.0	0"-3" = ASPHALT
2		Hand Dug	NA	0.0	3"-4' = Orange/brown coarse to fine SAND and SILT, some coarse to fine
		Hand Dug	NA	0.0	Gravel and Cobbles, dry
4		Hand Dug	NA	0.0	4'-4.5' = Orange/brown coarse to fine SAND and SILT, some coarse to fine Gravel and Cobbles
		Hand Dug	NA	0.0	dry; (Fill Material)
6		4-4-7-5	0	0.0	No recovery
8		7-8-7-9	25	3.6	Brown coarse to fine SAND, some Silt, coarse medium to fine Gravel, wet (Fil
10		5-6-5-16	67	2.3	0"-8" Yellow/brown fine SAND and SILT, moist (Fill)
					8"-16" Brown SILT, some fine Sand, moist (Fill)
12		20-20-19-20	83	13.8	Brown SILT, some fine Sand, moist (Fill)
14		6-7-7-6	8	0	Brown fine SAND, some Silt, coarse medium to fine Gravel, wet (Fill)
16		5-5-5-5	50	4.7	Brown fine SAND, some Silt, coarse medium to fine Gravel, wet, Hydrocarbon like odor (Fill)
18		20-20-50/3"	25	125	Green/gray fine SAND and SILT, moist, black Staining, Hydrocarbon like odo
	MW-7a(17-19)				
20		10-10-20-20	8	9.2	Brown fine SAND and SILT, moist, black Staining, Hydrocarbon like odor
	MW-7a(21-23)				
22		50/2"	17	6.6	Brown fine SAND and SILT, moist, black Staining, Hydrocarbon like odo
					End of boring @ 21.5' bgs
24					
26					
28					
30					
32					
34					
36					

SCHEMATIC

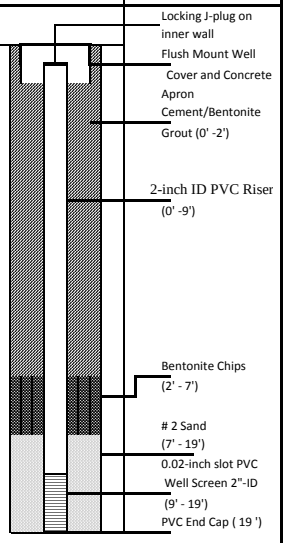


Diagram Not To Scale

COMMENTS

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-4.5' = Hand Dug, 5-23' = continuous sampling with split spoons

Refusal at 21.5' due to possible bedrock.

PARSONS
DRILLING RECORD

BORING/ WELL NO. MW-7b (SB-12) Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Chris Stratton/Chris Migliori/Frank DiCono
Inspector: René Robles
Rig Type: CME-75

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10.0'	DTW 7.54'		
Date	1/13/09	12/19/08		
Time	0915	0840		
Meas. From	Split Spoon	Top of Casing		

Weather: Rainy, 40°'s, 0-5 mph Wind (W)

Date/Time Start: 12/02/08 0820 / 12/16/08 0755

Date/Time Finish: 1/13/09 11400

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL
0					
1		Vac-tron	NA	0.0	0"-3" = ASPHALT
2		Vac-tron	NA		3"-8" = GRAVEL Subbase.
3		Vac-tron	NA		8"-5' = Light brown coarse to fine SAND, SILT, GRAVEL, CONCRETE, and BRICK
4		Vac-tron	NA		
5		Vac-tron	NA		(Fill Material)
6			33	1.5	Brown fine SAND and Silt, some rounded fine Gravel.
		1-2-4-9			
8			0	0.0	Brown course angular GRAVEL, and BRICK
		4-4-17-8			
10			58	1.4	Dark Brown/gray coarse to fine SAND, SILT, and fine angular GRAVEL, hydrocarbon like odor, wet
		4-3-8-15			
12	SB-12 (11-13')		58	7.8	Gray coarse to fine SAND, some Silt and rounded Gravel, wet
		45-35-50/2'			
14			67	32.9	Brown/gray medium to fine SAND, some Silt, coarse to fine Gravel, and Brick
		5-6-7-17			
16			75	46.5	Brown/gray coarse to fine SAND, some Silt and rounded Gravel, hydrocarbon like odor,
		6-6-12-50/1"			Staining and NAPL in 17-19' interval
18	SB-12 (17-19')		17	46.5	Brown/gray coarse to fine SAND, some Silt and rounded Gravel, hydrocarbon like od
		50/4"			
					End of overburden drilling @ 19' bgs
					19-43' Gneiss with lenses of schist and black stained vertical and horizontal fracture
					End of rock coring @ 43' bgs

SCHEMATIC

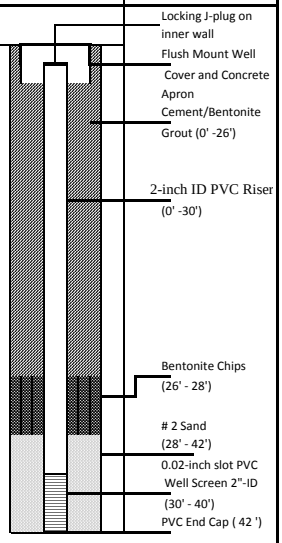


Diagram Not To Scale

COMMENTS

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-19' = continuous sampling with split spoons, 19-43' rock coring.

PARSONS

DRILLING RECORD

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

Contractor: Advanced Drilling Technology
Driller: Greg Rivera/Bernie Cruz
Inspector: Paul Kies
Rig Type: LC-55

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10.0'	DTW		
Date	12/16/08			
Time	1000			
Meas. From	Split Spoon			

Weather: Rainy/Sleet, 30º's, 0-5 mph Wind (W)

Date/Time Start: 12/01/08 0850 / 12/16/08 1000

Date/Time Finish: 12/16/08 1100

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC	COMMENTS
0							
1		Vac-tron	NA	0.0	0"-2" = GRASS		
2		Vac-tron	NA		2"-5' = Brown coarse fine SAND, SILT, GRAVEL, and COBBLES		
3		Vac-tron	NA				
4		Vac-tron	NA				
5		Vac-tron	NA		(Fill Material)		
6			50	0.0	Brown/dark brown fine SAND, some Silt		
		WH-2-2-2					
8			83	0.0	Brown fine SAND, some Silt, moist		
		2-2-2-2					
10	SB-1(9-11)		83	0.0	Brown fine to medium SAND, some Silt and Weathered Rock, wet		
		11-18-20-20					
12	SB-1(11-13)		29	0.0	Gray/olive fine to medium Sand, some Weathered Rock		
		21-50/3"					
14					**End of boring @ 12' bgs**		
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							
36							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-12' = continuous sampling with split spoons
Refusal at 12' due to possible bedrock.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB-2 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Chris Stratton/Chris Migliori/Frank DiCono
Inspector: René Robles
Rig Type: CME-75

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10.0'	DTW		
Date	12/16/08			
Time	1230			
Meas. From	Split Spoon			

Weather: Rainy, 40°'s, 0-5 mph Wind (W)

Date/Time Start: 12/02/08 0820 / 12/16/08 0755

Date/Time Finish: 12/16/08 1130

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC	COMMENTS
0							
1		Vac-tron	NA	0.0	0"-3" = ASPHALT		
2		Vac-tron	NA		3"-8" = GRAVEL Subbase.		
3		Vac-tron	NA		8"-5' = Light brown coarse to fine SAND, Silt, Gravel, Concrete, and Brick.		
4		Vac-tron	NA				
5		Vac-tron	NA		(Fill Material)		
6			67	0.0	0-8" Dark brown/grey fine-medium SAND, some Silt.		
		5-5-5-8			8-16" Weathered rock (Schist and Mica fragments)(fine angular Gravel) (Fill)		
8			75	0.0	0-7" Weathered rock(Shist and Mica fragments).		
		9-3-4-4			7-18" Brown fine SAND, some Silt. (Fill)		
10	SB-2 (9-11)		71	0.0	Orange Brown fine SAND, some Silt (moist).		
		4-6-9-14					
12			83	0.0	Red brown/dark brown fine SAND, some Silt and fine angular Gravel (moist to wet).		
		15-19-21-21					
14			83	0.0	Red Brown fine SAND, some Silt and fine angular Gravel.		
		9-11-8-13					
16			92	0.0	Red Brown fine-medium SAND, some fine angular Gravel (weathered rock) and Quartz		
		9-16-8-22					
18			50	0.0	Same as above 15-17' interval.		
		11-13-50/3"					
20			58	0.0	Red brown fine-medium-course SAND, some fine angular Gravel.		
		5-8-11-11					
22			100	0.0	Same as above 19-21' interval.		
		12-21-28-50/5"					
24			83	0.0	Red brown fine-medium SAND, some fine-course angular Gravel.		
	SB-2 (23-25')	37-37-50/5"					
26					**End of boring @ 24.5' bgs**		
28							
30							
32							
34							
36							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-24.5' = continuous sampling with split spoons
Refusal at 24.5' due to possible bedrock.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB-3 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Chris Stratton/Chris Migliori/Frank DiCono
Inspector: René Robles
Rig Type: CME-75

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10.0'	DTW		
Date	12/18/08			
Time	1215			
Meas. From	Split Spoon			

Weather: Partly cloudy, 40°'s, 0-5 mph Wind (W)

Date/Time Start: 12/09/08 0820 / 12/18/08 0755

Date/Time Finish: 12/18/08 1400

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC	COMMENTS
0							
1		Vac-tron	NA	0.0	0-4" = Asphalt		
2		Vac-tron	NA		4"-7" = Trap rock.		
3		Vac-tron	NA		7"-5' = Boulders (Schist), some fine course angular Gravel, some fine medium Sand,		
4		Vac-tron	NA		trace Silt		
5		Vac-tron	NA		(Fill Material)		
6			42	34.9	Weathered SCHIST, dry (Fill)		
		1-1-25-22					
8			33	4.1	Weathered SCHIST, dry (Fill)		
		36-50/4"					
10			21	55.1	Dark Brown/Black coarse SAND, some angular Gravel, stained, wet, hydrocarbon like		
	SB-3(11-13)	5-1-1/12"			odor (Fill)		
12			42	2266	Dark brown/black coarse to fine SAND, some angular Gravel and Silt, staining,		
	SB-3(13)	50/3"			Hydrocarbon like odor, organic material (Fill)		
14			1	-	Weathered Rock gneiss, Brick fragments. (Fill)		
		50/0"					
16			1	-	Weathered Rock gneiss, Brick fragments. (Fill		
					End of boring @ 15.4' bgs		
18							
20							
22							
24							
26							
28							
30							
32							
34							
36							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-13' = continuous sampling with split spoons, 13'-15.4' roller bit encountered variable density zones.
Split spoon refusal at 13.3' bgs

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB-4 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Jeramie Mayer/ Bernie Cruz
Inspector: René Robles
Rig Type: LC-55

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10.0'	DTW		
Date	12/21/08			
Time	1400			
Meas. From	Split Spoon			

Weather: Rainy, 40°'s, 0-5 mph Wind (W)

Date/Time Start: 12/14/08 0820 / 12/21/08 1315

Date/Time Finish: 12/21/08 1525

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC	COMMENTS
0							
1		Vac-tron	NA	0.0	0"-13" = CONCRETE		
2		Vac-tron	NA		13"-5' = Yellow/brown fine to medium SAND, trace Concrete.		
3		Vac-tron	NA				
4		Vac-tron	NA				
5		Vac-tron	NA		(Fill Material)		
6			4	0.0	Yellow/brown coarse fine SAND, some Silt, trace medium to fine Gravel, dry (Fill)		
		WH/24"					
8			100	0.0	Yellow/brown coarse fine SAND, some Silt, trace medium to fine Gravel, dry (Fill)		
		WH/24"					
10			25	3	0"-4" Dark brown medium to fine SAND, some Silt, coarse to fine Gravel, slight		
		WH/6"-3-5-4			Hydrocarbon like odor, wet; 4"-6" Weathered SCHIST (Fill)		
12			33	3.5	same as above 11-13'		
		4-5-27-15					
14	SB-4(13-15')		33	5.8	0"-4" Gray coarse medium to fine SAND, trace Silt, wet (Fill)		
		11-16-5-3			4"-8" Black medium to fine SAND, strong Hydrocarbon like odor (Fill)		
16			25	10.1	0"-4" Gray/brown coarse to fine SAND, some Silt, coarse fine Gravel, black		
		3-5-11-9			staining, wet; 4-6" Light gray coarse to medium SAND, some Gravel, moist (Fill)		
18			50	10.8	0"-3" Dark gray coarse medium to fine SAND (Fill)		
					3"-12" Dark gray coarse medium to fine SAND, some coarse to fine Gravel, trace Silt,		
		8-15-11-9			black staining (Fill)		
20			11	0.0	Dark brown fine SAND and SILT, some coarse Gravel and Wood, black staining,		
		2-2-2-1			Hydrocarbon like odor (Fill)		
22	SB-4(21-23')		75	56.7	0"-8" Dark brown fine SAND and SILT, some coarse Gravel and Wood, black		
		45-32-27-17			staining, Hydrocarbon like odor; 8"-18" Brown coarse to fine SAND, some Silt, coarse		
					to fine Gravel, Hydrocarbon like odor (Fill)		
24	SB-4(23-25')		11	6.4	Dark brown/black medium to fine SAND, some Silt, coarse to medium fine Gravel,		
		11-50/2"			trace black Staining, hydrocarbon like odor, wet (Fill		
26					**End of boring @ 24' bgs**		
28							
30							
32							
34							
36							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-24' = continuous sampling with split spoons
Refusal at 24' due to possible bedrock.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB-5 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Jeramie Mayer/ Bernie Cruz
Inspector: René Robles
Rig Type: LC-55

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10.0'	DTW		
Date	1/4/09			
Time	1400			
Meas. From	Split Spoon			

Weather: Rainy, 40°'s, 0-5 mph Wind (W)

Date/Time Start: 1/4/09 1015 / 1/4/09 1315

Date/Time Finish: 1/4/09 1600

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC	COMMENTS
0							
1		Vac-tron	NA	0.0	0"-18" = CONCRETE		
2		Vac-tron	NA		18"-2' = TRAP ROCK.		
3		Vac-tron	NA		2'-5' Light brown fine SAND, little Silt, trace fine to coarse Gravel		
4		Vac-tron	NA				
5		Vac-tron	NA		(Fill Material)		
6			50	4.4	Brown medium to fine SAND, some Silt, trace coarse to fine Gravel, dry (Fill)		
		8-7-7-4					
8			17	1.7	Brown medium to fine SAND, coarse GRAVEL, and weathered GNEISS, some Silt,		
		3-4-3-2			black staining at 3" (Fill)		
10			25	6.2	0"-2" Brown medium to fine SAND and SILT, trace coarse Gravel, wet (Fill)		
		2-2-2-3			2"-6" Dark gray coarse to fine SAND, SILT, and medium to fine GRAVEL, black stain at 5" (Fill)		
12			25	2.1	Dark gray coarse medium to fine SAND, some fine Gravel, trace Silt, Hydrocarbon like odor		
		2-1-2-2					
14			75	0.9	Brown medium to fine SAND and SILT, trace fine Gravel, saturated, Hydrocarbon like odor, black		
		2-2-1-1			staining at 4" (Fill)		
16			50	0.9	Gray/brown medium to fine SAND and SILT, some coarse medium to fine Gravel, staining at 8"		
		1-1-1-2			(Fill)		
18			50	0.9	Green/brown medium to fine SAND and SILT, some fine Gravel, staining at 9"		
	SB-5 (19-21')	1-1-1-1			(Fill)		
20			75	10.2	0"-12" Green/brown coarse to fine SAND and SILT, trace Gravel, staining at 10" (Fill)		
	SB-5 (21-23')	2-5-9-14			12"-18" Black fine SAND and SILT, heavy staining (Fill)		
22			25	6.2	Green/brown coarse to fine SAND, trace Silt and coarse to medium Gravel, heavy		
		50/4"			staining at 4" (Fill)		
24		60/0"	0	-	Refusal.		
					End of boring @ 23'		
26							
28							
30							
32							
34							
36							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-23' = continuous sampling with split spoons
Refusal at 23' due to possible bedrock.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB-6 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Chris Stratton/Greg Rivera
Inspector: Mike Wilkinson
Rig Type: LC-55

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10.0'	DTW		
Date	1/4/09			
Time	1400			
Meas. From	Split Spoon			

Weather: Rainy, 40°'s, 0-5 mph Wind (W)

Date/Time Start: 1/4/09 1230

Date/Time Finish: 1/4/09 1445

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC	COMMENTS
0							
1		Vac-tron	NA	0.0	0"-8" = CONCRETE		
2		Vac-tron	NA		8"-11" = Yellow/brown fine SAND, dry, loose		
3		Vac-tron	NA		11"-5' Dark brown medium to fine SAND, little fine coarse Gravel, trace Silt, Brick,		
4		Vac-tron	NA		Concrete, Glass, and Slag		
5		Vac-tron	NA		(Fill Material)		
6			25	0.7	Dark gray fine to coarse SAND, little fine to coarse Gravel, trace Silt, Brick,		
		3-2-1-2			moist, very loose (Fill)		
8			33	1.2	Dark gray fine to course SAND, trace fine Gravel, trace Silt		
		1-1-2-1			3-7" SILT (Fill)		
10			11	0.1	Gray SILT, little fine Sand, wet		
		2-2-5-5					
12	SB-6 (11-13')		33	55.5	0"-2" Dark gray SILT, trace fine Sand, Stained		
		1-1-2-2			2"-8" Light gray CLAY, wet		
14			71	5.1	0"-7" Light gray SILT, moist		
		10-8-10-10			7"-17" Light brown fine to medium SAND, trace Silt, wet		
16			92	23.5	0"-10" Gray SILT, micaceous at 6"-7", wet		
		10-10-9-10			10"-22" Light brown fine to medium SAND, trace fine coarse Gravel and Silt		
18			100	15.1	0"-7" Light gray SILT, wet, stiff, stained at 5-7"; 7-20" Light brown fine to medium SAND,		
		18-10-12-13			and Gravel; 20"-24" Weathered SCHIST, Hydrocarbon like odor		
20	SB-6 (19-21')		29	0.7	Weathered SCHIST, Hydrocarbon like odor.		
		42-42-50/3"					
22					**End of boring @ 21.5'**		
24							
26							
28							
30							
32							
34							
36							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-21.5' = continuous sampling with split spoons
Refusal at 21.5' due to possible bedrock.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB-7 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Chris Stratton/Greg Rivera
Inspector: René Robles
Rig Type: LC-55

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~8'	DTW		
Date	1/4/09			
Time	0930			
Meas. From	Split Spoon			

Weather: Rainy, 40°'s, 0-5 mph Wind (W)

Date/Time Start: 12/02/08 0820 / 12/16/08 0755

Date/Time Finish: 1/4/09 1130

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC	COMMENTS
0							
1		Vac-tron	NA	0.0	0-3" = CONCRETE		
2		Vac-tron	NA		3"-8" = GRAVEL Subbase.		
3		Vac-tron	NA		8"-5' = Light brown coarse to fine SAND, Silt, Gravel, Concrete, and Brick.		
4		Vac-tron	NA				
5		Vac-tron	NA		(Fill Material)		
6			25	3.3	Grey/dark grey medium-fine SAND, some Silt, fine-medium-course angular to subangular		
		16-5-3-4			Gravel, dry. (Fill)		
8			33	2.4	Dark grey fine SAND, Silt medium-fine Sand, Silt, medium-fine angular Gravel,		
		2-2-3-4			last 2" wet, slight Hydrocarbon like odor. (Fill)		
10			25	6.4	0"-3" Same as above 7-9'. (Fill)		
		5-5-4-4			3"-6" Light grey course-fine SAND, Silt, Dry, Slight Hydrocarbon like odor. (Fill)		
12	SB-7 (11-13')		75	187	0"-6" Dark grey course-medium-fine SAND, Silt, medium-fine subangular Gravel, wet. (Fill)		
		8-11-16-21			6"-18" Light grey SILT, some Sand, trace fine subangular Gravel, Hydrocarbon like odor.		
14			12	18.0	Green/grey SILT, some fine Sand, trace course subangular Gravel, moist.		
		14-14-18-19					
16	SB-7 (15-17')		67	50.2	0"-10" Brown/grey course-medium-fine SAND, some Silt, trace medium-fine angular Gravel		
		14-50/5"			10"-16" Yellow-grey/brown SILT, trace medium-fine subangular Gravel, Hydrocarbon like odo		
18					**End of boring @ 17' bgs**		
20							
22							
24							
26							
28							
30							
32							
34							
36							
38							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-17' = continuous sampling with split spoons
Refusal at 17' due to possible bedrock.

Contractor: ADT
Driller: Bernard Cruz/ Chris Iodice
Inspector: Rene Robles
Rig Type: Vac-tron

PARSONS
DRILLING RECORD

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

BORING/ WELL NO. SB - 8 Sheet 1 of 1
Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather: Clear, Cold, 30's-40's, Winds W 0-5 mph
Date/Time Start: 12/3/08 0840
Date/Time Finish: 12/3/09 1020

Location Plan
See Site Plan

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+3							
+2							
+1							
0		Vac-tron		NA	0"-5" = Asphalt		
1		Vac-tron		0.0	5"-1' = Gravel sub-base, (trap rock).		
2		Vac-tron		0.0	1'-2.5' = Dark brown course-fine SAND, Silt. Gravel, Broken concrete, metal and		
3		Vac-tron		0.0	wood debris, Cobblestone or bedrock refusal. (Fill		
4					**End of Boring at 2.5' bgs**		
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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31							
32							
33							
34							
35							
36							
37							

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

COMMENTS:
Boring was hand cleared to 2.5' bgs;
Four attempts made to clear this location. Refusal at 2.5' due to cobblestone overlying possible bedrock.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB-9 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Chris Stratton/Chris Migliori/Frank DiCono
Inspector: Chris Delmonico
Rig Type: CME-75

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW	DTW		
Date				
Time				
Meas. From				

Weather: Rainy/Sleet, 40°'s

Date/Time Start: 12/02/08 0820 / 12/16/08 0755

Date/Time Finish: 12/16/08 1130

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC	COMMENTS
0							
1		Vac-tron	NA	0.0	0-3" = ASPHALT		
2		Vac-tron	NA		3"-8" = GRAVEL Subbase.		
3		Vac-tron	NA		8"-5' = Light brown coarse to fine SAND, SILT, GRAVEL, CONCRETE, and BRICK		
4		Vac-tron	NA				
5		Vac-tron	NA		(Fill Material)		
6			0	0.0	Brown/black fine angular GRAVEL, some Sand and Silt		
		5-8-10-11					
8	SB-9 (7-9')	32-50/0"	29	0.0	Brown/black SILT, some fine Sand, mois		
					End of boring @ 7.5' bgs		
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							
36							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 7.5' = continuous sampling with split spoons
Refusal at 7.5' due to possible bedrock.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB-10 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Chris Stratton/Greg Rivera
Inspector: Mike Wilkinson
Rig Type: LC-55

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10.0'	DTW		
Date	1/4/09			
Time	1050			
Meas. From	Split Spoon			

Weather: Rainy, 40°'s, 0-5 mph Wind (W)

Date/Time Start: 12/21/08 0920 / 1/4/09 1045

Date/Time Finish: 1/4/09 1100

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC	COMMENTS
0							
1		Vac-tron	NA	0.0	0-1' = CONCRETE		
2		Vac-tron	NA		1'-1.5' = Brown coarse SAND and SILT; 1.5'-2' Dark brown coarse COBBLE		
3		Vac-tron	NA		2'-2.5' = Medium SAND and SILT and TAR PAPER; 2.5'-5' BOULDERS		
4		Vac-tron	NA				
5		Vac-tron	NA		(Fill Material)		
6			11	14.4	Dark brown fine GRAVEL, little fine Sand, trace Silt, Brick, and Cold Patch, Dry, loose (Fill)		
		1-3-3-3					
8			0	-	No Recovery, Rock at tip. (Fill)		
		1-1-1-1					
10			33	0.0	Gray SILT, little fine to medium Sand, trace Gravel, wet (Fill)		
		WR-WR-WR-18					
12			54	2.2	Gray SILT, little fine to medium Sand, wet (Fill)		
		8-6-2-1					
14			33	3.4	Gray fine SAND, little Silt, trace fine to coarse Gravel, wet (Fill)		
		WR-WH-3-2					
16			63	2.1	Gray fine SAND, little Silt, trace fine to coarse Gravel, wet (Fill)		
		2-2-4-2					
18			25	1.4	Gray fine SAND, little Silt, trace fine to coarse Gravel, wet (Fill)		
		2-2-1-2					
20	SB-10 (19-21')		75	5.3	Gray fine SAND, little Silt, trace fine to coarse Gravel, wet (Fill)		
		2-2-1-3					
22			100	2.2	Gray fine SAND, little Silt, trace fine to coarse Gravel, wet (Fill)		
		1-1-1-1					
24			8	1.3	Gray fine SAND, little Silt, little fine to coarse Gravel, wet (Fill)		
		1-2-2-1					
26					**End of boring @ 25' bgs**		
28							
30							
32							
34							
36							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-25' = continuous sampling with split spoons
Refusal at 25' due to possible bedrock.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB-11 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Jeramie Mayer/ Bernie Cruz
Inspector: René Robles
Rig Type: LC-55

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10.0'	DTW		
Date	12/21/08			
Time	1115			
Meas. From	Split Spoon			

Weather: Rainy, 40°'s, 0-5 mph Wind (W)

Date/Time Start: 12/21/08 0920 / 12/21/08 1100

Date/Time Finish: 12/21/08 1100

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC	COMMENTS
0							
1		Vac-tron	NA	0.0	0"-6" = CONCRETE		
2		Vac-tron	NA		6"-5' = Brown fine to medium SAND, little fine to coarse Gravel and Cobbles, Asphalt,		
3		Vac-tron	NA		and Concrete		
4		Vac-tron	NA				
5		Vac-tron	NA		(Fill Material)		
6			17	0.0	Brown medium to fine SAND, some Silt, hydrocarbon like odor, Dry (Fill)		
		5-6-14-12					
8			0	1.9	Gray coarse to fine SAND, some Silt, medium to fine Gravel, hydrocarbon like odor, wet (Fill)		
		13-10-8-14					
10			33	1.6	0"-3" Gray coarse to fine SAND, some Silt, medium to fine Gravel, hydrocarbon like odor, wet		
		3-11-3-2			3"-6" Gray medium to fine SAND, some medium Gravel, Dry (Fill)		
12			54	1.5	Gray medium to fine SAND, some Silt and medium to fine Gravel, wet (Fill)		
		1-2-1-1					
14			33	2.6	Gray medium to fine SAND, some Silt, trace coarse to fine Gravel, wet (Fill)		
		3-3-3-2					
16			63	1.6	Gray medium to fine SAND, some Silt, trace coarse to fine Gravel, wet (Fill)		
		2-2-4-2					
18	SB-11 (17-19')		25	3.5	Gray medium to fine SAND, some Silt, trace coarse to fine Gravel, wet (Fill)		
		5-4-3-3					
20	SB-11 (19-21')		75	205	Gray coarse fine SAND, some coarse to fine Gravel, trace Silt, hydrocarbon like		
		28-31-31-19			odor, black staining, wet (Fill)		
22			100	-	No Recovery.		
		50/3"					
24					**End of boring @ 23' bgs**		
26							
28							
30							
32							
34							
36							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-23' = continuous sampling with split spoons
Refusal at 23' due to possible bedrock.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB-13 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Chris Stratton/Chris Migliori/Frank DiCono
Inspector: Chris Delmonico
Rig Type: CME-75

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10	DTW		
Date	12/16/08			
Time	1335			
Meas. From	Split spoon			

Weather: Rainy/Sleet, 40°'s

Date/Time Start: 12/09/08 0800 / 12/16/08 0755

Date/Time Finish: 12/16/08 1130

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC	COMMENTS
0							
1		Vac-tron	NA	0.0	0-5" = ASPHALT		
2		Vac-tron	NA		5"-7" = TRAP ROCK		
3		Vac-tron	NA		7"-6' = Brown/black SILT, some fine Sand, moist		
4		Vac-tron	NA				
5		Vac-tron	NA		(Fill Material)		
6			50	15.2	Black ASH and CINDER, odor, moist (Fill)		
		6-1-2-12					
8			38	25.3	Black ASH and CINDER, odor, moist (Fill)		
		26-3-3-4					
10			83	30.1	9'-10' Black ASH and CINDER, odor, moist (Fill)		
		8-8-8-12			10'-11' Yellow fine SAND, some Silt, dry		
12	SB-13 (11-13')		100	101	11-13 Yellow/green fine SAND, little Silt, moist		
		13-15-12-12					
14	SB-13 (13-15')		83	118	Yellow/green fine SAND, little Silt, moist, black staining 14-15'		
		12-25-50/1"					
16			0	-	No Recovery		
		50/2"					
18					**End of boring @ 15' bgs**		
20							
22							
24							
26							
28							
30							
32							
34							
36							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 15' = continuous sampling with split spoons
Refusal at 15' due to possible bedrock.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB-14 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Chris Stratton/Chris Migliori/Frank DiCono
Inspector: René Robles
Rig Type: CME-75

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10.0'	DTW		
Date	12/16/08			
Time	0915			
Meas. From	Split Spoon			

Weather: Rainy, 40°'s, 0-5 mph Wind (W)

Date/Time Start: 12/10/08 0820 / 12/16/08 0755

Date/Time Finish: 12/16/08 1130

Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC	COMMENTS
0							
1		Vac-tron	NA	0.0	0-3" = GRASS		
2		Vac-tron	NA		3"-18" = Light brown medium to fine SAND, SILT, CLAY, and medium fine GRAVEL,		
			NA		trace medium Cobbles, dry		
3		Vac-tron	NA		18"-3' = Dark brown/black coarse medium to fine SAND and SILT, medium to fine		
4		Vac-tron	NA		Gravel, dry; 3-5' = Light brown medium to fine SAND, SILT, medium fine GRAVEL,		
5		Vac-tron	NA		trace medium Cobbles (Fill Material)		
6			63	0.0	Brown fine medium SAND, moist		
		5-12-11-14					
8			83	0.0	Brown fine Sand, some SILT, moist		
		4-3-5-5					
10	SB-14 (9-11')		92	0.0	Light brown fine Sand, some Silt, moist		
		13-13-16-20					
12			83	0.0	Light brown fine SAND, some Silt		
		17-26-23-18					
14			83	0.0	Red/brown fine to medium SAND, some Silt, little fine angular Gravel.		
		7-21-16-17					
16			29	0.0	Red/brown fine to medium SAND, trace Silt		
		9-15-16-14					
18			63	0.0	Red/brown fine to medium SAND, trace Silt and Weathered Rock		
		18-40-26-26					
20			83	0.0	Red Brown/brown fine to medium SAND, some coarse Sand, trace Silt		
		11-15-14-20					
22			100	0.0	Red Brown/brown fine to medium SAND, some coarse Sand, trace Silt		
		26-27-42-50/5"					
24	SB-14 (23-25')		33	0.0	Grey fine to medium SAND, some fine angular Gravel, trace Silt		
		17-16-50/1"					
26					**End of boring @ 24' bgs**		
28							
30							
32							
34							
36							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-24' = continuous sampling with split spoons
Refusal at 24' due to possible bedrock.

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB-15 Sheet 1 of 1

Contractor: Advanced Drilling Technology
Driller: Chris Stratton/Chris Migliori/Frank DiCono
Inspector: René Robles
Rig Type: CME-75

PROJECT NAME: Consolidated Edison
PROJECT NUMBER: 442098.03000

Location Description: Cedar Street, New Rochelle, NY

GROUNDWATER OBSERVATIONS				
Water Level	DTW ~10.0'	DTW		
Date	1/12/09			
Time	1130			
Meas. From	Split Spoon			

Weather: Rainy, 40°'s, 0-5 mph Wind (W)

Date/Time Start: 1/6/09 0930 / 1/12/09 1120

Date/Time Finish: 1/12/09 1130

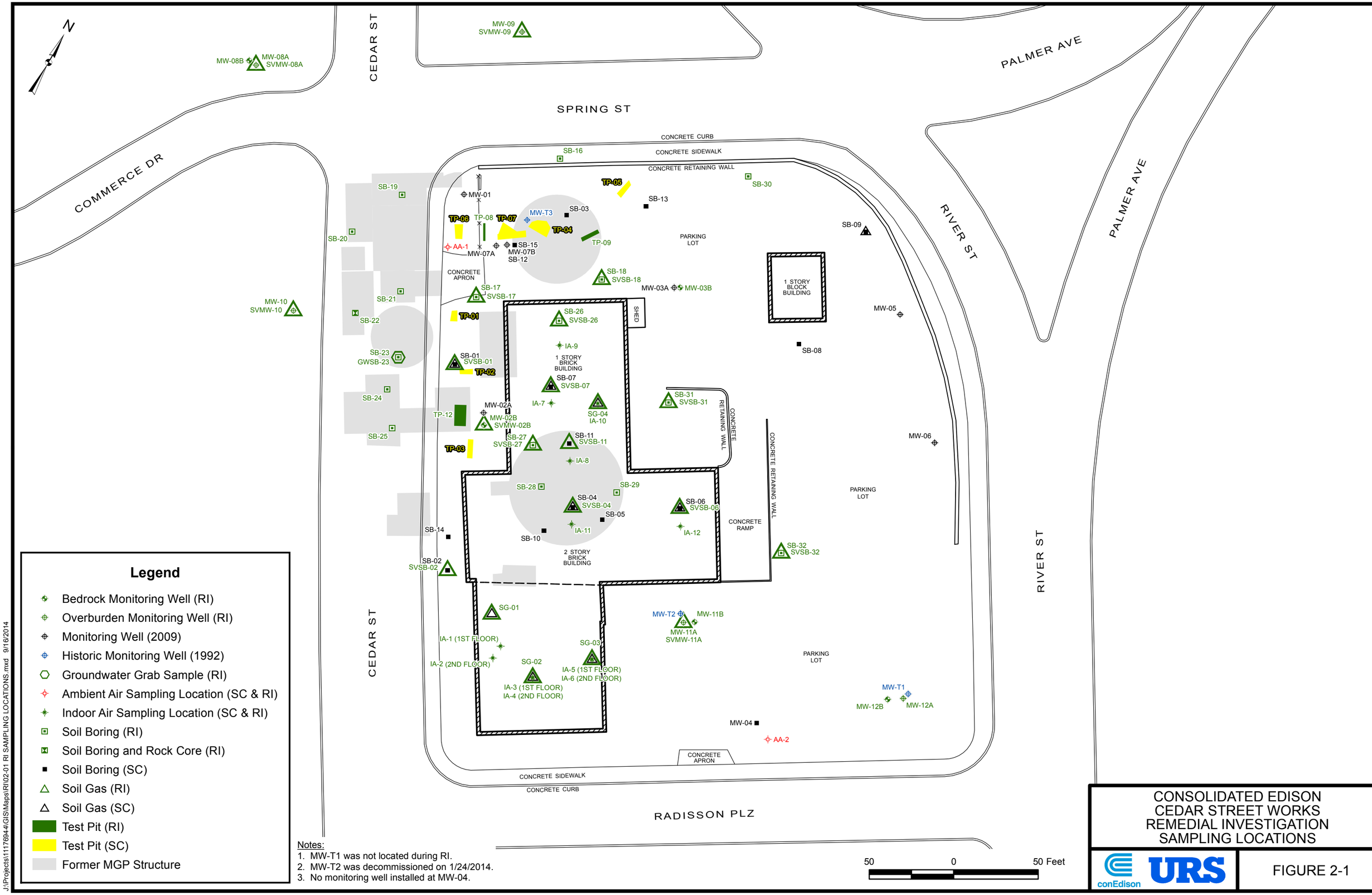
Location Plan

See Site Plan

Sample Depth	Location/ Sample I.D.	SPT	% Rec.	PID* (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC	COMMENTS
0							
1		Vac-tron	NA	0.0	0-3" = ASPHALT		
2		Vac-tron	NA		3"-3' = Brown coarse medium to fine SAND and coarse medium angular Gravel		
3		Vac-tron	NA		3-5' = Brown coarse medium to fine SAND and coarse medium angular Gravel		
4		Vac-tron	NA				
5		Vac-tron	NA		(Fill Material)		
6			50	0.8	Dark brown coarse fine SAND and Weathered SCHIST, trace Silt, Dry. (Fill)		
		5-3-8-20					
8			25	1.1	Dark brown coarse fine SAND, some coarse to fine angular Gravel, wet (Fill)		
		10-8-7-7					
10			25	16	Dark grey coarse fine SAND and coarse fine angular GRAVEL, wet, black staining, odor (Fill)		
		6-5-3-2					
12			25	44.6	Dark grey medium fine SAND, some Silt, coarse to fine Gravel, and Brick, wet, black staining, hydrocarbon like odor (Fill)		
		3-4-4-4					
14	SB-15 (13-15')		11	1002	Black coarse fine SAND, some Silt, and Brick, trace fine Gravel, heavy black staining, hydrocarbon like odor (Fill)		
		1-1-1-38					
16	SB-15 (15-17')		21	1209	Black coarse fine SAND, some Silt, and Brick, trace fine Gravel, heavy black staining, hydrocarbon like odor (Fill)		
		50/1"					
18			0		No recovery, End soil boring begin rock coring		
					End of overburden drilling @ 17' bgs		
20					Schist with black stained horizontal and diagonal fractures throughout.		
22					**End of rock coring @ 22' bgs**		
24							
26							
28							
30							
32							
34							
36							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

0-5' = Hand Dug, 5-17' = continuous sampling with split spoons, 17-22' rock coring.



Legend

- Bedrock Monitoring Well (RI)
- Overburden Monitoring Well (RI)
- Monitoring Well (2009)
- Historic Monitoring Well (1992)
- Groundwater Grab Sample (RI)
- Ambient Air Sampling Location (SC & RI)
- Indoor Air Sampling Location (SC & RI)
- Soil Boring (RI)
- Soil Boring and Rock Core (RI)
- Soil Boring (SC)
- Soil Gas (RI)
- Soil Gas (SC)
- Test Pit (RI)
- Test Pit (SC)
- Former MGP Structure

Notes:
1. MW-T1 was not located during RI.
2. MW-T2 was decommissioned on 1/24/2014.
3. No monitoring well installed at MW-04.

50 0 50 Feet

CONSOLIDATED EDISON CEDAR STREET WORKS REMEDIAL INVESTIGATION SAMPLING LOCATIONS

conEdison URS

FIGURE 2-1

J:\Projects\11176944\GIS\Maps\RI\02-01 RI SAMPLING LOCATIONS.mxd 9/16/2014

URS Corporation

TEST BORING LOG

BORING NO. : MW-02B

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 OF 2

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Glacier Drilling

NORTHING: 758971.0 **EASTING:** 691385.0

GROUNDWATER: NA

GROUND ELEVATION: 52.34 ft amsl

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE	Steel		Nx/HQ	
4/22/14		43.95 ft amsl		DIA.	6"		2"/4"	
7/17/14		47.36 ft amsl		WT.				
				LENGTH				
				* POCKET PENETROMETER READING				

DATE STARTED: 1/20/14

DATE FINISHED: 3/26/14

DRILLER: Terry Bell

GEOLOGIST: M. Gutmann/A. Papaneocleous

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife on 1/20/14.				0-14' Stratigraphic profile previously described on log for Parsons boring MW-2. Boring advanced with 4-1/4" HSAs, 8-1/4" HSAs, and 4" HQ casing to 20'. Nx cored from 20-25', and reamed with 7-7/8" roller bit from 20-25'. Set 6" steel casing from 25' to surface with grout.			
-15							Weathered SCHIST	Schist		
-20		RC-1 20-25	Nx 2"	RQD = 72% REC = 95%	Dark Gray	Hard	Metamorphic SCHIST, with muscovite, feldspar, quartz, biotite, hornblende, and garnet, fractured throughout, foliated, 15-30° fractures at 20'3", 20'11", 21'8", 22'2", 22'5", 22'9", 23'3", and ~24'		0	No water loss No sheen No NAPL 3-5 min./ft
-25										No water loss No sheen on water return

COMMENTS: Boring advanced with a CME 85 drill rig.

Collected soil sample from 3.5-4' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

Installed 4-inch PVC well screen (0.020 slot) from 24-39 ft bgs. See well construction log.

URS Corporation

TEST BORING LOG

BORING NO. : MW-02B

PROJECT: Con Edison Cedar Street Works Site

SHEET: 2 OF 2

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
-30		RC-2 25-30	HQ 4"	RQD = 95% REC = 100%			GNEISS, fractures at 25'7" (10°), 26'1" (60°), 26'8" (60°), 27'3" (50°), 27'8" (5°), 28'3" (10°), and 28'8" (20°)	Gneiss	0	2 min./ft No NAPL No sheen or odors
		RC-3 30-34	HQ 4"	RQD = 100% REC = 87%			Granitic GNEISS, with mica, feldspar, quartz, and hornblende, fractures at 31' (10°), 32' (15°), 33'1" (25°), and 34' (5°)		0	2 min./ft
-35		RC-4 34-39	HQ 4"	RQD = 97% REC = 100%	Light Gray		near vertical fracture at 35-35.5' fractures at 37' (10°), 37'8" - 37'10", 35'5" (10°), 37' (10-15°) and 38' (5°)		0	2-4 min./ft Lost 100 gal. at 37.5'
-40							Boring complete at 39 ft bgs.			
-45										
-50										
-55										

COMMENTS: Boring advanced with a CME 85 drill rig.

Collected soil sample from 3.5-4' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

Installed 4-inch PVC well screen (0.020 slot) from 24-39 ft bgs. See well construction log.

URS Corporation

TEST BORING LOG

BORING NO. : MW-03B

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 2

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental/Glacier Drilling

NORTHING: 759098.4 **EASTING:** 691447.0

GROUNDWATER: NA

GROUND ELEVATION: 50.32 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
					Steel		Nx/HQ	
4/22/14		43.94 ft amsl		DIA.	6"		2"/4"	
7/17/14		43.86 ft amsl		WT.				
				LENGTH				
				* POCKET PENETROMETER READING				

DATE STARTED: 11/21/2013

DATE FINISHED: 3/26/14

DRILLER: John Veiss/Terry Bell

GEOLOGIST: J. Boyd/A. Papaneocleous/M. Gutmann

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife on 11/21/13.				0-16' Stratigraphic profile previously described on Parsons log for MW-3. Boring advanced with 4-1/4" and 8-1/4" HSAs, and 4" HQ casing to 28'. Reamed rock to 28' with 7-7/8" roller bit and set steel 6" casing to surface with grout.			
-5										
-10										
-15										
-16							Weathered Schist	Schist		
-20										
-25					Dark Gray		Metamorphic GNEISS, banded, with hornblende, biotite, feldspar, quartz, and	Gneiss	0	No odor or sheen on rock 2-4 min./ft

COMMENTS: Boring advanced with a CME 85 drill rig.

Installed 4-inch PVC well screen (0.020 slot) from 36-41 ft bgs. See well construction log.

URS Corporation

TEST BORING LOG

BORING NO. : MW-03B

PROJECT: Con Edison Cedar Street Works Site

SHEET: 2 OF 2

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
		RC-1		RQD = 60% REC = 95%			micas, fracture at 26'6" (25°-35°), and high angle fracture at 27'6"			
									16.5	PID at 26.5' fracture
									117	PID at 27.5' fracture
-30		RC-1	HQ 4"	RQD = 100% REC = 97%			Granitic GNEISS, banded with schist seams, high angle banding with micas, quartz, feldspar, and hornblende fracture at 28'10" (20°), 29'4.5" (15°), and 31'5" (15°)		0	No water loss Slight sheen on return water 2 min./ft
-35		RC-2	HQ 4"	RQD = 90% REC = 100%			fractures at 33' (15°), 33'2" (15°), and 34'6-34'9" (30°)		28	Coal tar NAPL on fracture at 33'2" (28 ppm) 10 gal. water loss at 34' 2-3 min./ft
-40		RC-3	HQ 4"	RQD = 100% REC = 100%			fractures at 38' (25°), 39'11" (15°), and 43' (30°)		0	No sheen or NAPL on return water 2-4 min./ft
-45							Boring completed at 43 ft bgs.			
-50										
-55										

COMMENTS: Boring advanced with a CME 85 drill rig.

Installed 4-inch PVC well screen (0.020 slot) from 36-41 ft bgs. See well construction log.

URS Corporation

TEST BORING LOG

BORING NO. : MW-08A

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 759091.8 **EASTING:** 691163.8

GROUNDWATER: ~10.8 ft bgs

GROUND ELEVATION: 51.77 ft amsl

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
1/13/14		48.90 ft amsl	DIA.		2"		
4/22/14		42.13 ft amsl	WT.				
7/17/14		42.09 ft amsl	LENGTH		5'		

* POCKET PENETROMETER READING

DATE STARTED: 10/29/13

DATE FINISHED: 10/31/13

DRILLER: John Veiss

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.		Brown	Hard	FILL: silt, trace to some very fine sand and fine gravel	Fill	0	Dry
						Dense	FILL: silt, some fine to medium sand, fine to medium gravel and schist cobbles		0	Moist, no odor
-5			Soil vapor sample from 6.5-7'				Installed temporary soil vapor point from 6.5-7'	SM		
		1		67		Medium Dense	SILT and very fine SAND, trace fine gravel		6	No odor
-10		2		82			Very fine SAND, trace to some silt	SP	6.4	Wet at 10.8'
-15		3		100			Fractured SCHIST	Schist	2.3	
							Very fine to fine SAND, trace silt.	SP	2.2	
							Weathered SCHIST	Schist	0.1	
-20							Refusal at 16 ft bgs.			
-25										

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig, used 4-1/4" HSAs to install the well.

Collected soil samples from 2.7-2.9', 9.5-10' and 15-16' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

Collected soil vapor sample from 6.5-7' bgs for TO-15 VOCs analysis. Installed monitoring well, 2" PVC, screen 5-15' bgs

URS Corporation

TEST BORING LOG

BORING NO. : MW-08B

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 2

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 759092.3 **EASTING:** 691158.9

GROUNDWATER: NA

GROUND ELEVATION: 51.69 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
4/22/14		41.38 ft amsl		DIA.	4"	2"	2"	
7/17/14		41.35 ft amsl		WT.				
				LENGTH		5'		
				* POCKET PENETROMETER READING				

DATE STARTED: 10/29/13

DATE FINISHED: 11/26/13

DRILLER: Ryan Jensen

GEOLOGIST: Andreas Papaneocleous

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.				0-16' Stratigraphic profile previously described on log for boring MW-08A. Borehole advanced with 4-1/4" HSAs to 16' on 11/7/13. Set 4" steel casing from 28 ft to surface with grout.			
-5										
-10										
-15										
-20		RC-1	NX 2"	RQD = 0% REC = 20%	Brown to Gray		SILT and highly weathered SCHIST rock fragments	Schist	0	No water loss No odor or sheen throughout
			Roller Bit				Roller bit to 21' on 11/8/13 and tried another core but core jammed, no recovery. Pulled off hole, returned on 11/25/13.			
-25		RC-2	NX 2"	RQD = 72% REC = 100%	Gray banded Black and White	Hard	6-1/4" HSA to 23', Nx core to 28' GNEISS and SCHIST Bedrock, high angle mineral banding of quartz, feldspar,	Gneiss and Schist	0	No sheen or NAPL observed on cores or water return

COMMENTS: Boring advanced with a Dietrich D-3 truck drill rig.

Collected soil samples from 3-3.2', 9.5-10.5', and 15-16' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

Set 4" steel casing from 0-28 ft and installed 2" PVC well screened from 28-38 ft bgs. See well construction log.

URS Corporation

TEST BORING LOG

BORING NO. : MW-08B

PROJECT: Con Edison Cedar Street Works Site

SHEET: 2 OF 2

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
							and micas			No sheen or NAPL observed on return water
-30		RC-3	NX 2"	RQD = 88% REC = 95%			Granitic GNEISS and SCHIST, coarse grained, horizontal fracture at 29', large fracture at 30', seams of foliated schist at fractures	Gneiss and Schist	0	10-15 min./ft throughout Little or no water loss
-35		RC-4	NX 2"	RQD = 83% REC = 100%			some mineralization: pyrite, quartz, micas, feldspars, and hornblende angular fractures at 33'7", 34'8", 35'9", and 37'5" (30-35°)		0	No sheen or NAPL observed on return water or cores Small quantity of water loss
-40							Boring complete at 38 ft bgs.			
-45										
-50										
-55										

COMMENTS: Boring advanced with a Dietrich D-3 truck drill rig.

Collected soil samples from 3-3.2', 9.5-10.5', and 15-16' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

Set 4" steel casing from 0-28 ft and installed 2" PVC well screened from 28-38 ft bgs. See well construction log.

URS Corporation

TEST BORING LOG

BORING NO. : MW-09

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 759185.3 **EASTING:** 691291.9

GROUNDWATER: ~9 ft bgs

GROUND ELEVATION: 49.22 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
1/13/14	0845	35.33 ft amsl		DIA.	4-1/4"	2"		
4/22/14	1655	36.96 ft amsl		WT.				
7/17/14		34.33 ft amsl		LENGTH		5'		
				* POCKET PENETROMETER READING				

DATE STARTED: 10/28/13

DATE FINISHED: 10/30/13

DRILLER: John Veiss

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.	100	Brown	Dense	SOD	Fill	0	Dry
							FILL: silt, trace to some very fine sand and fine gravel, with concrete pieces		0	Moist
					Black to Dk Gray	Medium Dense	FILL: concrete rocks mixed with gneiss rocks with little silt and sand			
-5		1		67			Fine to medium SAND and SILT, trace fine gravel and mica	SM	0	Headspace bag sample PID, 7-8' - 0.2 ppm
					Brown				0	
					Gray		SILT, trace fine sand and fine gravel.	ML	0	Very moist to wet at 9'
-10					Brown		Fine to medium SAND	SW		
		2		82			SILT and very fine SAND, trace fine to medium gravel	SM	0.4	Headspace bag sample PID, 10-12' - 0.4 ppm
					Yellowish Brown	Loose	SAND, trace fine to medium gravel and silt	SW	0	Headspace bag sample PID, 12-14' - 0.5 ppm
									0	
-15		3		100	Brown	Dense	Weathered SCHIST	Schist	0	Wet
							Boring completed at 15.5 ft bgs.			
-20										
-25										

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig, used 4-1/4-inch HSAs to install the well.

Collected soil samples from 8.2-8.8' and 14.8-15.5' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

Collected soil vapor sample from 6.5-7' for TO-15 VOCs analysis. Installed monitoring well, 2" PVC, screen 5.5-15.5' bgs

URS Corporation

TEST BORING LOG

BORING NO. : MW-10

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 758975.4 **EASTING:** 691253.5

GROUNDWATER: ~10 ft bgs

GROUND ELEVATION: 52.05 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
1/13/14		42.62 ft amsl		DIA.	4-1/4"	2"		
4/22/14		42.97 ft amsl		WT.				
7/17/14		46.82 ft amsl		LENGTH		5'		
				* POCKET PENETROMETER READING				

DATE STARTED: 10/30/13

DATE FINISHED: 10/31/13

DRILLER: John Veiss

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 6' with drum vacuum and air knife. Four attempts to clear hole due to refusals at 1st, 2nd, and 3rd attempts.		Brown	Dense	FILL: silty sand, some mica flakes, brick fragments mixed with schist cobbles and boulders	Fill	0	No odors
-5		1		73.3%		Loose	Very fine SAND, some silt and fine to medium gravel	SP	0.3	Moist, no odor
									0.9	
						Medium Dense	SILT and very fine SAND	SM		
								SP	4.4	
							Medium SAND, some fractured schist	SM		
-10		2		38%			SILT and very fine SAND	SW	0.5	Wet, no odor
							Fine to medium SAND, some to trace silt and fine gravel		0.6	No odor throughout
							SILT and fine to medium SAND	SM		
							Fine to medium SAND, trace silt	SW	1.2	
-15		3		80%	Brown Gray		Very fine SAND, trace silt and fine gravel	SP	0.1	
							SILT and fine SAND	SM		
							Fine SAND, trace silt	SP	0.1	
									0.1	
-20		4		100%	Gray		SILT and very fine SAND	SM	0.1	
							Fine to very fine SAND, decomposed schist at bottom of core	SP	0.1	
							Refusal at 22 ft bgs.			
-25										

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig, used 4-1/4-inch HSAs to install the well.

Collected soil samples from 7-8.5' and 21-22' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

Collected soil vapor sample from 6.5-7' bgs for TO-15 VOCs analysis. Installed monitoring well, 2" PVC, screen 6-16' bgs

URS Corporation

TEST BORING LOG

BORING NO. : MW-11A

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 758926.0 **EASTING:** 691544.8

GROUNDWATER: ~10 ft bgs

GROUND ELEVATION: 45.75 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
1/13/14		39.29 ft amsl		DIA.	4-1/4"	2"		
4/22/14		40.70 ft amsl		WT.				
7/17/14		41.46 ft amsl		LENGTH		5'		
				* POCKET PENETROMETER READING				

DATE STARTED: 11/18/2013

DATE FINISHED: 11/19/2013

DRILLER: John Veiss

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.		Black	Very Dense	ASPHALT	FILL	0.0	Moist
					Brown	Medium Dense	FILL: (0.35-3') fine to medium sand, some silt and fine to medium gravel		0.0	No odors throughout
					Dark Brown		(3-5') silt, some medium to fine sand and medium to fine gravel, trace wood		0.1	Headspace bag sample PID, 3-3.5' - 0.1 ppm
-5			Soil vapor sample from 6.5-7' bgs				Installed temporary soil vapor point from 6.5-7' bgs	SM	0.0	
					Brown		SILT and fine to medium SAND		0.0	Headspace bag sample PID, 7-8.5' - 0.2 ppm
		1		73.3%			SILT		0.0	
							SILT and fine SAND		0.1	Wet at 10', no odor
-10							SILT	ML	0.1	
		2		74%			Fine to medium SAND, trace fine gravel and silt	SW	0.1	Headspace bag sample PID, 10-11.5' - 0.3 ppm
							Refusal @ 12.7' bgs			
-15										
-20										
-25										

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig, used 4-1/4-inch HSAs to install well.

Collected soil samples from 3-3.5', 8.5-9.5' and 11.5-12.7' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

Collected soil vapor sample from 6.5-7' bgs for TO-15 VOCs analysis. Installed monitoring well, screen 4.5-12.5' bgs.

URS Corporation

TEST BORING LOG

BORING NO. : MW-11B

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 2

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Glacier Drilling

NORTHING: 758929.5 **EASTING:** 691550.4

GROUNDWATER: NA

GROUND ELEVATION: 45.67 ft amsl

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE	Steel		Nx/HQ	
4/22/14		35.64 ft amsl		DIA.	6"		2"/4"	
7/17/14		36.61 ft amsl		WT.				
				LENGTH				

* POCKET PENETROMETER READING

DATE STARTED: 1/16/14

DATE FINISHED: 3/25/14

DRILLER: Terry Bell

GEOLOGIST: A. Papaneocleous/M. Gutmann

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Borehole hand cleared to 5' with drum vacuum and air knife.				0-12.7' Stratigraphic profile previously described on log for boring MW-11A. Boring advanced with 4-1/4" HSA, 8-1/4" HSA, and HQ casing to 20 '. Nx cored from 20-25', reamed borehole with 7-7/8" roller bit, and set 6" steel casing from 25' to the surface with grout.			
-15							Weathered GNEISS and SCHIST	Gneiss and Schist		
-20		RC-1	NX 2"	RQD = 100% REC = 68.3%			Granitic GNEISS, banded mineralization with biotite, hornblende, feldspar, quartz, and mica, fractured throughout (15-35°), 3-6" spacings on fractures	Gneiss	0	No odor or sheen No water loss observed
-25										

COMMENTS: Boring advanced with a CME 85 drill rig.

Installed 4-inch PVC well screen (0.020 slot) from 25.9-40.9 ft bgs. See well construction log.

URS Corporation

TEST BORING LOG

BORING NO. : MW-11B

PROJECT: Con Edison Cedar Street Works Site

SHEET: 2 OF 2

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
-30		RC-2	HQ 4"	RQD = 100% REC = 100%	Dark Gray		Metamorphic GNEISS, some schist zones, high angle mineral banding of quartz, hornblende, feldspar, and micas fractures at 25'5" (5°), 26' (10°), 26'7" (10°), 27'6" (15°), 28'3" (10°), 28'8" (25°), and 29'7" (15°)		0	No water loss Slight sheen on return water - 1st 75 gal. No tar, NAPL, or sheen on core
-35		RC-3	HQ 4"	RQD = 95% REC = 93%			fractures at 30'4" (15°), 31'4"-31'7", 32'7" (15°), 33'3" (5°), and 35' (0°)		0	Few small NAPL blebs on return water from 30-35' Water loss - 30 gal. from 31-35' No odor, sheen, or NAPL
-40		RC-4	HQ 4"	RQD = 100% REC = 100%			fractures at 36'7" (5°), 39'4" (10°), and 40' (0°)		0	No water loss No NAPL, sheen, or odor
-45							Boring completed at 40.9 ft bgs.			
-50										
-55										

COMMENTS: Boring advanced with a CME 85 drill rig.

Installed 4-inch PVC well screen (0.020 slot) from 25.9-40.9 ft bgs. See well construction log.

URS Corporation

TEST BORING LOG

BORING NO. : MW-12A

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 758949.7 **EASTING:** 691680.4

GROUNDWATER: ~7 ft bgs

GROUND ELEVATION: 38.63 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
4/22/14		32.22 ft amsl		DIA.	4-1/4"	2"		
7/17/14		33.27 ft amsl		WT.				
				LENGTH		5'		
				* POCKET PENETROMETER READING				

DATE STARTED: 1/23/14

DATE FINISHED: 1/24/14

DRILLER: John Veiss

GEOLOGIST: John Boyd/Mike Gutmann

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.		Brown	Medium Dense	ASPHALT FILL: fine to medium sand, some silt and fine to medium gravel, trace mica flakes Rock at 3.2' bgs Concrete pieces at 3.2-3.7' bgs	Fill	0	Moist, no odor
-5		1		60	Light Brown		Fine to medium SAND, some fine to medium gravel, few cobbles	SW	0	No odors throughout Wet at 7'
-10		2		75	Gray to Brown				0	No odors, sheen, or NAPL Wet
					Dark Gray	Very Dense	Weathered GNEISS/SCHIST	Gneiss and Schist	0	
-15							Refusal at 12 ft bgs with Macrocore sampler, used HSA to 14 ft bgs.			
-20										
-25										

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig, used 4-1/4-inch HSAs to install well. Collected soil samples from 2.8-3.2', 7-8', and 10-11' bgs for TCL VOCs. Collected soil samples from 2.8-3.2', 7-10', and 10-12' bgs for SVOCs, TAL Metals, and Total CN analysis. Installed monitoring well, 2" PVC, screen 4-14' bgs.

BORING NO. : MW-12A

URS Corporation

TEST BORING LOG

BORING NO. : MW-12B

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 2

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Glacier Drilling

NORTHING: 758944.8 **EASTING:** 691672.6

GROUNDWATER: NA

GROUND ELEVATION: 39.15 ft amsl

				CAS.	SAMPLER	CORE	TUBE
DATE	TIME	LEVEL	TYPE	TYPE	HQ		Nx/HQ	
4/22/14		34.25 ft amsl		DIA.	4"		2"/4"	
7/17/14		33.25 ft amsl		WT.				
				LENGTH				
				* POCKET PENETROMETER READING				

DATE STARTED: 1/14/14

DATE FINISHED: 3/26/14

DRILLER: Terry Bell

GEOLOGIST: A. Papaneocleous/M. Gutmann

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.				Boring advanced with 4-1/4" HSAs, 8-1/4" HSAs, and 4" HQ casing. Nx cored from 19-25'. Reamed with 7-7/8" roller bit to 25', and set 6" steel casing from 25' to surface with grout.			
-5										
-10										
-15										
-20		RC-1	Nx 2"	RQD = 0% REC = 46%	Dark Gray	Hard	SCHIST with mica,quartz, and feldspar, micas at high angle bedding (~60°), very fractured throughout	Schist	0	No odor or sheen No water loss observed
-25		RC-2	Nx 2"	RQD=83% REC=100%			SCHIST with high angle mineral banding with quartz, micas, feldspar and hornblende		0	

COMMENTS: Boring advanced with a CME 85 drill rig.

Installed 4-inch PVC well screen (0.020 slot) from 26-41 ft bgs. See well construction log.

URS Corporation

TEST BORING LOG

BORING NO. : MW-12B

PROJECT: Con Edison Cedar Street Works Site

SHEET: 2 OF 2

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
-30		RC-3	HQ 4"	RQD = 100% REC = 100%			fractures at 25' (20°), 25'6" (15°), 26'7" (15°), 27' (10°), and 29'4" (10°)		0	40 gal. water from 26.2-27' No sheen on core or return water
-35		RC-4	HQ 4"	RQD = 93% REC = 100%			fractures at 31'1" (10°), 31'9" (50°), 32'7" (15°), 33'9" (60°), 34'8" (30°) very broken from 34'8"-35'		0	No sheen or NAPL on core or return water 30 gal. water loss from 30-35'
-40		RC-5	HQ 4"	RQD = 80% REC = 100%			fractures at 35-35'4" (15°), 37'10" (50°), 38'6-38'8" (0°), 39'4" (50°), and 39'7" (5°)		0	10 gal. water loss from 35-40'
-45							Boring complete at 40 ft bgs.			
-50										
-55										

COMMENTS: Boring advanced with a CME 85 drill rig.

Installed 4-inch PVC well screen (0.020 slot) from 26-41 ft bgs. See well construction log.

URS Corporation

TEST BORING LOG

BORING NO. : SB-16

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 759130.6 **EASTING:** 691347.9

GROUNDWATER: ~10 ft bgs

GROUND ELEVATION: 48.14 ft amsl

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore		
				DIA.		2"		
				WT.				
				LENGTH		5'		
				* POCKET PENETROMETER READING				

DATE STARTED: 11/1/13

DATE FINISHED: 11/7/13

DRILLER: Ryan Jensen

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared with drum vacuum and air knife.		Gray / Brown	Hard / Medium Dense	CONCRETE SIDEWALK	Concrete	0.0	Moist
							FILL: silt and fine to medium sand, some to trace clay, cinders and fine gravel	Fill	0	
-5									0.7	
							Fine to medium SAND, some to trace silt and fine gravel	SW	0.2	Slight MGP-like odor
		1		56	Green to Brown		SILT, some clay some mottled green and gray clay	ML	13.6	Moderate MGP-like odor
-10					Gray		Fine to medium SAND, some silt	SW	92.1	Wet at 10'
					Red/Brn			GW	27.4	
					Gray		Fine to medium GRAVEL, some fine to medium sand,	SM	32.4	Slight to moderate naphthalene odor from 10-15'
		2		76	Lt. Brn		SILT and fine SAND, some to trace fine gravel		13.8	
-15							Fine to medium SAND, trace to some silt and fine gravel	SW	0.9	No odor from 15-16' MGP-like odor
		3		78	Gray				1.3	Naphthalene-like odor
					Lt. Brn				12.8	NAPL tar on liner from 18-19'
					Gray		NAPL tar at 19' bgs			
-20							Refusal at 19 ft bgs.			
-25										

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig.

Collected soil samples from 3.2-3.6', 4.5-5', 9-10', 13-14', and 18-19' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

URS Corporation

TEST BORING LOG

BORING NO. : SB-17

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 759035.0 **EASTING:** 691344.2

GROUNDWATER: ~11 ft bgs

GROUND ELEVATION: 51.53 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
				DIA.		2"		
				WT.				
				LENGTH		5'		
				* POCKET PENETROMETER READING				

DATE STARTED: 11/20/13

DATE FINISHED: 11/22/13

DRILLER: Jose Garcia

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.		Brown	Medium Dense	FILL: silt and fine to medium sand, some fine gravel, trace concrete	Fill	0.0	Moist, no odor
					Dk brn		few cobbles		0.3	No odor
-5									0.4	
			Soil vapor implant from 6.5-7' bgs.				Installed temporary soil vapor point from 6.5-7'	ML		
					Brown	Soft	SILT, trace to some fine sand		0.2	No odor
		1		73	Gray and brown	Medium Dense	trace clay, mottled		0.2	
-10										Wet at 11' MGP-like odor
					Brown		SILT and fine to medium SAND, trace fine gravel	SM	2.9	
		2		100					6.1	Undifferentiated chemical odor
-15		3		100					1.1	No odor
							Refusal at 16' bgs.			
-20										
-25										

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig.

Collected soil samples from 4-4.5', 10.5-11.5', 12.5-13.5' and 15-16' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis. Advanced soil vapor implant from 6.5-7' bgs and collected soil vapor sample for TO-15 VOCs analysis.

URS Corporation

TEST BORING LOG

BORING NO. : SB-18

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 759080.1 **EASTING:** 691404.2

GROUNDWATER: ~10.5 ft bgs

GROUND ELEVATION: 51.25 ft amsl

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore		
				DIA.		2"		
				WT.				
				LENGTH		5'		
				* POCKET PENETROMETER READING				

DATE STARTED: 11/20/13

DATE FINISHED: 11/22/13

DRILLER: Jose Garcia

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.		Black Brown	Hard Medium Dense	ASPHALT	Asphalt	0	
							FILL: silt and fine to medium sand, some fine to medium gravel	Fill	0.1	Moist, no odors to 2.9'
									0.7	Faint diesel-like odor
									9.7	Headspace bag sample PID, 3-3.5' - 15.9 ppm
-5			Soil vapor sample from 6.5-7'				Installed temporary soil vapor point from 6.5-7'	SW		
							Fine to medium SAND, some fine to medium gravel and silt		9.9	Moist, faint MGP-like odor
		1		57	Dk Brn		SILT, trace clay	ML	50.6	Very moist, strong MGP-like odor
-10					Brown				217	Wet at 10.5', strong MGP-like odor
		2		72			Fine SAND and SILT, trace fine gravel	SM	1017	
							Fine to medium SAND, trace to some fine gravel, trace silt	SW	147	Strong MGP-like odor, staining
-15									193	Wet, sheen, slight MGP-like odor
		3		66					689	
									17.3	
-20									18.9	
		4		68						
-25							Refusal at 25 ft bgs.			

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig.

Collected soil samples from 3-3.5', 8.5-10', 12.5-13.5', 15.8-16.8' and 23-25' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis. Advanced soil vapor implant from 6.5-7' bgs and collected soil vapor sample for TO-15 VOCs analysis.

URS Corporation

TEST BORING LOG

BORING NO. : SB-19

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 759066.6 **EASTING:** 691276.6

GROUNDWATER: ~10 ft bg

GROUND ELEVATION: 50.61 ft amsl

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
			TYPE		Macrocore		
			DIA.		2"		
			WT.				
			LENGTH		5'		
			* POCKET PENETROMETER READING				

DATE STARTED: 11/01/13

DATE FINISHED: 11/07/13

DRILLER: Jose Garcia

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.		Black	Very Dense	ASPHALT	Asphalt	0	Moist, no odors
					Brown	Medium Dense	FILL: fine to medium gravel and silt	Fill	0	
					Ylw - Brn				0	
					Brown		FILL: medium sand		0	
							FILL: fine to medium sand, some to trace silt and fine gravel, many rocks and cobbles			Used jackhammer to break rocks/cobbles
-5		1		36			SILT, trace fine sand some schist rock, trace fine to medium sand	ML	1.9	
							Fine SAND and SILT, trace fine gravel	SM	20.9	Undifferentiated chemical odor from 8.3-10'
-10		2		72			Fine SAND, some to trace silt, trace fine gravel	SP	1425	Wet at 10' Strong undifferentiated chemical odor from 10-14'
-15		3		78			Fine to medium SAND, trace fine gravel	SW	2.9	No odor
									0.7	
						Loose	Micaceous SCHIST, silty, weathered, and foliated	Schist	0.2	No odor
-20		4		96						
-25							Refusal at 22.7 ft bgs.			

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig.

Collected soil samples from 9-10', 10.5-11.5', and 21.6-22.7' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis

BORING NO. : SB-19

URS Corporation

TEST BORING LOG

BORING NO. : SB-20

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 759033.2 **EASTING:** 691261.2

GROUNDWATER: ~8 ft bgs

GROUND ELEVATION: 50.73 ft amsl

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore		
				DIA.		2"		
				WT.				
				LENGTH		5'		
				* POCKET PENETROMETER READING				

DATE STARTED: 10/31/13

DATE FINISHED: 10/31/13

DRILLER: Ryan Jensen

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.		Black	Hard	ASPHALT	Asphalt	0	
					Ylw to Brown	Med Dense to Loose	FILL: fine to medium gravel, some silt	Fill	0	Moist, no odor
					Black	Medium Dense	FILL: medium sand		0.1	MGP-like odor
							FILL: fine to medium sand, some to trace silt and fine gravel			
-5					Brown		Fine SAND and SILT	SM	0.2	
							Fine to medium SAND, some silt	SW	0.2	No odor
		1		36			Fine SAND and SILT, trace coarse sand	SM	0.2	Wet at 8'
-10							Fine to medium SAND, trace silt and fine gravel	SW	0.2	No odor
		2		72			Medium to coarse SAND, some fine gravel		0.2	
							Fine SAND, trace silt and fine gravel	SM	0.1	No odor
-15		3		78		Loose	Weathered SCHIST	Schist	2.4	
							Refusal at 15.5 ft bgs.			
-20										
-25										

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig.

Collected soil samples from 3-3.3', 7-8' and 14.5-15.5' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

URS Corporation

TEST BORING LOG

BORING NO. : SB-21

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 759016.2 **EASTING:** 691303.5

GROUNDWATER: ~10.5 ft bgs

GROUND ELEVATION: 51.01 ft amsl

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
			TYPE		Macrocore		
			DIA.		2"		
			WT.				
			LENGTH		5'		
			* POCKET PENETROMETER READING				

DATE STARTED: 11/04/13

DATE FINISHED: 11/07/13

DRILLER: Ryan Jensen

GEOLOGIST: John Boyd

REVIEWED BY: Kevin J. McGovern

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.		Black	Hard	ASPHALT	Asphalt	0	
					Brown	Dense	FILL: silt and fine to medium sand, some fine to medium gravel	Fill	0	Moist, no odor
					Yellow	Loose			0	
					Brown	Medium Dense	FILL: medium sand		0.2	Faint undifferentiated chemical odor
							FILL: silt and fine to medium sand, some fine to medium gravel, trace wood			
-5		1		48			SILT and fine to medium SAND, some to trace fine to medium gravel	SM	67.5	MGP-like odor
-10		2		64	Light Brown				46.7	Wet at 10.5'
					Gray to Brown		Fine SAND, trace to some fine gravel and silt	SP	20.4	Faint MGP-like odor
-15		3		100	Dark Brown					Seam of fine gravel with sheen from 13.8-14'.
							Fine to medium SAND, trace fine gravel	SW	20.1	Faint MGP-like odor
-20		4		100	Brown				81.5	Strong MGP-like odor from 20.7-21.1'
							Weathered SCHIST	Schist	16.1	Faint MGP-like odor
-25							Refusal at 22.5' bgs.			

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig.

Collected soil samples from 2.5-3.5', 9-10', 20.7-21.1' and 21.5-22.5' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

BORING NO. : SB-21

URS Corporation

TEST BORING LOG

BORING NO. : SB-22

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 2

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR:

NORTHING: 758992.1 **EASTING:** 691286.3

GROUNDWATER: ~11 ft bgs

GROUND ELEVATION: 51.09 ft amsl

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE	HSA		Nx	
				DIA.	4-1/4"		2"	
				WT.				
				LENGTH				
				* POCKET PENETROMETER READING				

DATE STARTED: 10/31/13

DATE FINISHED: 10/31/13

DRILLER: Ryan Jensen

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.		Black	Hard	ASPHALT	Asphalt	0	
					Yellow	Loose	FILL: medium sand	Fill	0	Moist, no odor
					Black	Medium Dense	FILL: silt, some fine to medium sand, trace fine gravel		0.1	PAH-like odor from 2-5'
-5					Brown		SILT, some fine sand, trace gravel	SM		No odor
		1		30			Fine to medium SAND, trace silt	SW	3.5	
							SILT and very fine SAND, trace fine gravel	SM	4.5	Moist, no odor
-10		2		68					27.1	Wet at 11'
									22.9	
-15							Medium SAND		0.6	
								SP	1.0	
		3		67			Very fine SAND, some silt, trace weathered schist rock	SM	2.0	No odor
					Gray	Dense	Weathered SCHIST	Schist	2.3	
-20			Run #1 20.5-23.25' 15 min.	RQD = 0% REC = 30%					0	
							Weathered SCHIST and GNEISS Bedrock, some muddy seams, highly fractured and broken			No odor or sheen on return water
			Run #2 23.25-26' 32 min.	RQD = 31% REC = 66%						Core water lost at 23.25' - pulled core
-25							SCHIST and GNEISS Bedrock, highly fractured and broken			Borehole grouted and patched

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig, and Dietrich D-3 truck rig.

Collected soil samples from 2-2.3', 10-11.5' and 18.5-19.5' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

Advanced 4-1/4-inch HSA to 20.5 ft bgs on 11/8/13 to perform rock coring.

URS Corporation

TEST BORING LOG

BORING NO. : SB-22

PROJECT: Con Edison Cedar Street Works Site

SHEET: 2 OF 2

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
							Borehole complete at 26 ft bgs.			

-30

-35

-40

-45

-50

-55

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig, and Dietrich D-3 truck rig.

Collected soil samples from 2-2.3', 10-11.5' and 18.5-19.5' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

Advanced 4-1/4-inch HSA to 20.5 ft bgs on 11/8/13 to perform rock coring.

URS Corporation

TEST BORING LOG

BORING NO. : SB-23

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 758981.5 **EASTING:** 691321.2

GROUNDWATER: ~9.5 ft bgs

GROUND ELEVATION: 51.31 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
				DIA.		2"		
				WT.				
				LENGTH		5'		
				* POCKET PENETROMETER READING				

DATE STARTED: 11/04/13

DATE FINISHED: 11/06/13

DRILLER: Ryan Jensen

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.		Black	Hard	ASPHALT		0	
					Brown	Medium dense		Fill	0	Moist, no odor
					Black		FILL: silt and fine to medium sand, some brick and fine to medium gravel, trace schist cobbles		1.6	
-5		1		16	Brown	Loose			11.8	Oil-like waste odor at 4.5'
							wood chips 9.9 - 10' bgs		2.8	
-10		2		18		Soft (weight of rods)	FILL: wood chips		109	Wet at 9.5' MGP-like odor on wood chips from 9.9-13.85'
							brick and concrete 13.85-14' bgs			No hammering needed from 10-14'
-15							Refusal at 14 ft bgs.			
-20										
-25										

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig.

Collected soil samples from 4.5-5' and 13.5-14' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

Collected water grab sample from 13-14' bgs for TCL VOCs analysis.

URS Corporation

TEST BORING LOG

BORING NO. : SB-24

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 758961.7 **EASTING:** 691324.6

GROUNDWATER: ~10 ft bgs

GROUND ELEVATION: 51.71 ft amsl

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
			TYPE		Macrocore		
			DIA.		2"		
			WT.				
			LENGTH		5'		
			* POCKET PENETROMETER READING				

DATE STARTED: 11/04/13

DATE FINISHED: 11/07/13

DRILLER: Ryan Jensen

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.		Black	Hard	ASPHALT	Asphalt	0	
					Brown	Dense	FILL: silt and fine to medium sand, some fine to medium gravel	Fill	0	Moist, no odor
					Yellow	Loose	FILL: medium sand		0	
					Brown	Dense	FILL: silt and fine to medium sand, some fine to medium gravel and cobbles (schist)		0	
-5									1.1	Slight MGP-like odor 3.5-5'
						Medium Dense	FILL: fine to medium sand, some silt and fine gravel	SM	3.4	
		1		54			Fine SAND and SILT, trace fine gravel		3	
									8.5	Faint undifferentiated chemical odor from 7-7.4'
-10									2	
		2		54			Fine to medium SAND, some fine gravel, trace silt	SW	0.1	Wet at 10'
										No odor
-15							Weathered SCHIST with mica flakes	Schist		
							Refusal at 15 ft bgs.			
-20										
-25										

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig.

Collected soil samples from 9-10' and 14-15' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

URS Corporation

TEST BORING LOG

BORING NO. : SB-25

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 758943.0 **EASTING:** 691338.4

GROUNDWATER: ~10 ft bgs

GROUND ELEVATION: 51.83 ft amsl

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
			TYPE		Macrocore		
			DIA.		2"		
			WT.				
			LENGTH		5'		
			* POCKET PENETROMETER READING				

DATE STARTED: 11/04/13

DATE FINISHED: 11/07/13

DRILLER: Ryan Jensen

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.		Black	Hard	ASPHALT	Asphalt	0	
					Brown	Dense	FILL: silt and fine to medium sand, some fine to medium gravel	Fill	0	Moist, no odor
					Yellow	Loose			0	
					Brown	Dense	FILL: medium sand		0	
							FILL: silt and fine to medium sand, some fine to medium gravel and cobbles (schist)			
-5						Medium Dense			30.1	Undifferentiated chemical odor at 5'
		1		84			SILT, some fine to medium sand, trace fine gravel	ML	67.7	
									113	Strong undifferentiated chemical odor from 7.2-8.2'
-10							Fine to medium SAND, trace silt and fine gravel	SW	7.3	Wet at 10'
		2		63					0.3	Faint undifferentiated chemical odor at 10'
									0.1	No odor
							Weathered SCHIST	Schist	0.1	
-15							Refusal at 14 ft bgs.			
-20										
-25										

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig.

Collected soil samples from 7.2-8.2', 9-10' and 13-14' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

URS Corporation

TEST BORING LOG

BORING NO. : SB-26

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 759046.4 **EASTING:** 691394.0

GROUNDWATER: ~9 ft bgs

GROUND ELEVATION: 51.37 ft amsl

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore		
				DIA.		2"		
				WT.				
				LENGTH		5'		
				* POCKET PENETROMETER READING				

DATE STARTED: 1/11/14

DATE FINISHED: 1/12/14

DRILLER: John Veiss

GEOLOGIST: John Boyd/Mike Gutmann

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Cored concrete floor. Boring hand cleared to 5' with drum vacuum and air knife.		Red	Hard	CONCRETE	Concrete	0	
					Brown to Gray	Medium Dense	FILL: fine to coarse sand mixed with fine to medium gravel	Fill	0	Moist, slight naphthalene-like odor
						Dense				Some rebar and threaded rod from 1.3-2.3'
					Light Brown		FILL: sand with silt, rock fragments, gravel, and cobbles			No odor from 3-5'
-5		1		40	Black	Medium Dense	FILL: silt and fine to medium sand, some fine to medium gravel and cobbles (schist)		31.3	MGP-like odor at 5'
									83.0	Strong MGP-like odor from 7.5-8'
									161	
					Gray to Black		SILT, some fine to medium sand, trace fine gravel	SM	172	MGP-like odor from 8-10'
-10		2		75	Brown to Yellow		some schist fragments		384	Wet at 9' MGP-like odor
					Brown				242	
							SAND, some silt and gravel		810.9	Strong MGP-like odor
									904.4	Sheen & Staining 12.5-14.8'
-15		3		70			SILT, some sand and gravel		148.8	Faint MGP-like odor
									25.0	
									7.1	No odors from 17.5-19.1'
-20							Refusal at 19.1 ft bgs.			

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig.

Collected soil samples from 2.3-2.6', 8-10', 12.5-14.5', and 17.5-19.1' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

BORING NO. : SB-26

URS Corporation

TEST BORING LOG

BORING NO. : SB-27

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 758974.6 **EASTING:** 691416.0

GROUNDWATER: ~10 ft bgs

GROUND ELEVATION: 51.51 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
				DIA.		2"		
				WT.				
				LENGTH		5'		
				* POCKET PENETROMETER READING				

DATE STARTED: 1/11/14

DATE FINISHED: 1/12/14

DRILLER: John Veiss

GEOLOGIST: John Boyd/Mike Gutmann

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Cored concrete floor, 12 dia. Boring hand cleared to 5' with drum vacuum and air knife.		Red / Light Brown	Hard / Medium Dense	CONCRETE	Concrete	0	Dry
							FILL: fine to medium sand with fine to medium gravel some coarse sand and rock fragments	Fill		
-5							FILL: fractured gneiss rock		1.4	
		1		46	Dark Brown		SILT and fine SAND, trace fine gravel mixed with fractured schist rocks	SM	1.4 1.4	No Odor
					Brown		Micaceous SILT, trace medium to coarse sand	ML	1.4	No Odor Wet at 10'
-10		2		28			Micaceous fine to medium SAND, trace to some silt and fine gravel	SW	1.4 - 7.7	Faint MGP-like odor
-15		3		40	Black	Loose / Medium Dense	Medium to coarse SAND and fine GRAVEL some silt and fine sand	SW/GW	2.1 6.2	
-20		4		20			Fine to medium GRAVEL, some to trace silt	GW	2.4	Faint MGP-like odor and sheen
-25							Refusal at 23.3 ft bgs.			

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig.

Collected soil samples from 4-4.5', 9-10', 11-12.5', and 22-23.5' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

URS Corporation

TEST BORING LOG

BORING NO. : SB-28

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 758955.5 **EASTING:** 691432.5

GROUNDWATER: ~10 ft bgs

GROUND ELEVATION: 51.48 ft amsl

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
			TYPE		Macrocore		
			DIA.		2"		
			WT.				
			LENGTH		5'		
			* POCKET PENETROMETER READING				

DATE STARTED: 1/11/14

DATE FINISHED: 1/12/14

DRILLER: John Veiss

GEOLOGIST: John Boyd/Mike Gutmann

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Cored concrete floor, 12" dia. Boring hand cleared to 5' with drum vacuum and air knife.		Red	Hard	CONCRETE	Concrete		
					Brown	Very Dense	FILL: gravel subbase, some sand	Fill	0	Dry, no odor
							FILL: fine to coarse sand with some gravel, few cobbles and micaceous schist rocks			
-5		1		18	Dark Brown	Medium Dense	FILL: fine to medium gravel, some silt and fine to medium sand, trace brick		1.1	No Odor
-10		2		34					1.4	Wet at 10' Faint MGP-like odor
-15		3		50			refractory and red brick in sand from 15-17'		1.8	MGP-like odor
					Black		Medium to coarse SAND and fine to medium GRAVEL, some fine sand and silt	SW/GW	1.8	Faint MGP-like odor, slight sheen from 17-20'
-20		4		20	Gray Brown	Soft	SILT and CLAY	ML/CL	1.8	Faint MGP-like odor
					Dark Gray		SILT and fine SAND, trace fine to medium gravel	SM		Strong MGP-like odor
-25							Refusal at 23' bgs.			

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig.

Collected soil samples from 10-12', 17-19', and 22-23' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

URS Corporation

TEST BORING LOG

BORING NO. : SB-29

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 758974.0 **EASTING:** 691473.0

GROUNDWATER: ~5.8 ft bgs

GROUND ELEVATION: 51.30 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
				DIA.		2"		
				WT.				
				LENGTH		5'		
				* POCKET PENETROMETER READING				

DATE STARTED: 1/11/14

DATE FINISHED: 1/12/14

DRILLER: Ryan Jensen

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Cored concrete floor, 12" dia. Boring hand cleared to 5' with drum vacuum and air knife.		Red	Very Dense	CONCRETE	Concrete	0	
					Brown	Medium Dense	FILL: round gravel subbase with fine to coarse sand mixed with cobbles and granitic boulders	Fill		
-5							FILL: fine to medium sand, some silt and fine to medium gravel		1.1	No odor
		1		44	Dark Brown	Loose	(5.8-7.4') silt and fine sand, trace fine gravel		1.1	Wet at 5.8' No odor
						Medium Dense	(7.4-9') fine to medium sand, trace silt and fine gravel		1.7	
					Red Brown		(9-9.4') red brick		2.0	Slight naphthalene-like odor
-10		2		28	Dark Brown		(9.4-10') medium gravel, some fine to medium sand, trace silt		2.4	
							(10-14') fine to medium sand, trace to some silt and fine to medium gravel			
							(14-15') fine sand, some silt and brick		9.8	Wet, faint MGP-like odor from 14-15'
-15		3		30		Loose	(15-18') medium gravel and coarse sand		1.0	No odor
							(18-20') fine to medium sand, some brick, trace silt		2.0	
-20		4		92			Fine SAND and SILT, trace fine gravel	SM	4.2	
							SILT	ML	137.1	Slight naphthalene-like odor
						Med Dense	Fine to medium SAND, trace silt and fine gravel	SW	58.3	
-25							Refusal at 22.6 ft bgs.			

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig.

Collected soil samples from 2.5-3', 5.8-7' and 20.8-21.9' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

URS Corporation

TEST BORING LOG

BORING NO. : SB-30

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 759175.5 **EASTING:** 691450.5

GROUNDWATER: Not Encountered

GROUND ELEVATION: 49.12 ft amsl

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore		
				DIA.		2"		
				WT.				
				LENGTH		5'		
				* POCKET PENETROMETER READING				

DATE STARTED: 11/15/13

DATE FINISHED: 11/19/13

DRILLER: Marty Amoscato

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.		Black Brown	Hard Medium Dense	ASPHALT to 0.35'	Asphalt	0.2	
							FILL: silt and fine to medium sand, some fine to medium gravel and schist cobbles	Fill	0.2	Moist, no odor
-5							Fine to medium SAND, some silt and fine to medium gravel	SM	0.2	No odor
		1		100			Weathered SCHIST with micaceous silt	Schist	0.1	
-10							Refusal at 7 ft bgs.			
-15										
-20										
-25										

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig.

Collected soil samples from 3-3.5' and 5.8-7' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

URS Corporation

TEST BORING LOG

BORING NO. : SB-31

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 759035.6 **EASTING:** 691474.0

GROUNDWATER: ~9.5 ft bgs

GROUND ELEVATION: 51.06 ft amsl

DATE	TIME	LEVEL	TYPE		CAS.	SAMPLER	CORE	TUBE
				TYPE		Macrocore		
				DIA.		2"		
				WT.				
				LENGTH		5'		
				* POCKET PENETROMETER READING				

DATE STARTED: 11/20/13

DATE FINISHED: 11/22/13

DRILLER: Jose Garcia

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.		Black / Brown	Hard / Medium Dense	ASPHALT to 0.35' FILL: fine to medium sand and fine to medium gravel, some silt and schist cobbles, trace brick and concrete	Asphalt / Fill	0.1 0.3	Moist
-5			Soil vapor sample from 6.5-7'				Installed temporary soil vapor point from 6.5-7'	SW	64.1	Faint MGP-like odor
		1		67		Medium Dense	Fine to medium SAND, some silt and fine to medium gravel		3.9	Faint MGP-like odor
-10					Black / Brown	Soft	SILT, trace fine to medium sand and fine gravel	ML	6.5 1.9 52.9	Wet at 9.5' MGP-like odor
		2		76	Black / Brown	Medium Dense	Fine SAND, some to trace silt and fine gravel	SM	394 673 883	
-15							Weathered SCHIST Refusal at 14.9 ft bgs.	Schist	3.3	
-20										
-25										

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig.

Collected soil samples from 4-4.5', 8.8-9.5', 11.5-12.5' and 13-14.5' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis. Advanced soil vapor implant from 6.5-7' bgs and collected soil vapor sample for TO-15 VOCs analysis.

URS Corporation

TEST BORING LOG

BORING NO. : SB-32

PROJECT/PROJECT LOCATION: Con Edison Cedar Street Works Site

SHEET: 1 **OF** 1

CLIENT: Consolidated Edison Company of New York, Inc.

JOB NO. : 11176944.20000

BORING CONTRACTOR: Associated Environmental

NORTHING: 758990.0 **EASTING:** 691575.5

GROUNDWATER: ~10 ft bgs

GROUND ELEVATION: 44.38 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
						Macrocore		
				DIA.		2"		
				WT.				
				LENGTH		5'		
				* POCKET PENETROMETER READING				

DATE STARTED: 11/15/13

DATE FINISHED: 11/19/13

DRILLER: Jose Garcia

GEOLOGIST: John Boyd

REVIEWED BY: Mike Gutmann

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID (PPM)	REMARKS
0			Boring hand cleared to 5' with drum vacuum and air knife.		Black Brown	Hard Medium Dense	ASPHALT to 0.4'	Asphalt	0	
								Fill	0	Moist
							FILL: silt and fine to medium sand, some fine to medium gravel		0	
							FILL: schist boulder		0.1	
-5							FILL: silt, some fine to medium sand, trace clay, fine to medium gravel, glass and metal	SM		
			Soil vapor sample from 6.5-7'				Installed temporary soil vapor point from 6.5-7'		0.2	No odor
		1		100			Fine to medium micaceous SAND and SILT, 2" silt layer from 7-7.2'			
-10		2		100			Weathered SCHIST	Schist	0.1	Wet at 10'
							Refusal at 10.2 ft bgs.			
-15										
-20										
-25										

COMMENTS: Boring advanced with a GeoProbe 7822 DT direct-push drill rig.

Collected soil samples from 3-3.5' and 8.8-10' bgs for TCL VOCs, SVOCs, TAL Metals, and Total CN analysis.

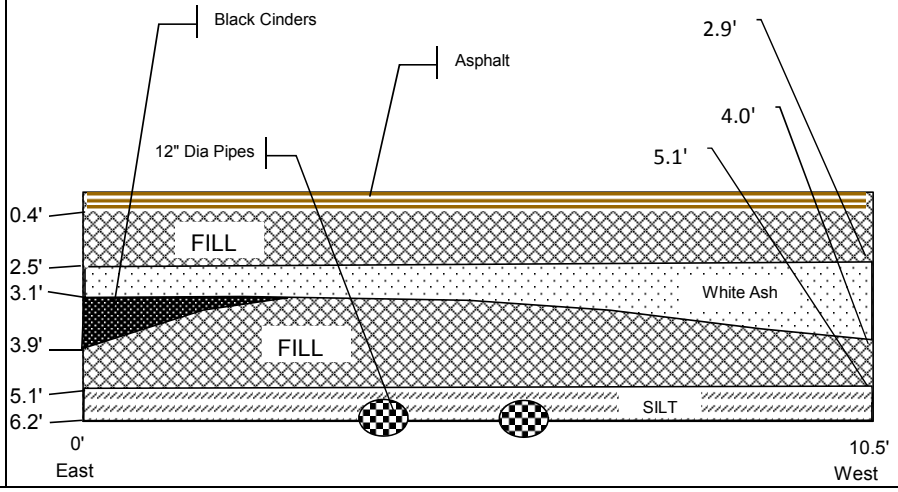
Advanced soil vapor implant from 6.5-7' bgs and collected soil vapor sample for TO-15 VOCs analysis.

BORING NO. : SB-32

TEST PIT LOG

PROJECT:	Con Edison Cedar Street Works Site	SHEET 1 OF 1	
CLIENT:	Consolidated Edison Company of New York, Inc.	JOB NUMBER:	11176944.20000
CONTRACTOR:	Associated Environmental	LOCATION:	Northing: 759070.9 Easting: 691329.8
DATE STARTED:	January 14, 2014	GROUND ELEVATION:	51.38 ft amsl
DATE COMPLETED:	January 14, 2014	OPERATOR:	John Veiss
TEST PIT NUMBER:	TP-8	GEOLOGIST:	John Boyd
		CHECKED BY:	Mike Gutmann

DEPTH (Ft.)	SAMPLE No.	SAMPLE Type	DESCRIPTION
1			ASPHALT
2			FILL: Mixture of cinders, brick and iron slag, fine to medium gravel, coarse sand, some to trace silt
3			ASH: Slag, PID = 0
4			
5			Light brown SILT, some fine sand, no odor
6			Two approx. 12" pipes found at 5.7' bgs.
7			completed @ 6.2 ft.
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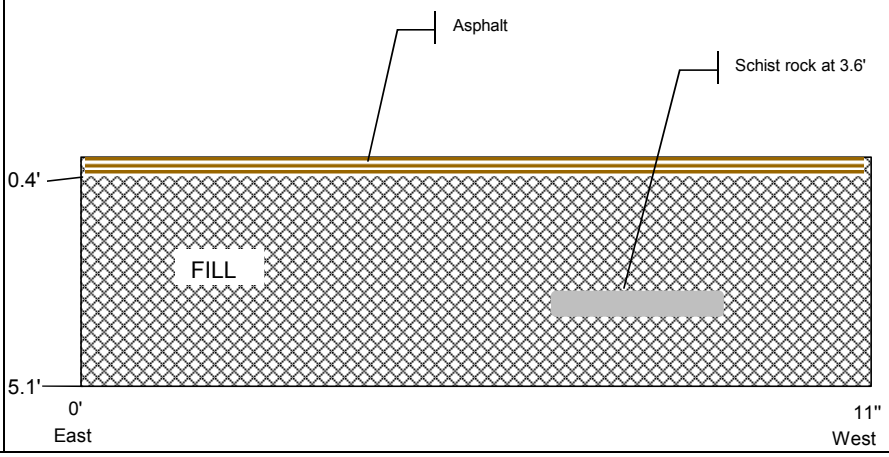


NOTES:

TEST PIT LOG

PROJECT:	Con Edison Cedar Street Works Site	SHEET 1 OF 1	
CLIENT:	Consolidated Edison Company of New York, Inc.	JOB NUMBER:	11176944.20000
CONTRACTOR:	Associated Environmental	LOCATION:	Northing: 759099.5 Easting: 691385.5
DATE STARTED:	January 15, 2014	GROUND ELEVATION:	51.59 ft amsl
DATE COMPLETED:	January 15, 2014	OPERATOR:	Jose Garcia
TEST PIT NUMBER:	TP-9	GEOLOGIST:	John Boyd
		CHECKED BY:	Mike Gutmann

DEPTH (Ft.)	SAMPLE No.	SAMPLE Type	DESCRIPTION
1			ASPHALT
2			FILL: 4"-7" - Brown subbase - fine to medium gravel and fine to coarse sand, trace silt
3			7"-1.5' - Schist rock, some fine to medium gravel, with sand and silt
4			1.5'-2.7' - Fine to medium sand and silt, trace fine gravel, faint MGP-like odor
5			2.7'-5.1' - Schist rock and fine to medium sand, some fine to medium gravel and silt, no odor
6			-large, flat schist rock exposed at 3.6' measuring 2.5'x3'x1.5", too large to remove from excavation
7			Excavation terminated @ 5.1 ft due to size of boulders encountered.
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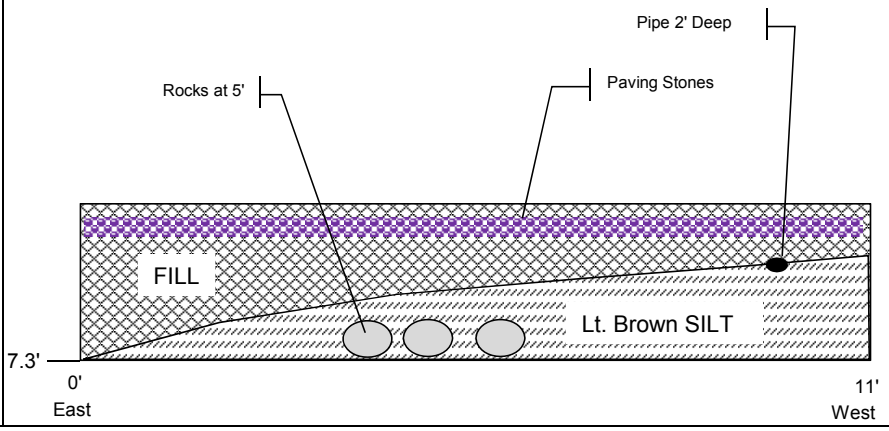


NOTES:

TEST PIT LOG

PROJECT:	Con Edison Cedar Street Works Site	SHEET 1 OF 1	
CLIENT:	Consolidated Edison Company of New York, Inc.	JOB NUMBER:	11176944.20000
CONTRACTOR:	Associated Environmental	LOCATION:	Northing: 758969.1 Easting: 691369.9
DATE STARTED:	January 13, 2014	GROUND ELEVATION:	52.36 ft amsl
DATE COMPLETED:	January 13, 2014	OPERATOR:	John Veiss
TEST PIT NUMBER:	TP-12	GEOLOGIST:	John Boyd
		CHECKED BY:	Mike Gutmann

DEPTH (Ft.)	SAMPLE No.	SAMPLE Type	DESCRIPTION
1–4			FILL: Brown fine to medium sand, some fine to medium gravel Concrete paving blocks (5" Thick, 7' X 7'), dark brown/black cinders Brown silt and medium to fine sand, some red brick ≈ 1.5" steel line perpendicular to trench and covered with white material
5–7			Light brown SILT, some fine to medium sand, trace fine gravel 5': Several large rocks present, which were removed completed @ 7.3 ft.



NOTES:

DRILLING SUMMARY

Geologist:
M. Gutmann, A. Papaneocleous

Drilling Company:
Glacier Drilling LLC

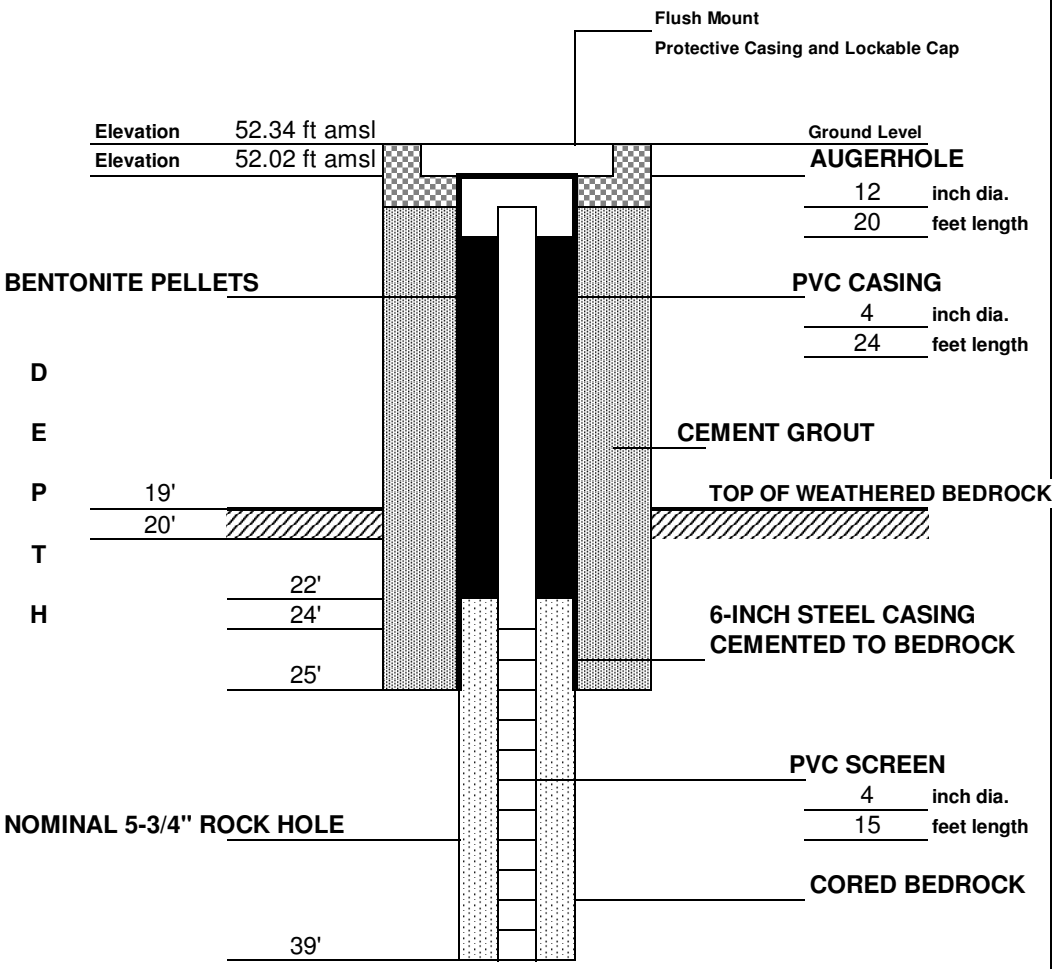
Driller:
Terry Bell

Rig Make/Model:
CME 85

Date:
3/26/2014

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 4" PVC	**Type:** #2 Sand **Setting:** 22-39'
Monitor: 4" PVC	**Slot Size:** 0.020"	***SEAL MATERIAL***
		Type: Bentonite Pellets **Setting:** 20-22'
		Type: Bentonite Pellets **Setting:** 10-20'

COMMENTS:
The boring was advanced with 4-1/4-inch ID HSAs, 8-1/4-inch ID HSAs, 4-inch HQ casing to 20 ft, and Nx cored to 25 ft. The borehole was then reamed with a 7-7/8-inch roller bit from 20 to 25 ft. Six-inch ID steel casing was then set into the rock socket and tremie grouted in place from 25 ft to the surface. Fourteen feet of HQ core were then drilled by a core barrel inserted into the 6-inch casing. The well was completed using 4-inch diameter PVC screen and riser.

LEGEND
- Concrete
- Cement Grout
- Bentonite Seal
- Silica Sandpack

Client:	**Consolidated Edison Company of New York, Inc.**	**Location:**	**Con Edison Cedar Street Works Site**
URS Corporation		**MONITORING WELL CONSTRUCTION DETAILS**	**Project No.:** **11176944**
			Well Number: **MW-02B**

DRILLING SUMMARY

Geologist:
M. Gutmann, A. Papaneocleous

Drilling Company:
Glacier Drilling LLC

Driller:
Terry Bell

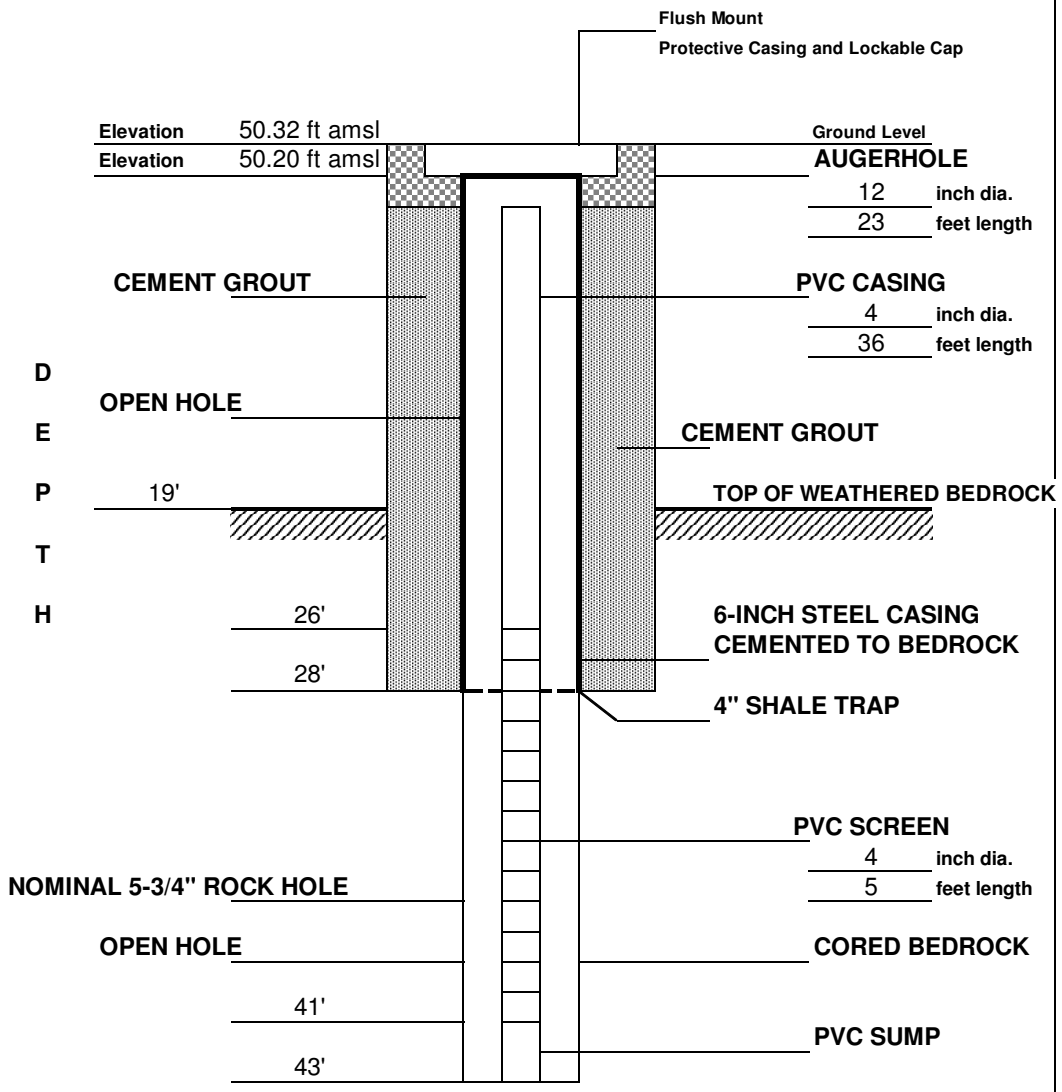
Rig Make/Model:
CME 85

Date:
3/26/2014

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.

WELL DESIGN



CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
Surface: Steel grade box	**Type:** 4" PVC	**Type:** None **Setting:** None
Monitor: 4" PVC	**Slot Size:** 0.020"	**SEAL MATERIAL**
		Type: None **Setting:** None
		Type: None **Setting:** None

COMMENTS:

The boring was advanced with 4-1/4-inch ID HSAs, 8-1/4-inch ID HSAs, 4-inch HQ casing to 23 ft, and Nx-cored to 28 ft. The borehole was then reamed with a 7-7/8-inch roller bit from 23 to 28 ft. Six-inch ID steel casing was then set into the rock socket and tremie grouted in place from 28 ft to the surface. Fifteen feet of HQ core were then drilled by a core barrel inserted into the 6-inch casing. The well was completed using 4-inch diameter PVC screen and riser.

LEGEND

- Concrete
- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client:	**Consolidated Edison Company of New York, Inc.**	**Location:**	**Con Edison Cedar Street Works Site**
URS Corporation		**MONITORING WELL CONSTRUCTION DETAILS**	

Project No.: **11176944**

Well Number: **MW-03B**

DRILLING SUMMARY

Geologist:
John Boyd

Drilling Company:
Associated Environmental

Driller:
John Veiss

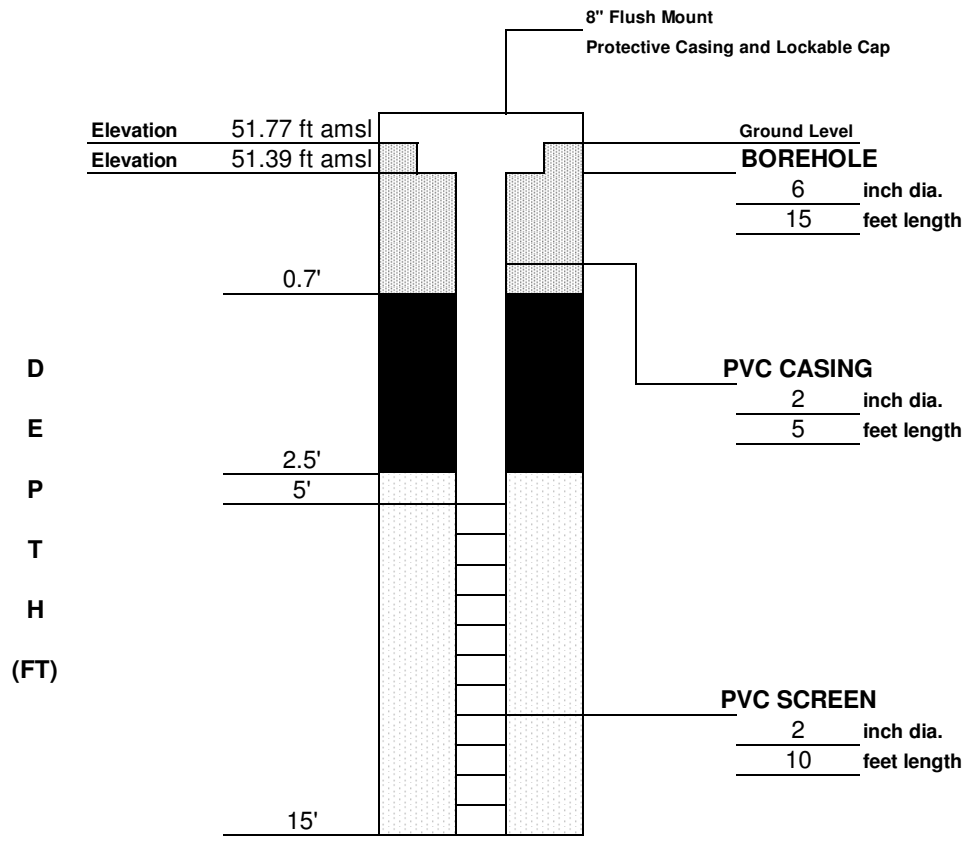
Rig Make/Model:
Geoprobe 7822 DT

Date:
10/31/2013

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.

WELL DESIGN



CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" SCH 40 PVC	**Type:** #2 Sand **Setting:** 2.5-15'
Monitor: 2" SCH 40 PVC	**Slot Size:** 0.020"	***SEAL MATERIAL***
		Type: Bentonite **Setting:** 0.7-2.5'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Consolidated Edison Company of New York, Inc.	**Location:** Con Edison Cedar Street Works Site	**Project No.:** 11176944
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-08A

DRILLING SUMMARY

Geologist:
A. Papaneocleous

Drilling Company:
Associated Environmental

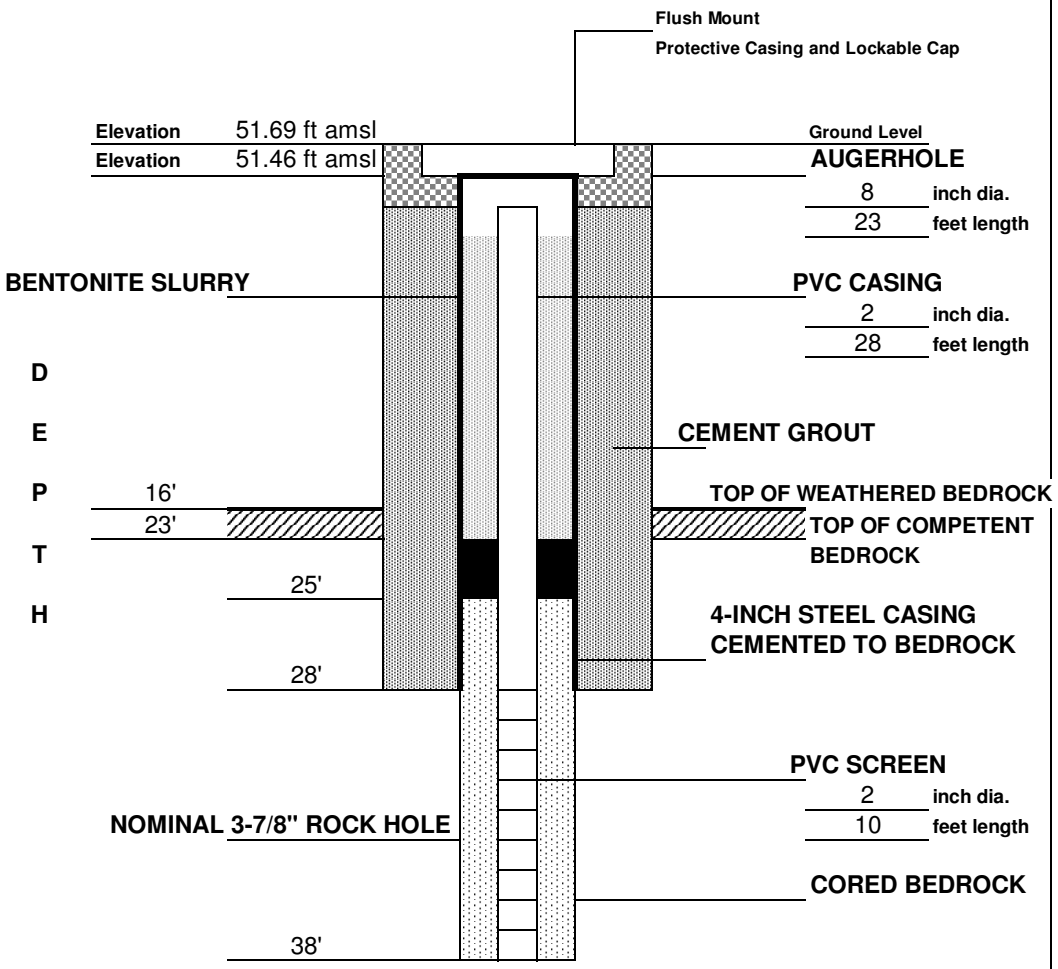
Driller:
Ryan Jensen

Rig Make/Model:
Dietrich D-3

Date:
11/26/2013

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** #2 Sand **Setting:** 25-38'
Monitor: 2" PVC	**Slot Size:** 0.020"	***SEAL MATERIAL***
		Type: Bentonite Pellets **Setting:** 23-25'
		Type: Bentonite Slurry **Setting:** 1-23'

COMMENTS:
The boring was advanced with 4-1/4-inch and 6-1/4"ID HSAs and 4-inch HQ casing to 23 ft. The borehole was then reamed with a 5-7/8-inch roller bit/air hammer from 23 to 28 ft. Four-inch ID steel casing was then set into the rock socket and tremie grouted in place from 28 ft to the surface. Ten feet of Nx core were then drilled by a core barrel inserted into the 4-inch casing. The well was completed using 2-inch diameter PVC screen and riser.

LEGEND
- Concrete
- Cement Grout
- Bentonite Seal
- Silica Sandpack

Client:	**Consolidated Edison Company of New York, Inc.**	**Location:**	**Con Edison Cedar Street Works Site**
URS Corporation		**MONITORING WELL CONSTRUCTION DETAILS**	

Project No.: **11176944**

Well Number: **MW-08B**

DRILLING SUMMARY

Geologist:
John Boyd

Drilling Company:
Associated Environmental

Driller:
John Veiss

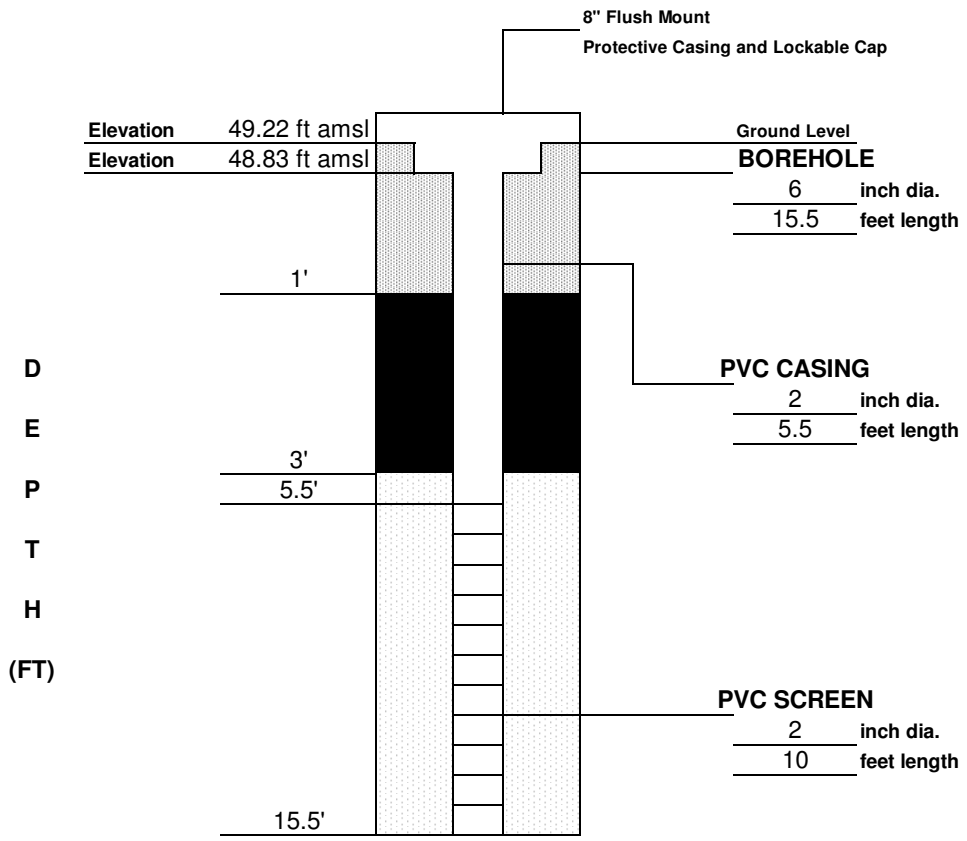
Rig Make/Model:
Geoprobe 7822 DT

Date:
10/30/2013

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.

WELL DESIGN



CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" SCH 40 PVC	**Type:** #2 Sand **Setting:** 3-15.5'
		SEAL MATERIAL
Monitor: 2" SCH 40 PVC	**Slot Size:** 0.020"	**Type:** Bentonite **Setting:** 1-3'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Consolidated Edison Company of New York, Inc.	**Location:** Con Edison Cedar Street Works Site	**Project No.:** 11176944
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-09

DRILLING SUMMARY

Geologist:
John Boyd

Drilling Company:
Associated Environmental

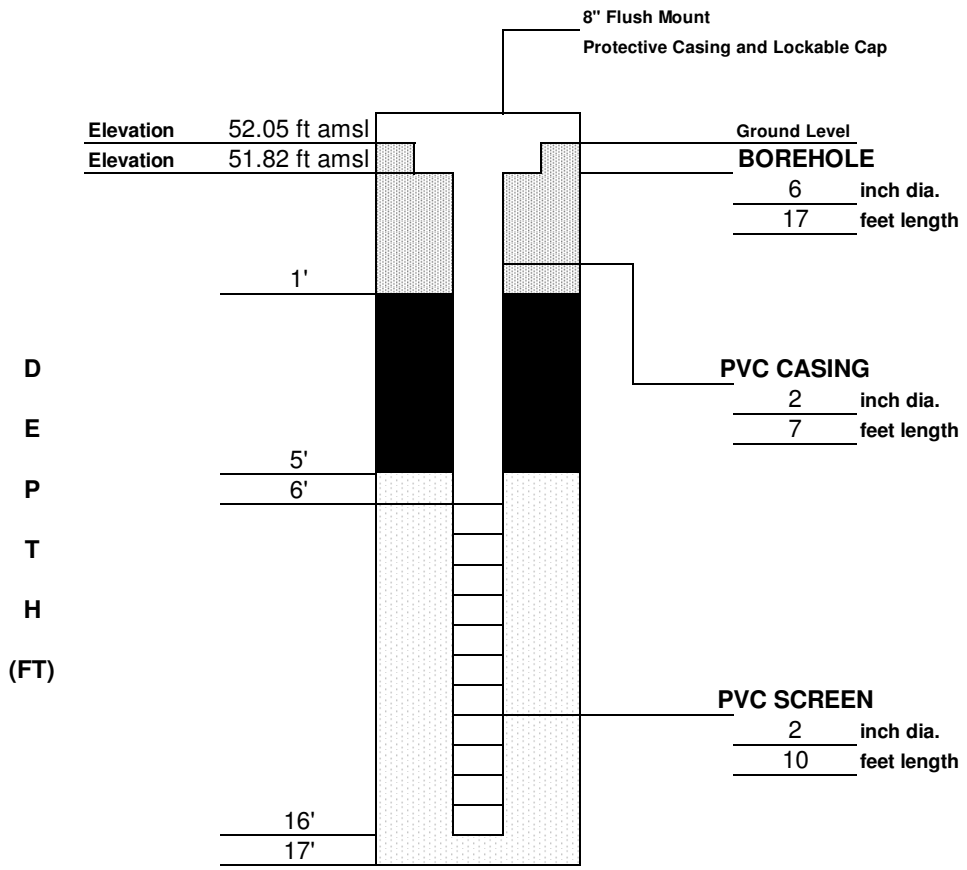
Driller:
John Veiss

Rig Make/Model:
Geoprobe 7822 DT

Date:
10/31/2013

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" SCH 40 PVC	**Type:** #2 Sand **Setting:** 5-17'
Monitor: 2" SCH 40 PVC	**Slot Size:** 0.020"	***SEAL MATERIAL***
		Type: Bentonite **Setting:** 1-5'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Consolidated Edison Company of New York, Inc.	**Location:** Con Edison Cedar Street Works Site	**Project No.:** 11176944
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-10

DRILLING SUMMARY

Geologist:
John Boyd

Drilling Company:
Associated Environmental

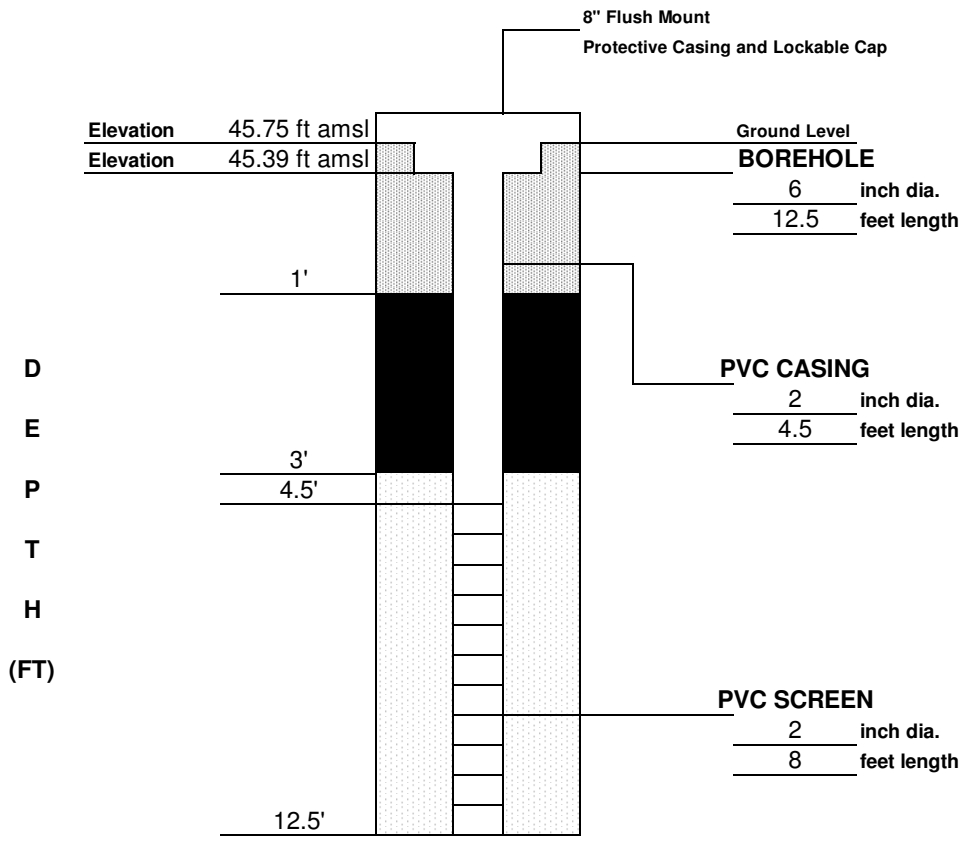
Driller:
John Veiss

Rig Make/Model:
Geoprobe 7822 DT

Date:
11/19/2013

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" SCH 40 PVC	**Type:** #2 Sand **Setting:** 3-12.5'
Monitor: 2" SCH 40 PVC	**Slot Size:** 0.020"	***SEAL MATERIAL***
		Type: Bentonite **Setting:** 1-3'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Consolidated Edison Company of New York, Inc.	**Location:** Con Edison Cedar Street Works Site	**Project No.:** 11176944
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-11A

DRILLING SUMMARY

Geologist:
M. Gutmann, A. Papaneocleous

Drilling Company:
Glacier Drilling LLC

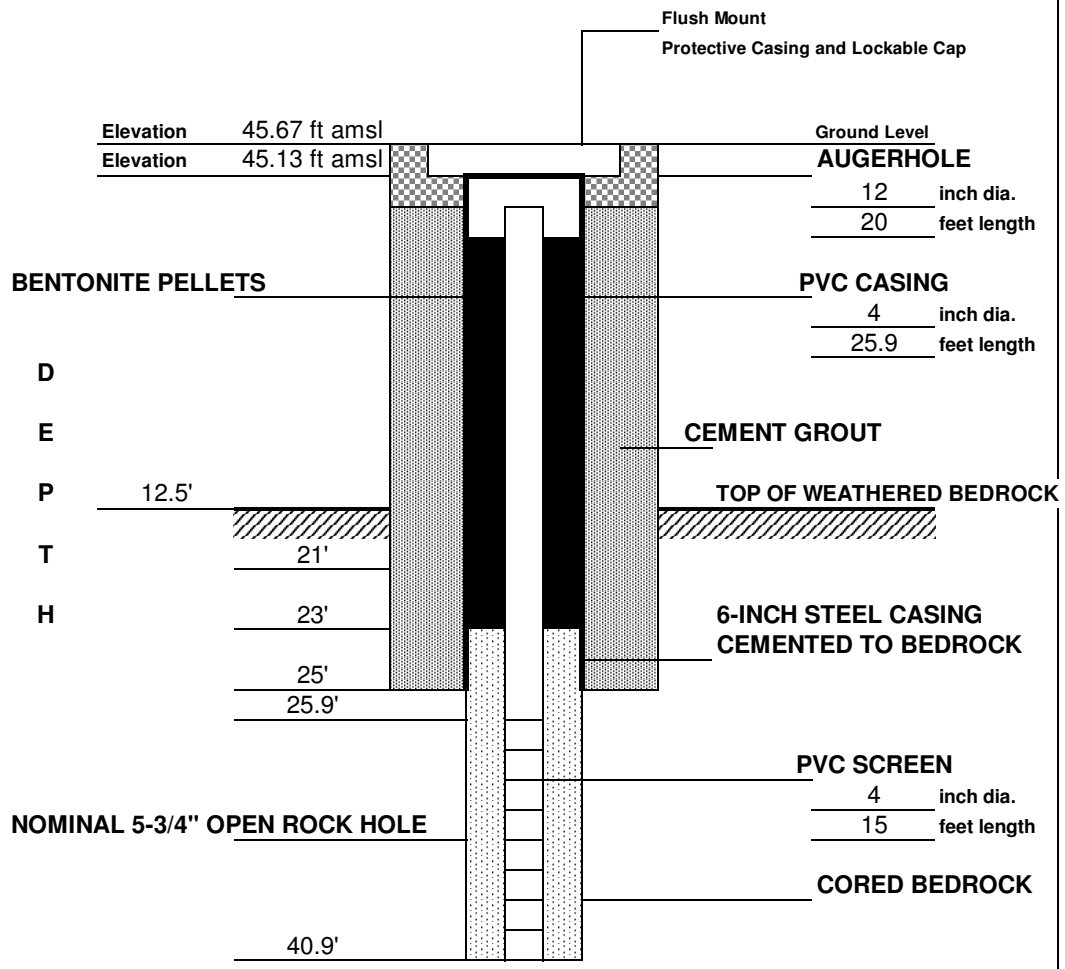
Driller:
Terry Bell

Rig Make/Model:
CME 85

Date:
3/25/2014

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 4" PVC	**Type:** #2 Sand **Setting:** 23-40.9'
Monitor: 4" PVC	**Slot Size:** 0.020"	***SEAL MATERIAL***
		Type: Bentonite Pellets **Setting:** 21-23'
		Type: Bentonite Pellets **Setting:** 10-21'

COMMENTS:
The boring was advanced with 4-1/4-inch ID HSAs, 8-1/4-inch ID HSAs, 4-inch HQ casing to 20 ft, and NX cored to 25 ft. The borehole was then reamed with a 7-7/8-inch roller bit from 20 to 25 ft. Six-inch ID steel casing was then set into the rock socket and tremie grouted in place from 25 ft to the surface. Approximately 16 feet of HQ core were then drilled by a core barrel inserted into the 6-inch casing. The well was completed using 4-inch diameter PVC screen and riser.

LEGEND
- Concrete
- Cement Grout
- Bentonite Seal
- Silica Sandpack

Client:	**Consolidated Edison Company of New York, Inc.**	**Location:**	**Con Edison Cedar Street Works Site**
URS Corporation		**MONITORING WELL CONSTRUCTION DETAILS**	**Project No.:** **11176944**
			Well Number: **MW-11B**

DRILLING SUMMARY

Geologist:
John Boyd

Drilling Company:
Associated Environmental

Driller:
John Veiss

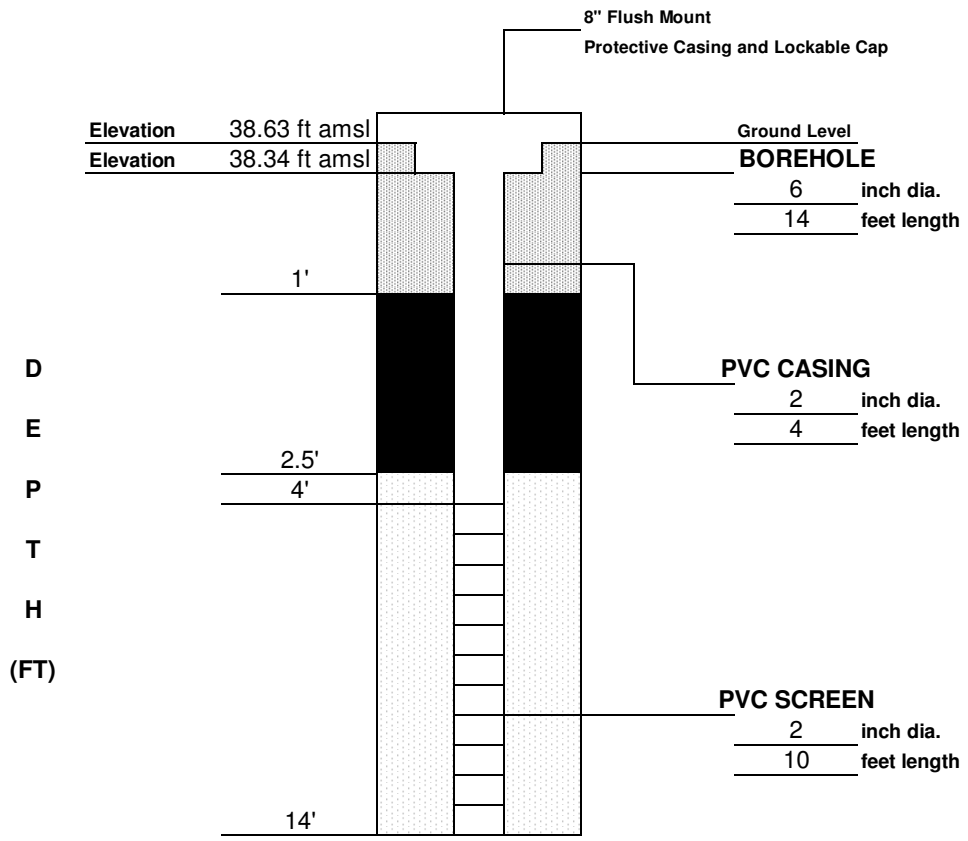
Rig Make/Model:
Geoprobe 7822 DT

Date:
1/24/2014

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.

WELL DESIGN



CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" SCH 40 PVC	**Type:** #2 Sand **Setting:** 3-12.5'
		SEAL MATERIAL
Monitor: 2" SCH 40 PVC	**Slot Size:** 0.020"	**Type:** Bentonite **Setting:** 1-3'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Consolidated Edison Company of New York, Inc.	**Location:** Con Edison Cedar Street Works Site	**Project No.:** 11176944
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-12A

DRILLING SUMMARY

Geologist:
M. Gutmann

Drilling Company:
Glacier Drilling LLC

Driller:
Terry Bell

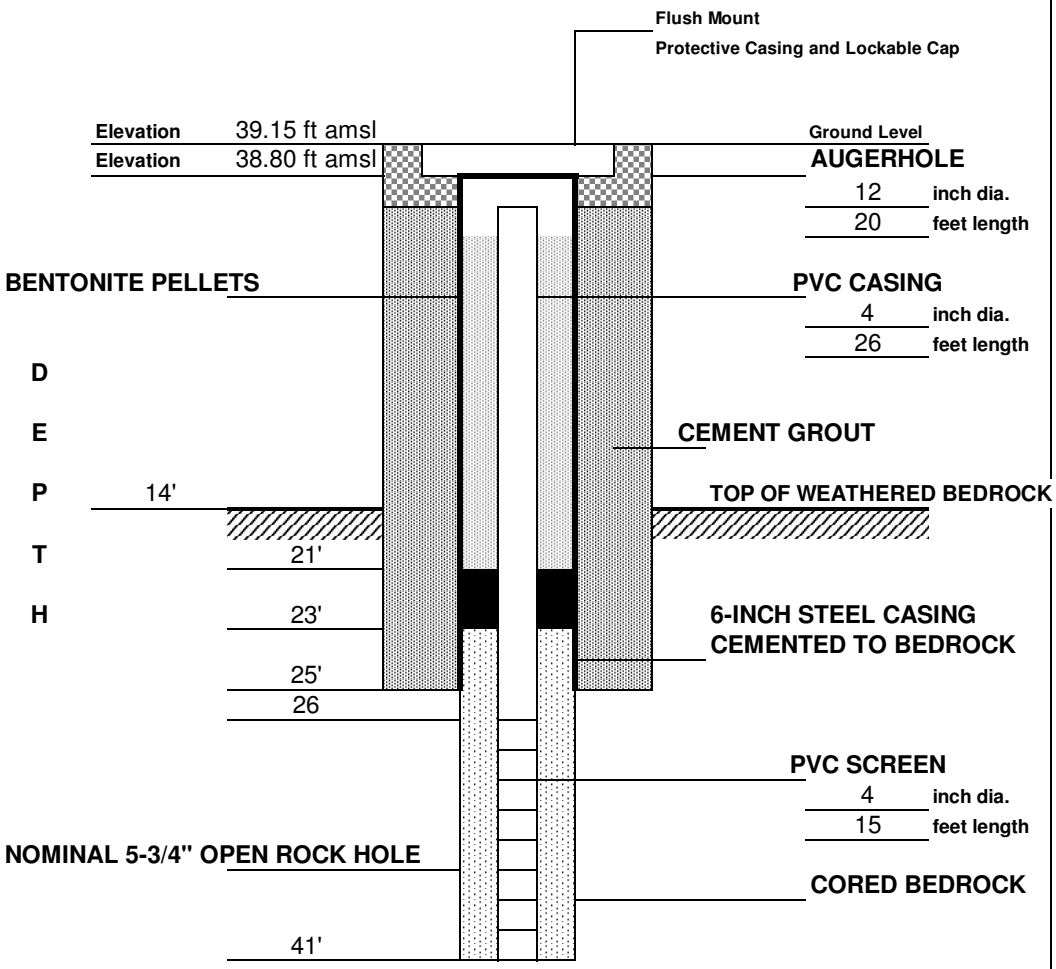
Rig Make/Model:
CME 85

Date:
3/26/2014

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.

WELL DESIGN

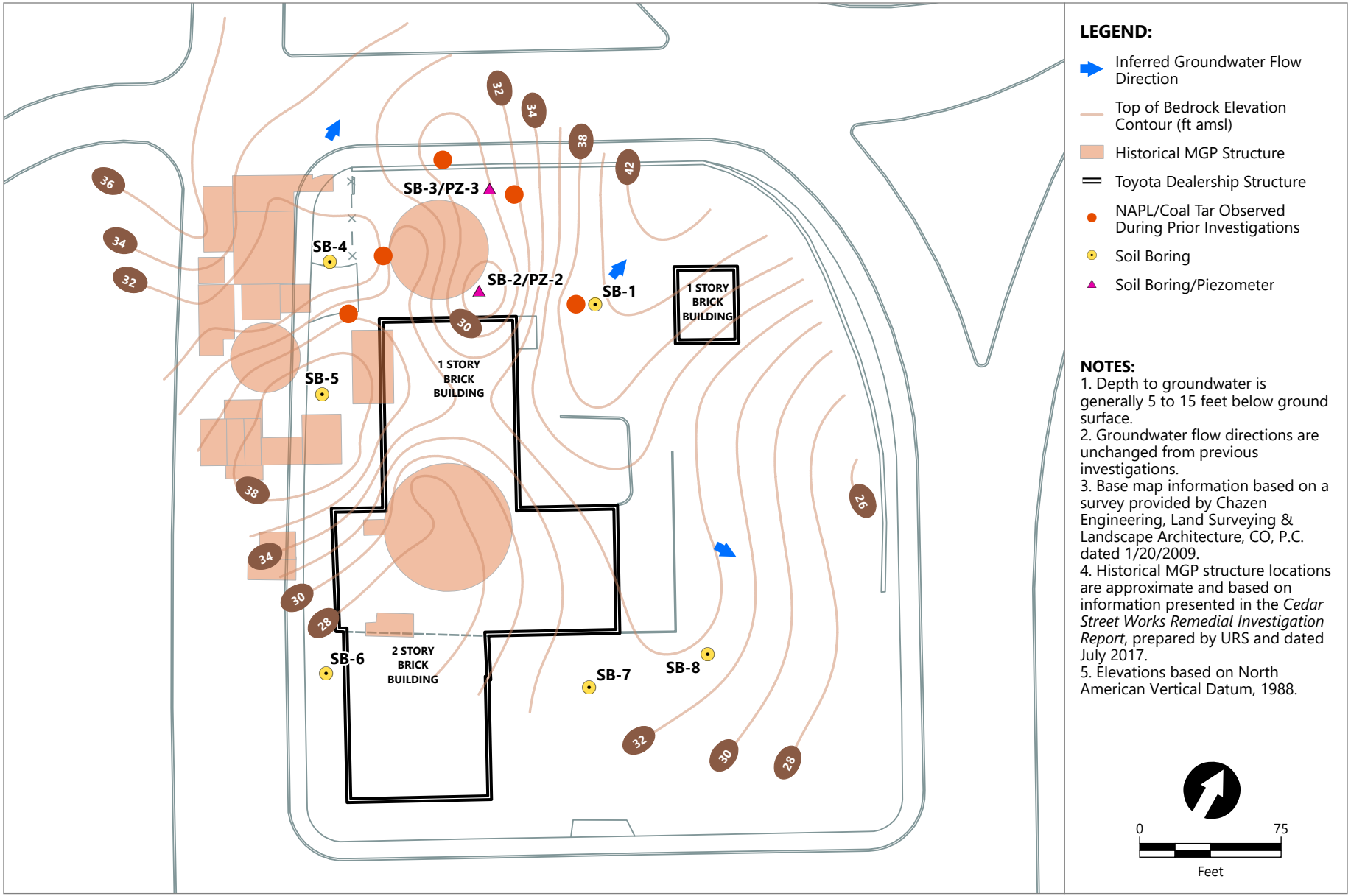


CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 4" PVC	**Type:** #2 Sand **Setting:** 23-41'
Monitor: 4" PVC	**Slot Size:** 0.020"	***SEAL MATERIAL***
		Type: Bentonite Pellets **Setting:** 21-23'
		Type: Bentonite Pellets **Setting:** 10-21'

COMMENTS:
The boring was advanced with 4-1/4-inch ID HSAs, 8-1/4-inch ID HSAs, 4-inch HQ casing to 20 ft, and Nx cored to 25 ft. The borehole was then reamed with a 7-7/8-inch roller bit from 20 to 25 ft. Six-inch ID steel casing was then set into the rock socket and tremie grouted in place from 25 ft to the surface. Fifteen feet of HQ core were then drilled by a core barrel inserted into the 6-inch casing. The well was completed using 4-inch diameter PVC screen and riser.

LEGEND
- Concrete
- Cement Grout
- Bentonite Seal
- Silica Sandpack

Client:	**Consolidated Edison Company of New York, Inc.**	**Location:**	**Con Edison Cedar Street Works Site**
URS Corporation		**MONITORING WELL CONSTRUCTION DETAILS**	**Project No.:** **11176944**
			Well Number: **MW-12B**



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Filepath: \\GSTFile01\GIS\Jobs\Con_Edison_0921\CedarStreetWorksSite\Maps\PDI_SummaryReport\PDI.aprx | AQ_Fig01_SampleLocations

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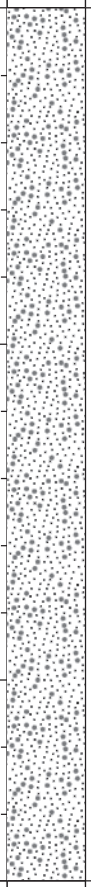
Figure 2-1
PDI Locations
PDI Report
Cedar Street Works Former MGP Site

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Phone: (206) 287-9130

Boring Log - Borehole

SB-1

UTM	: 18T	Equipment	: Sonic Drill Rig	Job Number	: E50921-07.01
Latitude	: 40.91518	Contractor	: ADT	Client	: Consolidated Edison Company of New York, Inc.
Longitude	: -73.77875	Logged By	: Kelly Thigpen	Project	: Cedar Street Former MGP Site
Ground Elevation	: 46.92 (Ft)	Reviewed By	: Matt Cavas	Location	: 47 Cedar St, New Rochelle, NY 10801, USA
Total Depth	: 13 Ft BGL	Date	: 05/23/2025	Loc Comment	:

Depth (ft bgs)	Graphic Log	PID (ppm)	Recovered Length (ft bgs)	Soil Description Samples and description are in recovered depths Classification Scheme: USCS	NAPL Observations	Notes
		0.0		Gravelly Sand with Silt - (SP): slightly moist, loose, grey brown, sub-angular gravel, medium to fine sand, coarse grained gravel, little brick, cinder, and concrete.	No observed impacts	
				Gravelly Sand with Silt - (SP): slightly moist, medium dense, grey black and brown, sub-angular gravel, fine, medium and coarse sand, coarse grained gravel, some cinder, concrete, ash, and brick.		
				Gravelly Sand with Silt - (SP): slightly moist, medium dense, grey black, angular gravel, medium, fine and coarse sand, coarse grained gravel, some concrete, cinder, and brick.		
5.0				Gravelly Sand with Silt - (SP): very moist, loose, dark grey, sub-angular gravel, medium to coarse sand, coarse grained gravel.		
		0.0		Gravelly Sand with Silt - (SP): dry, loose, light grey, sub-rounded gravel, fine sand, coarse grained gravel, boulder or bedrock.		
10.0						
				SB-1 Terminated at 13 Ft (top of rock)		

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Boring Log - Borehole

SB-2

UTM	: 18T	Equipment	: Sonic Drill Rig	Job Number	: E50921-07.01
Latitude	: 40.91497	Contractor	: ADT	Client	: Consolidated Edison Company of New York, Inc.
Longitude	: -73.77871	Logged By	: Kelly Thigpen	Project	: Cedar Street Former MGP Site
Ground Elevation	: 49.7 (Ft)	Reviewed By	: Matt Cavas	Location	: 47 Cedar St, New Rochelle, NY 10801, USA
Total Depth	: 28 Ft BGL	Date	: 05/23/2025	Loc Comment	:

Depth (ft bgs)	PID (ppm)	Recovered Length (ft bgs)	Soil Description Samples and description are in recovered depths Classification Scheme: USCS	NAPL Observations	Notes
	0.0		Poorly Graded Sand with Silt and Gravel - (SP-SM): dry, loose, brown, sub-angular gravel, fine, medium and coarse sand, trace brick and concrete.	No observed impacts	
			Silty Sand with Gravel - (SM): slightly moist, medium dense, brown, sub-angular gravel, medium to fine sand, trace brick and cement.		
5.0			Silty Sand with Gravel - (SM): very moist, loose, brown, sub-angular gravel, medium to coarse sand, mild odor.		
	5.7		Clayey Silt with Sand - (ML): Moist Firm, Black, Low plasticity, with medium sand, odor.	Trace Stained	
10.0	80.1			Coated	
	33.5		Poorly Graded Sand with Silt - (SP-SM): moist, loose, black, medium to coarse sand, odor.		
	5.7				
15.0	42.6		Well-Graded Sand with Silt and Gravel - (SW-SM): moist, dense, grey brown, sub-rounded gravel, fine, medium and coarse sand.	No observed impacts	

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Boring Log - Borehole

SB-2

UTM	: 18T	Equipment	: Sonic Drill Rig	Job Number	: E50921-07.01
Latitude	: 40.91497	Contractor	: ADT	Client	: Consolidated Edison Company of New York, Inc.
Longitude	: -73.77871	Logged By	: Kelly Thigpen	Project	: Cedar Street Former MGP Site
Ground Elevation	: 49.7 (Ft)	Reviewed By	: Matt Cavas	Location	: 47 Cedar St, New Rochelle, NY 10801, USA
Total Depth	: 28 Ft BGL	Date	: 05/23/2025	Loc Comment	:

Depth (ft bgs)	Graphic Log	PID (ppm)	Recovered Length (ft bgs)	Soil Description Samples and description are in recovered depths Classification Scheme: USCS	NAPL Observations	Notes
				Well-Graded Sand with Silt and Gravel - (SW-SM): moist, dense, grey brown, sub-rounded gravel, fine, medium and coarse sand. (continued)	No observed impacts	
				Gravelly Sand with Silt - (SP): wet, loose, brown, sub-rounded gravel, coarse to medium sand, coarse grained gravel.		
25.0		9.4		Gravelly Sand with Silt - (SP): wet, loose, grey black, sub-rounded gravel, coarse to medium sand, coarse grained gravel, odor.	Coated	
				SB-2 Terminated at 28 Ft (top of rock)		

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Boring Log - Borehole

SB-3

UTM	: 18T	**Equipment**	: Sonic Drill Rig	**Job Number**	: E50921-07.01
Latitude	: 40.91521	**Contractor**	: ADT	**Client**	: Consolidated Edison Company of New York, Inc.
Longitude	: -73.77903	**Logged By**	: Kelly Thigpen	**Project**	: Cedar Street Former MGP Site
Ground Elevation	: 49.38 (Ft)	**Reviewed By**	: Matt Cavas	**Location**	: 47 Cedar St, New Rochelle, NY 10801, USA
Total Depth	: 20 Ft BGL	**Date**	: 05/23/2025	**Loc Comment**	:

Depth (ft bgs)	PID (ppm)	Recovered Length (ft bgs)	Soil Description Samples and description are in recovered depths Classification Scheme: USCS	NAPL Observations	Notes
	0.0		Gravelly Sand with Silt - (SP): dry, loose, tan, sub-rounded gravel, medium to fine sand, fine grained gravel.	No observed impacts	
			Gravelly Sand with Silt - (SP): dry, dense, black, sub-angular gravel, medium to fine sand, coarse grained gravel, some cinder, ash, and brick. grades downward to mf sand and mfc gravel.		
5.0			Well-Graded Sand with Silt - (SW-SM): moist, medium dense, orange brown, coarse, medium and fine sand.		
	0.0		Clayey Silt - (ML): Moist Firm, Grey Brown, Low plasticity.		
10.0			Well-Graded Sand with Silt - (SW-SM): wet, loose, grey black, medium to coarse sand, odor.	Stained, trace blebs	
	55.4			Coated	
15.0			Silty Sand with Gravel - (SM): slightly moist, very dense, grey, sub-rounded gravel, medium to fine sand.		
	90.3		SB-3 Terminated at 20 Ft (top of rock)	No observed impacts	

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Boring Log - Borehole

SB-4

UTM	: 18T	**Equipment**	: Sonic Drill Rig	**Job Number**	: E50921-07.01
Latitude	: 40.91504	**Contractor**	: ADT	**Client**	: Consolidated Edison Company of New York, Inc.
Longitude	: -73.77923	**Logged By**	: Kelly Thigpen	**Project**	: Cedar Street Former MGP Site
Ground Elevation	: 42.62 (Ft)	**Reviewed By**	: Matt Cavas	**Location**	: 47 Cedar St, New Rochelle, NY 10801, USA
Total Depth	: 25 Ft BGL	**Date**	: 05/22/2025	**Loc Comment**	:

Depth (ft bgs)	Graphic Log	PID (ppm)	Recovered Length (ft bgs)	Soil Description Samples and description are in recovered depths Classification Scheme: USCS	NAPL Observations	Notes
				Silty Sand with Gravel - (SM): slightly moist, loose, brown, sub-rounded gravel, medium, coarse and fine sand, little brick, cinder, ash.	No observed impacts	
				Gravelly Sand with Silt - (SP): slightly moist, loose, black, sub-rounded gravel, medium to coarse sand, fine grained gravel, some cinder, little ash and brick.		
5.0				Sandy Elastic Silt with Gravel - (MH): Wet Soft, Grey Black, Medium plasticity, fine to medium grained sand, with medium gravel, mild odor.		
		4.2				
10.0				Sandy Silt with Gravel - (ML): Moist Firm, Grey, Low plasticity, fine to medium grained sand, with coarse gravel, mild odor.	Blebs sporadic throughout	
		2.6				
		46.5				
15.0		80.6		Silty Sand with Gravel - (SM): moist, dense, grey brown, sub-angular gravel, medium to fine sand.	No observed impacts	
		0.0				

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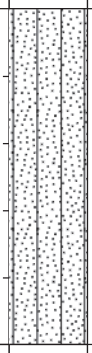
Notes:

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Boring Log - Borehole

SB-4

UTM	: 18T	Equipment	: Sonic Drill Rig	Job Number	: E50921-07.01
Latitude	: 40.91504	Contractor	: ADT	Client	: Consolidated Edison Company of New York, Inc.
Longitude	: -73.77923	Logged By	: Kelly Thigpen	Project	: Cedar Street Former MGP Site
Ground Elevation	: 42.62 (Ft)	Reviewed By	: Matt Cavas	Location	: 47 Cedar St, New Rochelle, NY 10801, USA
Total Depth	: 25 Ft BGL	Date	: 05/22/2025	Loc Comment	:

Depth (ft bgs)	Graphic Log	PID (ppm)	Recovered Length (ft bgs)	Soil Description Samples and description are in recovered depths Classification Scheme: USCS	NAPL Observations	Notes
		0.0		Poorly Graded Sand with Silt and Gravel - (SP-SM): moist, dense, grey, sub-rounded gravel, medium to fine sand.	No observed impacts	
				SB-4 Terminated at 25 Ft (top of rock)		

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Boring Log - Borehole

SB-5

UTM	: 18T	Equipment	: Sonic Drill Rig	Job Number	: E50921-07.01
Latitude	: 40.91481	Contractor	: ADT	Client	: Consolidated Edison Company of New York, Inc.
Longitude	: -73.77914	Logged By	: Kelly Thigpen	Project	: Cedar Street Former MGP Site
Ground Elevation	: 51.74 (Ft)	Reviewed By	: Matt Cavas	Location	: 47 Cedar St, New Rochelle, NY 10801, USA
Total Depth	: 15 Ft BGL	Date	: 05/22/2025	Loc Comment	:

Depth (ft bgs)	Graphic Log	PID (ppm)	Recovered Length (ft bgs)	Soil Description Samples and description are in recovered depths Classification Scheme: USCS	NAPL Observations	Notes
		0.0		Silty Sand with Gravel - (SM): slightly moist, medium dense, brown , sub-rounded gravel, medium to fine sand.	No observed impacts	
				Sandy Elastic Silt with Gravel - (MH): Slightly Moist Soft, Brown, Medium plasticity, medium to fine grained sand, with fine gravel, trace brick and cinder.		
5.0		0.0		Silty Sand with Gravel - (SM): slightly moist, dense, brown, sub-angular gravel, medium to fine sand, trace brick and cinder.		
10.0		0.0		Poorly Graded Sand with Silt and Gravel - (SP-SM): dry, loose, light grey, sub-angular gravel, medium to fine sand, top of rock.		
				SB-5 Terminated at 15 Ft (top of rock)		

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Boring Log - Borehole

SB-6

UTM	: 18T	Equipment	: Sonic Drill Rig	Job Number	: E50921-07.01
Latitude	: 40.91444	Contractor	: ADT	Client	: Consolidated Edison Company of New York, Inc.
Longitude	: -73.77883	Logged By	: Kelly Thigpen	Project	: Cedar Street Former MGP Site
Ground Elevation	: 54.36 (Ft)	Reviewed By	: Matt Cavas	Location	: 47 Cedar St, New Rochelle, NY 10801, USA
Total Depth	: 28 Ft BGL	Date	: 05/22/2025	Loc Comment	:

Depth (ft bgs)	Graphic Log	PID (ppm)	Recovered Length (ft bgs)	Soil Description Samples and description are in recovered depths Classification Scheme: USCS	NAPL Observations	Notes
		0.0		Silty Sand with Gravel - (SM): slightly moist, medium dense, brown, sub-rounded gravel, fine to medium sand.	No observed impacts	
				Sandy Elastic Silt with Gravel - (MH): Slightly Moist Soft, Brown, Medium plasticity, medium to fine grained sand, with medium gravel, little cinder, brick, and ash.		
5.0		0.0		Gravelly Sand with Silt - (SP): slightly moist, medium dense, grey black, sub-angular gravel, coarse to medium sand, fine grained gravel, some cinder, brick, and ash.		
				Silty Sand - (SM): slightly moist, dense, orange brown, fine to medium sand.		
10.0		0.0		Silty Sand with Gravel - (SM): moist, dense, brown grey, sub-rounded gravel, fine, medium and coarse sand.		
15.0		0.0				

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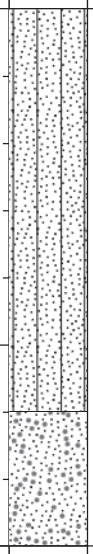
Notes:

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Boring Log - Borehole

SB-6

UTM	: 18T	Equipment	: Sonic Drill Rig	Job Number	: E50921-07.01
Latitude	: 40.91444	Contractor	: ADT	Client	: Consolidated Edison Company of New York, Inc.
Longitude	: -73.77883	Logged By	: Kelly Thigpen	Project	: Cedar Street Former MGP Site
Ground Elevation	: 54.36 (Ft)	Reviewed By	: Matt Cavas	Location	: 47 Cedar St, New Rochelle, NY 10801, USA
Total Depth	: 28 Ft BGL	Date	: 05/22/2025	Loc Comment	:

Depth (ft bgs)	Graphic Log	PID (ppm)	Recovered Length (ft bgs)	Soil Description Samples and description are in recovered depths Classification Scheme: USCS	NAPL Observations	Notes
		0.0		Silty Sand with Gravel - (SM): moist, dense, brown grey, sub-rounded gravel, fine, medium and coarse sand. (continued)	No observed impacts	
25.0				Well-Graded Sand with Silt and Gravel - (SW-SM): slightly moist, medium dense, grey, sub-rounded gravel, fine, medium and coarse sand.		
		0.0		Gravelly Sand with Silt - (SP): dry, loose, light grey, sub-rounded gravel, coarse, medium and fine sand, coarse grained gravel.		
				SB-6 Terminated at 28 Ft (top of rock)		

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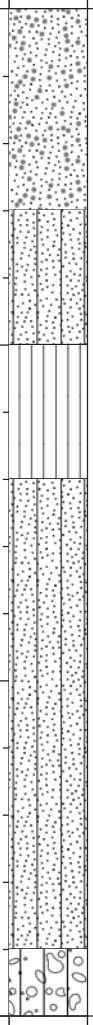
Notes:

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Boring Log - Borehole

SB-7

UTM	: 18T	Equipment	: Sonic Drill Rig	Job Number	: E50921-07.01
Latitude	: 40.91468	Contractor	: ADT	Client	: Consolidated Edison Company of New York, Inc.
Longitude	: -73.77835	Logged By	: Kelly Thigpen	Project	: Cedar Street Former MGP Site
Ground Elevation	: 41.86 (Ft)	Reviewed By	: Matt Cavas	Location	: 47 Cedar St, New Rochelle, NY 10801, USA
Total Depth	: 15 Ft BGL	Date	: 05/23/2025	Loc Comment	:

Depth (ft bgs)	Graphic Log	PID (ppm)	Recovered Length (ft bgs)	Soil Description Samples and description are in recovered depths Classification Scheme: USCS	NAPL Observations	Notes
		0.0		Gravelly Sand with Silt - (SP): slightly moist, loose, black, sub-angular gravel, fine, medium and coarse sand, coarse grained gravel, little brick, cinder, concrete, and ash.	No observed impacts	
				Silty Sand with Gravel - (SM): slightly moist, medium dense, grey brown, sub-angular gravel, medium to fine sand, trace brick, cinder, ash.		
5.0				Clayey Silt - (ML): Slightly Moist Firm, Grey And Orange, Low plasticity, with fine gravel, with fine sand reworked.		
		0.0		Well-Graded Sand with Silt - (SW-SM): moist, medium dense, grey brown, fine, medium and coarse sand.		
10.0				As above but wet.		
		0.0		Silty Gravel with Sand - (GM): dry, loose, light grey, angular gravel, medium to coarse grained, bedrock.		
				SB-7 Terminated at 15 Ft (top of rock)		

1201 Third Avenue
Suite 2600 Seattle, WA 98101

Notes:

ANCHOR QEA

Anchor QEA Engineering, PLLC

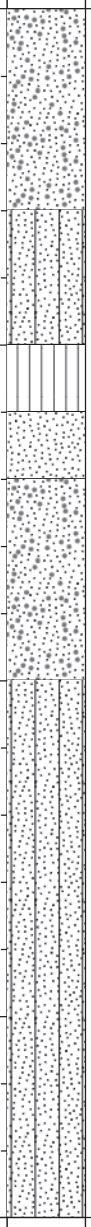
54 Genesee Street, Suite 100A Camillus, NY 13031

Phone: (206) 287-9130

Boring Log - Borehole

SB-8

UTM	**: 18T**	**Equipment**	**: Sonic Drill Rig**	**Job Number**	**: E50921-07.01**
Latitude	**: 40.91480**	**Contractor**	**: ADT**	**Client**	**: Consolidated Edison Company of New York, Inc.**
Longitude	**: -73.77821**	**Logged By**	**: Kelly Thigpen**	**Project**	**: Cedar Street Former MGP Site**
Ground Elevation	**: 44.06 (Ft)**	**Reviewed By**	**: Matt Cavas**	**Location**	**: 47 Cedar St, New Rochelle, NY 10801, USA**
Total Depth	**: 18 Ft BGL**	**Date**	**: 05/22/2025**	**Loc Comment**	**:**

Depth (ft bgs)	Graphic Log	PID (ppm)	Recovered Length (ft bgs)	Soil Description Samples and description are in recovered depths Classification Scheme: USCS	NAPL Observations	Notes
		0.0		Gravelly Sand with Silt - (SP): slightly moist, medium dense, grey, sub-angular gravel, medium to fine sand, coarse grained gravel, little cinder and concrete.	No observed impacts	
				Silty Sand with Gravel - (SM): slightly moist, medium dense, grey black, sub-angular gravel, medium to fine sand, little concrete, ash, and cinder.		
5.0				Clayey Silt - (ML): Slightly Moist Firm, Orange And Grey, Low plasticity, reworked.		
				Gravelly Sand with Silt - (SW): moist, dense, grey brown, sub-rounded gravel, coarse, medium and fine sand, fine grained gravel.		
		0.0		Gravelly Sand with Silt - (SP): dry, loose, light grey, sub-angular gravel, medium to fine sand, coarse grained gravel, boulder fragments.		
10.0				Poorly Graded Sand with Silt and Gravel - (SP-SM): wet, loose, light brown, angular gravel, coarse sand, weathered rock.		
		0.0				
15.0						
		0.0				
				SB-8 Terminated at 18 Ft (top of rock)		

ANCHOR QEA

1201 Third Avenue
Suite 2600 Seattle, WA 98101

Notes:

MONITORING WELL CONSTRUCTION DATA

DATE: 5/23/2025	CLIENT: Consolidated Edison, Inc.	Site No: E50921-07.01

WELL/BORING NO: PZ-SB-2

PROJECT NAME: Cedar St. Former MGP Site

ADDRESS: 47 Cedar Street
New Rochelle, NY

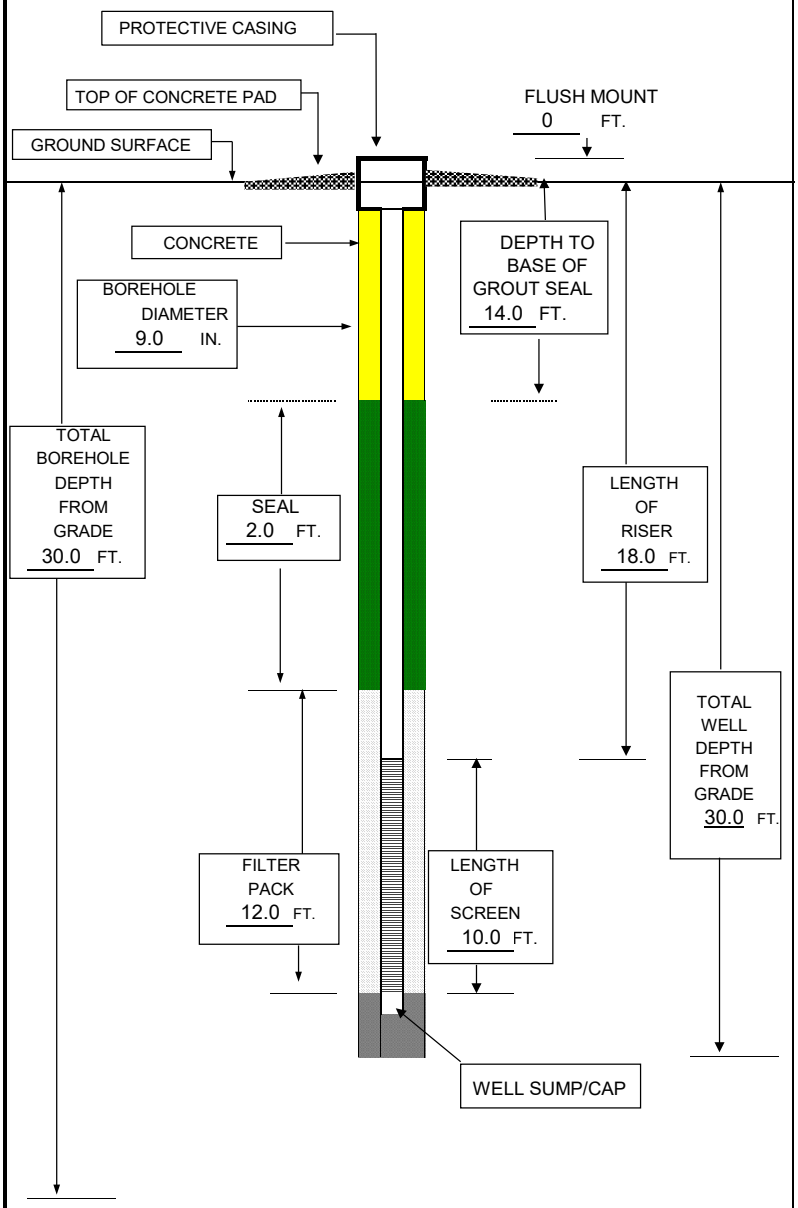
WELL CONTRACTOR: ADT

COORDINATES:
NORTH 759079.5
EAST 691398.7

TOP OF SLAB ELEVATION: 51.02

TOP OF CASING ELEVATION: 50.59

WELL SCHEMATIC



CONSTRUCTION DATA

CASING INFORMATION

MATERIAL: [X] PVC [ ] STAINLESS [ ] CARBON [ ] OTHER
DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER IN.
JOINTS: [X] THREADED [ ] WELDED [ ] SCREWED [ ] COUPLED [ ] OTHER
SCHEDULE: 40

SCREEN INFORMATION

MATERIAL: [X] PVC [ ] STAINLESS [ ] TEFLON [ ] OTHER
DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER IN
SLOT: [X] 0.010 [ ] 0.020 [ ] OTHER IN

CENTRALIZER: [ ] YES [X] NO

FILTER PACK MATERIAL

20/40 SAND [ ]
OTHER [X] #2

BENTONITE WELL SEAL

[ ] 1/2-INCH PELLETS
[ ] 1/4-INCH PELLETS
[X] CHIPS
[ ] OTHER

SURFACE PROTECTION

CONCRETE PAD: [ ] 3'X3' [ ] 4'X4' [X] OTHER 1'X1'

WELL SUMP/CAP

[X] YES
[ ] NO
LENGTH 2.00 FT.

REMARKS:

1. Vertical Datum is in North American Vertical Datum of 1988 (NAVD88).
2. Horizontal Datum is in North American Datum of 1983 (NAD83).
3. Top of Casing Elevation surveyed at marked measuring point at top of PVC casing.

MONITORING WELL CONSTRUCTION DATA

DATE: 5/23/2025	CLIENT: Consolidated Edison, Inc.	Site No: E50921-07.01

WELL/BORING NO: PZ-SB-3

PROJECT NAME: Cedar St. Former MGP Site

ADDRESS: 47 Cedar Street
New Rochelle, NY

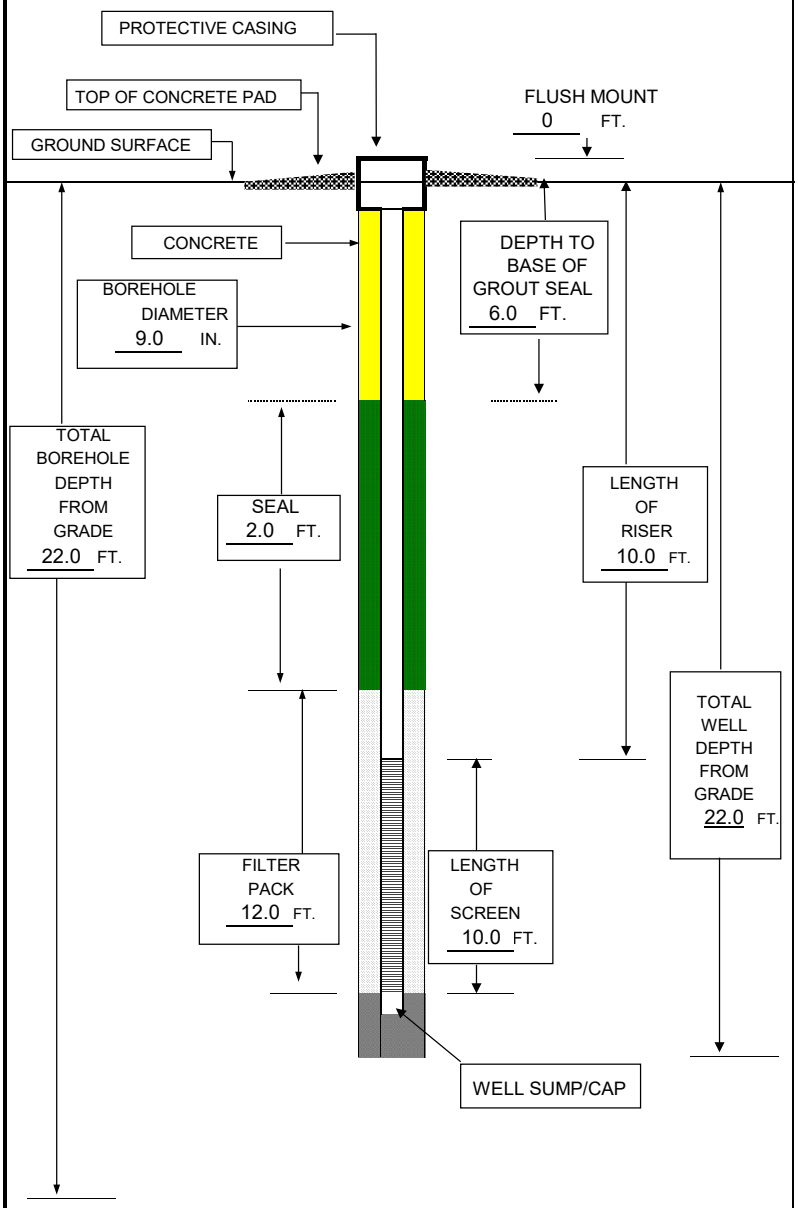
WELL CONTRACTOR: ADT

COORDINATES:
NORTH 759129.6
EAST 691377.0

TOP OF SLAB ELEVATION: 50.68

TOP OF CASING ELEVATION: 50.37

WELL SCHEMATIC



CONSTRUCTION DATA

CASING INFORMATION

MATERIAL: [X] PVC [ ] STAINLESS [ ] CARBON [ ] OTHER
DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER IN.
JOINTS: [X] THREADED [ ] WELDED [ ] SCREWED [ ] COUPLED [ ] OTHER
SCHEDULE: 40

SCREEN INFORMATION

MATERIAL: [X] PVC [ ] STAINLESS [ ] TEFLON [ ] OTHER
DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER IN
SLOT: [X] 0.010 [ ] 0.020 [ ] OTHER IN

CENTRALIZER: [ ] YES [X] NO

FILTER PACK MATERIAL

20/40 SAND [ ]
OTHER [X] #2

BENTONITE WELL SEAL

[ ] 1/2-INCH PELLETS
[ ] 1/4-INCH PELLETS
[X] CHIPS
[ ] OTHER

SURFACE PROTECTION

CONCRETE PAD: [ ] 3'X3' [ ] 4'X4' [X] OTHER 1'X1'

WELL SUMP/CAP

[X] YES
[ ] NO
LENGTH 2.00 FT.

REMARKS:

1. Vertical Datum is in North American Vertical Datum of 1988 (NAVD88).
2. Horizontal Datum is in North American Datum of 1983 (NAD83).
3. Top of Casing Elevation surveyed at marked measuring point at top of PVC casing.

NAPL Observations

- Summary of NAPL Observations (URS 2017)
- Summary of NAPL Observations (Anchor QEA 2025)

Table 4-1
Qualitative Observations in Soil Borings, Monitoring Wells and Test Pits
Consolidated Edison Company of New York, Cedar Street Works Site, New Rochelle, NY

Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
SB-01	12/16/2008	12/16/08	10	12	Fill. Sand, silt, gravel, and cobbles.	Fine Sand, some Silt.	Medium Sand, some Silt and weathered Rock.							No impacts.
					PID=0.0 No odor.	PID=0.0 No odor.	PID=0. No odor.							
					SB-01 (3.5-4') BTEX: ND VOCs: ND PAHs: 11.04 ppm SVOCs: 11.04ppm CN: ND	**SB-1 (9-11')** BTEX: ND VOCs: ND PAHs: ND SVOCs: 0.047 ppm CN: ND **Soil Vapor Sample SVSB-1 (6.5-7')**	**SB-1 (11-13')** BTEX: ND VOCs: ND PAHs: 1.355 ppm SVOCs: 1.399 ppm CN: ND							
SB-02	12/2/2008	12/16/08	10	24.5	Fill. Asphalt over gravel subbase. Sand, silt, gravel, concrete, and brick.	Fill. Sand, some Silt, and rock fragments.	Sands some Silt and gravel.	Sands some Silt and gravel.	Sands some Silt and gravel.					No impacts.
					PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.					
						SB-2 (9-11') BTEX: ND VOCs: ND PAHs: ND SVOCs: 0.1 ppm CN: ND **Soil Vapor Sample SVSB-2 (6.5-7')**			**SB-2 (23-25')** BTEX: ND VOCs: ND PAHs: 0.138 ppm SVOCs: 0.678 ppm CN: ND				
SB-03	12/9/2008	12/18/08	10	15.4	Fill. Asphalt over trap Rock and Boulders.	Fill. Weathered Schist and rock fragments.	Fill. Sand, some Gravel and weathered Rock, stained.							Hydrocarbon odor 10-13'. META indicated middle tar fraction, possibly drip oil or naphthalene oil.
					PID=0.0 No odor.	PID=34.9 - 4.1 ppm No odor.	PID=55.1 - 2266 ppm Hydrocarbon odor.							
							SB-3 (11-13') BTEX: 23.6 ppm VOCs: 25.84 ppm PAHs: 19.72 ppm SVOCs: 20.559 ppm CN: ND **SB-3 (13') + META Sample (13')** BTEX: 11,500 ppm VOCs: 13,254 ppm PAHs: 6,317.2 ppm SVOCs: 6,383.3 ppm CN: ND						

Table 4-1
Qualitative Observations in Soil Borings, Monitoring Wells and Test Pits
Consolidated Edison Company of New York, Cedar Street Works Site, New Rochelle, NY

Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
SB-04	12/14/2008	12/21/08	10	24	Fill. Concrete over Sand.	Fill. Sand, some Silt, trace Gravel.	Fill. Sand, some Silt, trace Gravel and weathered Schist.	Fill. Sand, some Silt and Gravel and black staining.	Fill. Sand and Silt, some Gravel and wood with black staining.					Hydrocarbon odor 10-15' and 20-24'. META indicated no detectable pattern.
					PID=0.0 No odor.	PID=42.3 No odor.	PID=3-5.8 ppm Slight - Strong hydrocarbon odor 10-15'	PID=10.1-10.8 ppm. No odor.	PID=0-56.7 ppm. Hydrocarbon odor 20-24'					
							SB-4 (13-15') + META Sample BTEX: 0.075 ppm VOCs: 0.075 ppm PAHs: 6.5 ppm SVOCs: 6.5 ppm CN: ND	**SB-4 (21-23')** BTEX: 34.4 ppm VOCs: 35.379 ppm PAHs: 125.1 ppm SVOCs: 130.6 ppm CN: 26 ppm	**SB-4 (23-25')** BTEX: 0.734 ppm VOCs: 0.75 ppm PAHs: 186.32 ppm SVOCs: 197.32 ppm CN: ND					
SB-05	1/4/2009	1/4/09	10	23	Fill. Concrete over trap Rock, Sand and Gravel. PID=0.0 No odor.	Fill. Sand, some Silt, trace Gravel, and weathered Gneiss. Stained black 8-10'. PID=1.7-4.4 ppm No odor.	Fill. Sand and Silt, with Gravel. Stained black @ 10 and 14'. PID=0.9-6.2 ppm Hydrocarbon odor 12-15'.	Fill. Sand and Silt, with Gravel. Stained black 15 - 20'. PID=0.9 ppm No odor. **SB-5 (19-21')** BTEX: 0.052 ppm VOCs: 0.052 ppm PAHs: 11.84 ppm SVOCs: 11.84 ppm CN: ND	Fill. Sand and Silt, with Gravel. Stained black 20-23'. PID=0-6.2 ppm No odor. **SB-5 (21-23') + META Sample** BTEX: 0.154 ppm VOCs: 0.154 ppm PAHs: 5.69 ppm SVOCs: 5.69 ppm CN: 4.4 ppm					Hydrocarbon odor 12-15'. META indicated likely source was weathered Tar-Like Material.
SB-06	1/4/2009	1/4/09	10	21.5	Fill. Concrete over Sand, Gravel, and Silt, with Bricks, Glass, and Slag.	Fill. Sand, some Gravel and Bricks to 8', over Silt.	Silt, little Sand, some Clay. Stained 11-13'.	Silt and Sand, trace Gravel.	Weathered Schist.					Hydrocarbon odor 18-21.5'
					PID=0.0 No odor.	PID=0.1-1.2 ppm No odor.	PID=5.1-55.5 ppm No odor.	PID=15.1-23.5 ppm Hydrocarbon odor 18-20'	PID=0.7 ppm Hydrocarbon odor 20-21.5'					
							SB-6 (11-13') BTEX: 80.46 ppm VOCs: 129.71 ppm PAHs: 898.5 ppm SVOCs: 936.9 ppm CN: 2.55 ppm	**SB-6 (19-21')** BTEX: 0.146 ppm VOCs: 0.208 ppm PAHs: 75.01 ppm SVOCs: 78.19 ppm CN: ND						
SB-07	12/2/2008	12/16/08	8	17	Fill. Concrete over gravel subbase. Sand, silt, gravel, concrete, and brick.	Fill. Sand, Silt, and Gravel.	Fill to 13'. Sands and silty sands.	Silty sand and gravel. Refusal 17'.						Hydrocarbon odor 8-14' and 16-17'
					PID=0.0 No odor.	PID=2.4 - 3.3 ppm Hydrocarbon odor 8-10'	PID=6.4 - 187 ppm Hydrocarbon odor 10-14'	PID=50.2 ppm Hydrocarbon odor 16-17'						
							SB-7 (11-13') BTEX: 263.1 ppm VOCs: 275.16 ppm PAHs: 1,524.8 ppm SVOCs: 1,631.06 ppm CN: 1.07 ppm	**SB-7 (15-17')** BTEX: 2.5 ppm VOCs: 2.5 ppm PAHs: 205.6 ppm SVOCs: 213.4 ppm CN: 0.978 ppm						

Table 4-1
Qualitative Observations in Soil Borings, Monitoring Wells and Test Pits
Consolidated Edison Company of New York, Cedar Street Works Site, New Rochelle, NY

Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
SB-08	12/3/2008	12/3/08	NA	2.5	Fill. Asphalt over gravel subbase and Sand, Silt, and Gravel with Concrete, Metal, and Wood.									No impacts.
					PID=0.0 No odor.									
SB-09	12/2/2008	12/16/08	NA	7.5	Fill. Asphalt over gravel subbase and Sand, Silt, and Gravel with Concrete, and Bricks.	Gravel, Silt, and Sand to 7' over Silt.								No impacts.
					PID=0.0 No odor.	PID=0.2 No odor.								
						SB-9 (7-9') BTEX: ND VOCs: 0.22 ppm PAHs: 34.49 ppm SVOCs: 34.49 ppm CN: ND							
SB-10	12/21/2008	1/4/09	10	25	Fill. Concrete over Sand and Silt, with Cobbles, Boulders, and Gravel.	Fill. Gravel and Sand with cold patch to 9' over Silt.	Fill. Silt, little Sand, trace Gravel to 13' over Sand, little Silt, trace Gravel.	Sand, little Silt, trace Gravel.	Sand, little Silt, trace Gravel.					No impacts.
					PID=0.0 No odor.	PID=0-14.4 ppm No odor.	PID=0-3.4 ppm No odor.	PID=1.4 - 2.1 ppm No odor.	PID=1.3 - 5.3 ppm No odor.					
								SB-10 (19-21') BTEX: 0.445 ppm VOCs: 0.526 ppm PAHs: 10.199 ppm SVOCs: 10.899 ppm CN: ND						
SB-11	12/21/2008	12/21/08	10	23	Fill. Concrete over Sand, Gravel, Cobbles, Asphalt, and Concrete.	Fill. Sand, some Silt and Gravel.	Fill. Sand, some Silt and Gravel.	Fill. Sand, some Silt and Gravel.	Fill. Sand, some Silt and Gravel.					Hydrocarbon odor 5-10' and 19-21'.
					PID=0.0 No odor.	PID=0-1.6 ppm Hydrocarbon odor 5-10'.	PID=1.5-2.6 ppm No odor.	PID=1.6-3.5 ppm Hydrocarbon odor 19-21'.	PID=205 ppm Hydrocarbon odor 19-21'.					
								SB-11 (17-19') BTEX: 0.792 ppm VOCs: 0.82 ppm PAHs: 8.93 ppm SVOCs: 9.65 ppm CN: ND	**SB-11 (19-21')** BTEX: 0.42 ppm VOCs: 0.432 ppm PAHs: 23 ppm SVOCs: 24.34 ppm CN: ND					

Table 4-1
Qualitative Observations in Soil Borings, Monitoring Wells and Test Pits
Consolidated Edison Company of New York, Cedar Street Works Site, New Rochelle, NY

Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
SB-12/MW-07B	12/2/2008	1/13/09	10	19	Fill. Asphalt over Gravel subbase to 8"', over Sand, Silt, Gravel, and Concrete and Brick to 5'.	Fill. Sand and Silt, some Gravel and Brick.	Fill. Sand, Silt, and Gravel, some Brick at 14'.	Fill. Sand, Silt, and Gravel, over Gneiss with Schist lenses. Black staining in rock throughout.						Faint MGP odor 5-10'. Strong naphthalene odor 10-14', and MGP naphthalene odor 17.5-19' and NAPL tar 18-19'.
					PID=0.0 No odor.	PID=42.3 Faint MGP odor 5-10'.	PID=92.1 Strong naphthalene odor 10-14'	PID=12.5. MGP and naphthalene odor 17.5-19'. NAPL tar 18-19'.						
							SB-12 (11-13') BTEX: 1.002 ppm VOCs: 4.702 ppm PAHs: 122.85 ppm SVOCs: 131.29 ppm CN: ND	**SB-12 (17-19')** BTEX: 113.3 ppm VOCs: 151.3 ppm PAHs: 158.49 ppm SVOCs: 166.24 ppm CN: ND						
SB-13	12/9/2008	12/16/08	10	15	Fill. Asphalt over trap Rock and Silt with some Sand. Boulders.	Fill. Black Ash and Cinder.	Fill. Sand, some Silt. Stained black 14-15'.Sands and silty sands.							Undifferentiated odor 5-10'. META indicated sample was characteristic of Tar-Like-Material likely from CWG process.
					PID=0.0 No odor.	PID=15.2-30.1 ppm Undifferentiated odor.	PID=30.1 - 118 ppm No odor.							
						SB-13 (11-13') BTEX: ND VOCs: 0.11 ppm PAHs: 29.19 ppm SVOCs: 30.69 ppm CN: ND	**SB-13 (13-15')** BTEX: 5.568 ppm VOCs: 7.258 ppm PAHs: 79.69 ppm SVOCs: 82.59 ppm CN: ND **META Sample (14-15')**						
SB-14	12/10/2008	12/16/08	10	24	Fill. Grass layer over Sand, Silt, Clay, and Gravel to 1.5'. Sand & Silt, and Gravel to 5'.	Sand, some Silt.	Sand, some Silt, and little Gravel.	Sand, trace Silt, and little Gravel.	Sand, trace Silt, and little-some Gravel.					No impacts.
					PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.					
						SB-14 (9-11') BTEX: ND VOCs: ND PAHs: 0.16 ppm SVOCs: 0.206 ppm CN: ND			**SB-14 (23-25')** BTEX: ND VOCs: ND PAHs: ND SVOCs: 0.039 ppm CN: ND					
SB-15	1/6/2009	1/12/09	10	22	Fill. Asphalt over Sand and Gravel to 5'.	Fill. Sand, weathered Schist, trace Silt, some Gravel.	Fill. Sand and Gravel. Stained black to 10'.	Fill. Sand and Gravel. Stained black to 15'. Schist 17-22'.	Schist to 22'.					Hydrocarbon odor 5-17'.
					PID=0.0 No odor.	PID=0.8-1.1 ppm Hydrocarbon odor 5-10'.	PID=16-1002 ppm Hydrocarbon odor 10-15'.	PID=1209 ppm Hydrocarbon odor 15-17'.						
							SB-15 (13-15') BTEX: 3,830 ppm VOCs: 3,989 ppm PAHs: 10,899 ppm SVOCs: 11,045.5 ppm CN: 1.92 ppm	**SB-15 (15-17')** BTEX: 7,770 ppm VOCs: 8,098 ppm PAHs: 11,897.7 ppm SVOCs: 12,179.7 ppm CN: 2.52 ppm						

Table 4-1
Qualitative Observations in Soil Borings, Monitoring Wells and Test Pits
Consolidated Edison Company of New York, Cedar Street Works Site, New Rochelle, NY

Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
SB-16	11/1/2013	11/7/13	10	19	Fill. Concrete over Sand, some Clay, Cinders, and Gravel.	Silty sands, sandy silts and clay.	Sands and silty sands.	Silty sand and gravel. Refusal 19'.						MGP impacts. META reported pyrogenic materials and probable source from CWG; with gasoline component.
					PID=0.0-0.7 No odor.	PID=0-13.6 ppm Slight - moderate MGP odor 5-10'.	PID=92.1 Slight-moderate naphthalene odor 10-15'	PID=12.5. MGP and naphthalene odor 17.5-19'. NAPL tar 18-19'.						
					SB-16 (3.2-3.6') BTEX: ND VOCs: 0.017 ppm PAHs: 6.98 ppm SVOCs: 7.09 ppm CN: ND **SB-16 (4-5.5')** BTEX: ND VOCs: ND PAHs: 208.65 ppm SVOCs: 208.65 ppm CN: 46.6 ppm	**SB-16 (9-10')** BTEX: 0.0079 ppm VOCs: 0.2679 ppm PAHs: 85.86 ppm SVOCs: 85.86 ppm CN: ND	**SB-16 (13-14')** BTEX: ND VOCs: 0.0165 ppm PAHs: 2.441 ppm SVOCs: 2.551 ppm CN: ND	**SB-16 (18-19') + META Sample** BTEX: 6.924 ppm VOCs: 13.159 ppm PAHs: 94.61 ppm SVOCs: 99.63 ppm CN: ND						
SB-17	11/20/13	11/22/13	11	16	Fill. Silt and Sand, some Gravel, trace Concrete.	Silt, trace Sand and Clay.	Silt and Sand, trace Gravel.	Silt and sand. Refusal 16'.						MGP odor 10.5-12.3'
					PID=0-0.4 ppm No odor.	PID=0.2 ppm No odor.	PID=2.9-6.1 ppm MGP-like odor 10.5-12.3'. Undifferentiated chemical odor 12.3-15'.	PID=1.1 ppm No odor.						
					SB-17 (4-4.5') BTEX: 0.0078 ppm VOCs: 0.0178 ppm PAHs: 791.7 ppm SVOCs: 800.78 ppm CN: ND	**S. Vapor sample SVSB-17 (6.5-7')**	**SB-17 (10.5-11.5')** BTEX: ND VOCs: 0.0447 ppm PAHs: 5.331 ppm SVOCs: 5.331 ppm CN: 3.8 ppm **SB-17 (12.5-13.5')** BTEX: ND VOCs: 0.0642 ppm PAHs: 42 ppm SVOCs: 42.8 ppm CN: ND	**SB-17 (15-16')** BTEX: ND VOCs: ND PAHs: ND SVOCs: 0.088 ppm CN: 2.2 ppm						
SB-18	11/20/13	11/22/13	10.5	25	Fill. Asphalt over Sand, some Gravel.	Sand, some Silt and gravel.	Sands and silty sands, trace gravel and clay.	Sands and gravels, trace silt.	Sands and gravels. No refusal.					MGP impacts with strong MGP odor, staining, and sheen.
					PID=0-9.7 ppm Faint diesel odor 2.9-5'.	PID=50.6 ppm Faint MGP-like odor 5-8.5'. Strong at 8.5'.	PID=147 - 1017 ppm Strong MGP-like odor 10-15'. Staining 13-15'.	PID=17.3 - 689 ppm Strong MGP odor. Sheen.	PID=0-18.9 ppm Faint MGP odor.					
					SB-18 (3-3.5') BTEX: 0.633 ppm VOCs: 0.8621 ppm PAHs: 1,464 ppm SVOCs: 1,536.6 ppm CN: 2.1 ppm	**SB-18 (8.5-10')** BTEX: 35 ppm VOCs: 75.06 ppm PAHs: 522.9 ppm SVOCs: 545.5 ppm CN: ND **S. Vapor sample SVSB-18 (6.5-7')**	**SB-18 (12.5-13.5')** BTEX: 24.3 ppm VOCs: 68.2 ppm PAHs: 358.3 ppm SVOCs: 376.92 ppm CN: ND	**SB-18 (15.8-16.8')** BTEX: 3.01 ppm VOCs: 14.34 ppm PAHs: 4,457 ppm SVOCs: 4,718 ppm CN: ND	**SB-18 (23-25')** BTEX: ND VOCs: 0.0036 ppm PAHs: 0.951 ppm SVOCs: 1.117 ppm CN: ND					

Table 4-1
Qualitative Observations in Soil Borings, Monitoring Wells and Test Pits
Consolidated Edison Company of New York, Cedar Street Works Site, New Rochelle, NY

Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
SB-19	11/1/13 and 11/5/13	11/07/13	10	22.7	Fill. Asphalt over Gravel, Sand, Silt, and Cobbles.	Sand and Silt, trace gravel, some Schist rock.	Sand, some Silt, trace Gravel.	Silty sands, some gravel. Decomposed schist rock at 18.5'.	Decomposed schist bedrock. Refusal at 22.7'.					Undifferentiated chemical impacts. META reported pyrogenic materials and probable tar source from CWG; with some gasoline component.
					PID=0.0 No odor.	PID=1.9 - 20.9 ppm Undifferentiated chemical odor 8.3-10'.	PID=2.9 - 1425 ppm Strong undifferentiated chemical odor 10-14'.	PID=0.7 -2.9 ppm No odor.	PID=0.2 ppm No odor.					
						SB-19 (9-10') BTEX: 0.208 ppm VOCs: 0.589 ppm PAHs: 14.97 ppm SVOCs: 15.81 ppm CN: ND	**SB-19 (10.5-11.5') + META Sample** BTEX: 0.921 ppm VOCs: 4.436 ppm PAHs: 89.28 ppm SVOCs: 94.38 ppm CN: ND		**SB-19 (21.6-22.7')** BTEX: 0.0037 ppm VOCs: 0.0113 ppm PAHs: ND SVOCs: ND CN: ND					
SB-20	10/31/13	10/31/13	8.5	15.5	Fill. Asphalt over Sand, Silt, and Gravel.	Sand and Silt.	Silty sand and gravel.	Weathered Schist. Refusal 15.5'.						No impacts.
					PID=0.1 ppm No odor.	PID=0.2 ppm No odor.	PID=0.1 - 0.2 ppm No odor.	PID=2.4 ppm No odor.						
					SB-20 (3-3.3') BTEX: ND VOCs: 0.0286 ppm PAHs: 0.986 ppm SVOCs: 0.986 ppm CN: ND	**SB-20 (7-8')** BTEX: ND VOCs: 0.0285 ppm PAHs: ND SVOCs: ND CN: ND		**SB-20 (14.5-15.5')** BTEX: ND VOCs: 0.0044 ppm PAHs: ND SVOCs: ND CN: ND					
SB-21	11/04/13	11/07/13	10.5	22.5	Fill. Asphalt over Sand and Silt, some Gravel.	Silt and Sand, some gravel.	Sand, some Silt and Gravel.	Sand, trace Gravel.	Silts, sands, gravels & weathered schist at 21.1'. Refusal at 22.5'.					MGP impacts with MGP odor. Sheen in seam 13.8 - 14'.
					PID=0.2 Faint undifferentiated chemical odor 2.5-5'.	PID=46.7 - 67.5 ppm MGP-like odor.	PID=20.1- 46.7 ppm MGP-like odors. Faint below 11.3'. Sheen in seam 13.8-14'.	PID=20.1 ppm Very faint MGP-like odor.	PID=16.1 - 81.5 ppm Strong MGP-like odor 20.7-21.1'. Faint below in weathered schist.					
					SB-21(2.5-3.5') BTEX: 0.0035 ppm VOCs: 0.0995 ppm PAHs: 288.3 ppm SVOCs: 300.07 ppm CN: ND	**SB-21 (9-10')** BTEX: 10.97 ppm VOCs: 15.7897 ppm PAHs: 762.7 ppm SVOCs: 818.7 ppm CN: ND			**SB-21 (20.7-21.1')** BTEX: 0.0101 ppm VOCs: 0.2734 ppm PAHs: 146.46 ppm SVOCs: 150.26 ppm CN: ND **SB-21 (21.5-22.5')** BTEX: ND VOCs: 0.0053 ppm PAHs: 6.62 ppm SVOCs: 6.62 ppm CN: ND					

Table 4-1
Qualitative Observations in Soil Borings, Monitoring Wells and Test Pits
Consolidated Edison Company of New York, Cedar Street Works Site, New Rochelle, NY

Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
SB-22	10/31/13	10/31/13	11	26	Fill. Asphalt over Sand, trace Gravel.	Silt, some Sand, trace Gravel.	Silt and Sand, trace Gravel.	Silt, sands and gravels. Weathered Schist below 19'. Refusal at 19.5' with DPT.	Weathered Schist and Gneiss. Rock cored 20.5-26'.					No impacts.
					PID=0 - 0.1 ppm MGP-like odor 2-5.3'	PID=3.5 - 4.5 ppm No odor.	PID=22.9-27.1 ppm No odor.	PID=0 - 2.3 ppm No odor.	PID=0. No impacts in Rock. No odor.					
					SB-22 (2-2.3') BTEX: 0.0041 ppm VOCs: 0.0509 ppm PAHs: 211.05 ppm SVOCs: 215.05 ppm CN: ND		**SB-22 (10-11.5')** BTEX: ND VOCs: 0.008 ppm PAHs: ND SVOCs: ND CN: ND	**SB-22 (18.5-19.5')** BTEX: ND VOCs: ND PAHs: ND SVOCs: ND CN: ND					
SB-23	11/04/13	11/05/13	9.5	14	Fill. Asphalt over Sand and Silt, trace Gravel and Schist Cobbles.	Fill. Silts, sand and gravel. Wood chips at 9.9-10'.	Fill. Wood chips. Bottom 0.15' concrete and brick. Refusal at 14'.							MGP impacts. META reported most likely tar-like materials consistent with CWG tars.
					PID=0 - 1.6 ppm Waste oil odor 1.4-5'.	PID=11.8 ppm MGP odor in the wood chips.	PID=109 ppm MGP odor and slight sheen.							
					SB-23 (4.5-5') BTEX: ND VOCs: 0.031 ppm PAHs: 256.23 ppm SVOCs: 268.33 ppm CN: ND		**SB-23 (13.5-14') + META Sample** BTEX: 167 ppm VOCs: 256.399 ppm PAHs: 1,690.7 ppm SVOCs: 1,799.7 ppm CN: ND	**Groundwater grab sample SB-23 (13-14')** BTEX: 2.810 ppm VOCs: 2.810 ppm PAHs: 6.882 ppm SVOCs: 6.962 ppm CN: ND					
SB-24	11/04/13	11/07/13	10	15	Fill. Asphalt over Sand and Silt, some Gravel, and Cobbles.	Fill to 6.5'. Sand and Silt, trace Gravel.	Sand and Silt, trace - some Gravel. Weathered Schist at 14.2'. Refusal at 15'.							MGP impacts. Faint MGP odor 3.5-5' and undifferentiated chemical odor at 7.3'.
					PID=0-1.1 ppm Faint MGP-like odor 3.5-5'.	PID=2-8.5 ppm Faint undifferentiated chemical odor at 7-7.3'. No odor after 7.3'.	PID=0.1 ppm No odor.							
						SB-24 (9-10') BTEX: ND VOCs: 0.0186 ppm PAHs: 1.314 ppm SVOCs: 2.859 ppm CN: ND	**SB-24 (14-15')** BTEX: ND VOCs: 0.0037 ppm PAHs: ND SVOCs: ND CN: ND						

Table 4-1
Qualitative Observations in Soil Borings, Monitoring Wells and Test Pits
Consolidated Edison Company of New York, Cedar Street Works Site, New Rochelle, NY

Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
SB-25	11/4/2013 and 11/5/13	11/07/13	10	14	Fill. Asphalt over Sand and Silt, some Gravel and Schist Cobbles.	Fill to 6.5'. Silt and Sand to 8', over Sand, trace Silt and Gravel.	Sand, trace Silt and Gravel. Refusal at 14'.							Undifferentiated chemical impacts.
					PID=0.0 No odor.	PID=7.3-113 ppm Undifferentiated chemical odor 5 to 10', strongest 7.2-8.2'.	PID=0.1-0.3 ppm Very faint undifferentiated chemical odor 10-12.5'.							
						SB-25-(7.2-8.2') BTEX: 14.56 ppm VOCs: 19.0863 ppm PAHs: 3,226 ppm SVOCs: 3,498 ppm CN: ND	**SB-25 (9-10')** BTEX: 0.369 ppm VOCs: 0.5074 ppm PAHs: 114.55 ppm SVOCs: 128.509 ppm CN: ND **SB-25 (13-14')** BTEX: 0.0058 ppm VOCs: 0.0127 ppm PAHs: 0.093 ppm SVOCs: 0.093 ppm CN: ND						
SB-26	01/11/14	01/12/14	9	19.1	Fill. Concrete over Sand, Gravel, Silt, Schist Cobbles to 8'.	Fill. Concrete over Sand, Gravel, Silt, Schist Cobbles to 8'. Silt, some Sand, trace Gravel.	Silt, some Sand to 11.5'. Sand, some Silt and Gravel to 14.8'.	Silt, some Sand and Gravel to 19.1'.						MGP odor 5 to 11.5', strongest 7.5-8'. Sheenand staining 12.5-14.8'.
					PID=0.0 Naphthalene odor to 3.5'.	PID=31.3-172 ppm MGP odor 5 to 11.5', strongest 7.5-8'.	PID=242-384 ppm Strong MGP odor throughout. Sheen and staining 12.5-14.8'.	PID=7.1-904.4 ppm Faint MGP odor.						
					SB-26 (2.3-2.6') BTEX: 0.0049 ppm VOCs: 0.0294 ppm PAHs: 961.9 ppm SVOCs: 968.093 ppm CN: 22.5 ppm	**SB-26 (8-10')** BTEX: 197 ppm VOCs: 346.7 ppm PAHs: 71.05 ppm SVOCs: 75.79 ppm CN: ND	**SB-26 (12.5-14.5') + META Sample** BTEX: 2.34 ppm VOCs: 18.82 ppm PAHs: 267.42 ppm SVOCs: 292.1 ppm CN: ND	**SB-26 (17.5-19.1')** BTEX: 0.0024 ppm VOCs: 0.0062 ppm PAHs: ND SVOCs: ND CN: ND						
SB-27	01/11/14	01/12/14	10	23.3	Fill. Concrete over Sand, Gravel, Silt, Gneiss Cobbles to 6'.	Fill. Concrete over Sand, Gravel, Silt, Gneiss Cobbles to 6'.over Silt and Sand, trace Gravel.	Sand, trace Silt and Gravel.	Sand and Gravel, trace Silt.	Gravel, trace Silt. Refusal at 23.3'.					Faint MGP odor and sheen.
					PID=0.0 No odor.	PID=1.4 ppm No odor.	PID=1.4-7.7 ppm Faint MGP odor.	PID=2.1-6.2 ppm Faint MGP odor.	PID=2.4 ppm Faint MGP odor and sheen.					
					SB-27 (4-4.5') BTEX: ND VOCs: 0.0091 ppm PAHs: 47.372 ppm SVOCs: 47.492 ppm CN: 1.1 ppm	**SB-27 (9-10')** BTEX: 0.0133 ppm VOCs: 0.0676 ppm PAHs: 203.1 ppm SVOCs: 211.4 ppm CN: ND	**SB-27 (11-12.5')** BTEX: 0.035 ppm VOCs: 0.1109 ppm PAHs: 45.23 ppm SVOCs: 51.43 ppm CN: ND		**SB-27 (22-23.5')** BTEX: ND VOCs: 0.1516 ppm PAHs: 21.387 ppm SVOCs: 22.827 ppm CN: 1.7 ppm					

Table 4-1
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Consolidated Edison Company of New York, Cedar Street Works Site, New Rochelle, NY

Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
SB-28	01/11/14	01/12/14	10	23	Fill. Concrete over Sand, Gravel, Silt, Schist Cobbles to 5'.	Fill. Gravel some Silt and Sand, trace Brick.	Fill. Gravel some Silt and Sand, trace Brick.	Fill. Gravel some Silt and Sand. Some Refractory Brick to 17', over Sand and Gravel, some Silt.	Silt and Clay, trace Gravel. Refusal at 23'.					MGP impacts. Faint MGP odor 10-25' and sheen 17-20'.
					PID=0.0 No odor.	PID=1.1 ppm No odor.	PID=1.4-1.8 ppm Faint MGP odor.	PID=1.8 ppm Faint MGP odor and sheen 17-20'.	PID=1.8 ppm Faint- strong MGP odor.					
							SB-28 (10-12') BTEX: 0.0435 ppm VOCs: 0.0696 ppm PAHs: 4.29 ppm SVOCs: 4.58 ppm CN: ND	**SB-28 (17-19')** BTEX: 0.0345 ppm VOCs: 0.0768 ppm PAHs: 20.9 ppm SVOCs: 23.11 ppm CN: ND	**SB-28 (22-23')** BTEX: 0.891 ppm VOCs: 1.123 ppm PAHs: 716.8 ppm SVOCs: 750 ppm CN: ND					
SB-29	01/11/14	01/12/14	5.8	22.6	Fill. Concrete over Sand and Granitic Cobbles to 5'.	Fill. Sand, Silt, and Gravel, some Brick.	Fill. Gravel some Silt and Sand, trace Brick.	Fill. Gravel some Silt and Sand. Some Refractory Brick to 20'.	Sand and Silt, trace Gravel. Refusal at 22.6'.					Faint MGP odor 14-15' and 20-22.6'.
					PID=0.0 No odor.	PID=1.1 ppm No odor.	PID=2.0-9.8 ppm Faint MGP odor 14-15'.	PID=1.8 ppm No odor.	PID=4.2-137.1 ppm Faint Naphthalene MGP odor.					
					SB-29 (2.5-3') BTEX: ND VOCs: 0.0039 ppm PAHs: 21.89 ppm SVOCs: 22.188 ppm CN: ND	**SB-29 (5.8-7')** BTEX: ND VOCs: 0.0096 ppm PAHs: 15.92 ppm SVOCs: 16.26 ppm CN: ND			**SB-29 (20.8-21.9')** BTEX: 4.34 ppm VOCs: 9.14 ppm PAHs: 106.33 ppm SVOCs: 108.17 ppm CN: 6.6 ppm					
SB-30	11/15/13	11/19/13	Not observed to depth drilled.	7	Fill. Asphalt to 0.35', over Sand and Silt, some Gravel and Schist Cobbles.	Silt, sands and gravels. Refusal at 7'.								No impacts.
					PID=0.2 ppm No odor.	PID=0.1 ppm No odor.								
					SB-30 (3-3.5') BTEX: ND VOCs: ND PAHs: 19.4 ppm SVOCs: 19.891 ppm CN: 0.61 ppm	**SB-30 (5.8-7')** BTEX: ND VOCs: ND PAHs: ND SVOCs: ND CN: ND								

Table 4-1
Qualitative Observations in Soil Borings, Monitoring Wells and Test Pits
Consolidated Edison Company of New York, Cedar Street Works Site, New Rochelle, NY

Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
SB-31	11/20/13	11/20/13	9.5	14.9	Fill. Asphalt over Sand and Gravel, some Silt and Schist Cobbles.	Sand, some Silt and Gravel. Silt, trace Gravel at 8.75'.	Silt, trace Sand and Gravel to 11', over Sand, some Silt, trace Gravel to 14.5', over weathered Schist at 14.5-14.9'. Refusal at 14.9'.							MGP impacts. MGP odors 4.5 - 9.5' and 10-14.5'.
					PID=0-64.1 ppm MGP-like odor at 4.5-5'.	PID=1.9-6.5 ppm Faint MGP odor 5-9.5'.	PID=3.3-883 ppm Faint MGP odor 10-11. Strong MGP odor 11-14.5'. No odors 14.5-14.9'.							
					SB-31 (4-4.5') BTEX: ND VOCs: ND PAHs: 88.97 ppm SVOCs: 88.97 ppm CN: 4.2 ppm	**SB-31 (8.8-9.5')** BTEX: 0.0596 ppm VOCs: 0.2522 ppm PAHs: 228.73 ppm SVOCs: 233.43 ppm CN: ND **S. Vapor sample SVSB-31 (6.5-7')**	**SB-31 (11.5-12.5')** BTEX: 0.58 ppm VOCs: 15.17 ppm PAHs: 572.9 ppm SVOCs: 585.54 ppm CN: ND **SB-31 (13-14.5')** BTEX: 1.9 ppm VOCs: 12.33 ppm PAHs: 177.85 ppm SVOCs: 183.041 ppm CN: ND							
SB-32	11/15/13	11/19/13	10	10.2	Fill. Silt, sand, gravel, glass and steel.	Silt, sands and gravels. Refusal at 10.2'.								No Impacts.
					PID=0.1 No odor.	PID=0.2 No odor.								
					SB-32 (3-3.5') BTEX: ND VOCs: ND PAHs: 18.804 ppm SVOCs: 18.999 ppm CN: ND	**SB-32 (8.8-10')** BTEX: ND VOCs: 0.0036 ppm PAHs: ND SVOCs: ND CN: ND **S. Vapor sample SVSB-32 (6.5-7')**								
Monitoring Wells:														
MW-01	12/15/08	12/19/2008	11	18	Fill. Grass layer over Sand, Silt, Clay, Cobbles, and Brick.	Fill. Sand, some Gravel to 7', over Silt, some Sand, little Gravel to 10'.	Sand, some Silt.	Sand, some Gravel, trace Silt.						No impacts.
					PID=0 No odor.	PID=0 No odor.	PID=0 No odor.	PID=0 No odor.						
						MW-1 (9-11') BTEX: ND VOCs: ND PAHs: 0.039 ppm SVOCs: 0.079 ppm CN: ND		**MW-1 (17-19')** BTEX: ND VOCs: ND PAHs: 0.048 ppm SVOCs: 0.268 ppm CN: ND						

Table 4-1
Qualitative Observations in Soil Borings, Monitoring Wells and Test Pits
Consolidated Edison Company of New York, Cedar Street Works Site, New Rochelle, NY

Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
MW-02A	12/10/08	12/15/2008	7.5	14	Fill. Grass layer over Sand, Silt, Clay, Cobbles, and Brick.	Sand and Silt, some Gravel.	Sand and Silt, some Gravel, weathered Schist at 13'.							No impacts.
					PID=0 No odor.	PID=0 No odor.	PID=0 No odor.							
						MW-2A (7-9') BTEX: ND VOCs: ND PAHs: 1,914 ppm SVOCs: 1,978.7 ppm CN: 1.24 ppm	**MW-2A (13-15')** BTEX: 0.82 ppm VOCs: 0.9 ppm PAHs: 183.9 ppm SVOCs: 192.26 ppm CN: ND						
MW-02B	11/14/13	1/20-3/26/14	7.5	39	Fill. Grass layer over Sand, Silt, Clay, Cobbles, and Brick.	Sand and Silt, some Gravel.	Sand and Silt, some Gravel, weathered Schist at 13'.	Weathered Schist to 20'.	Gneiss and Schist.	Gneiss and Schist.	Gneiss and Schist.	Gneiss and Schist.		No impacts.
					PID=0 No odor.	PID=0 No odor.	PID=0 No odor.	PID=0 No odor.	PID=0 No odor.	PID=0 No odor.	PID=0 No odor.	PID=0 No odor.		
					MW-2B (3.5-4') BTEX: ND VOCs: 0.004 ppm PAHs: 201.6 ppm SVOCs: 202.5 ppm CN: ND									
MW-03A	12/5/2008	12/15/2008	7.6	16	Fill. Asphalt over Sand, Silt, and Gravel subbase to 4'. Sand, Silt, Gravel, Cobbles, and Brick to 5'.	Fill. Sand, some Gravel, trace Silt and Asphalt to 9'. Gneiss Rock fragments to 11'.	Gneiss Rock fragments to 11'. Schist and Sand, some Gravel to 16'.	Schist and Sand, some Gravel to 16'.						No impacts.
					PID=0 No odor.	PID=10.5 ppm No odor.	PID=0 No odor.	PID=0 No odor.						
							MW-3A (14-14.5') BTEX: ND VOCs: ND PAHs: ND SVOCs: ND CN: ND	**MW-3A (16')** BTEX: ND VOCs: ND PAHs: 5.9 ppm SVOCs: 5.9 ppm CN: ND						
MW-03B	11/21/13	3/26/2014	7	43	Fill. Asphalt over Sand, Silt, and Gravel subbase to 4'. Sand, Silt, Gravel, Cobbles, and Brick to 5'.	Fill. Sand, some Gravel, trace Silt and Asphalt to 9'. Gneiss Rock fragments to 11'.	Gneiss Rock fragments to 11'. Schist and Sand, some Gravel to 16'.	Schist and Sand, some Gravel to 16'. Weathered Schist to 24'.	Weathered Schist to 24' over Gneiss and Schist.	Gneiss and Schist.	Gneiss and Schist. Coal Tar NAPL in core fracture at 33' 2", and sheen on water return at 33'.	Gneiss and Schist.	Gneiss and Schist.	Coal Tar NAPL in core fracture at 33'2", and sheen on water return at 33'.
					PID=0 No odor.	PID=10.5 ppm No odor.	PID=0 No odor.	PID=0 No odor.	PID=0	PID=26.5-117 ppm	PID=28 ppm at 32'.	PID=0.0	PID=0	

Table 4-1
Qualitative Observations in Soil Borings, Monitoring Wells and Test Pits
Consolidated Edison Company of New York, Cedar Street Works Site, New Rochelle, NY

Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
MW-05	12/12/08	12/12/2008	7.5	14	Fill. Asphalt over Sand, Silt, and Gravel subbase to 1'. Sand, Silt, Gravel, some Metal and Wood, little Cobble to 5'.	Fill. Sand, some Gravel to 7', over Sand and Silt, some Gravel to 10'.	Sand and Silt, some Gravel to 10'.							Hydrocarbon odor 10 - 14'.
					PID=0.6 ppm No odor.	PID=0 ppm No odor.	PID=27.9-28.7 ppm Hydrocarbon odor 10 - 14'.							
					MW-5 (2-3') BTEX: ND VOCs: ND PAHs: 313.2 ppm SVOCs: 318.7 ppm CN: 1.29 ppm	**MW-5 (11-13')** BTEX: 0.016 ppm VOCs: 0.405 ppm PAHs: 19.11 ppm SVOCs: 20.51 ppm CN: ND	**MW-5 (13-15')** BTEX: 0.037 ppm VOCs: 0.181 ppm PAHs: 23.62 ppm SVOCs: 25.72 ppm CN: ND							
MW-06	12/02/08	12/12/2008	7.5	17.4	Fill. Asphalt over Gravel subbase to 8"', over Sand, Silt, Gravel, Concrete, and Brick to 5'.	Fill. Sand and Silt, some Gravel to 10'.	Fill. Sand and Silt, some Gravel to 10'.	Sand, some Silt. Stained black.						Hydrocarbon odor 9 - 16'.
					PID=0 No odor.	PID=0-1.4 ppm No odor.	PID=1.4-32.9 ppm Hydrocarbon odor 10 - 15'.	PID=46.5 ppm Hydrocarbon odor 15 - 17.4'.						
							MW-6 (15-17') BTEX: ND VOCs: ND PAHs: 4.491 ppm SVOCs: 4.827 ppm CN: ND	**MW-6 (17-19')** BTEX: 0.065 ppm VOCs: 0.143 ppm PAHs: 8.708 ppm SVOCs: 9.228 ppm CN: ND						
MW-07A	01/06/09	01/07/09	7.5	21.5	Fill. Asphalt over Gravel subbase to 8"', over Sand, Silt, Gravel, and Cobbles to 5'.	Fill. Sand and Silt, some Gravel to 10'.	Fill. Sand and Silt, some Gravel to 15'.	Sand, some Silt. Stained black.	Sand, some Silt. Stained black.					Hydrocarbon odor 15 - 21.5'.
					PID=0.0 No odor.	PID=2.3-3.6 ppm No odor.	PID=0-13.8 ppm No odor.	PID=4.7-125 ppm Hydrocarbon odor 15 - 21.5'.	PID=6.6-9.2 ppm Hydrocarbon odor 15 - 21.5'.					
								MW-7A (17-19') BTEX: 16.82 ppm VOCs: 21.82 ppm PAHs: 49.11 ppm SVOCs: 50.81 ppm CN: ND	**MW-07A (21-23')** BTEX: 0.077 ppm VOCs: 0.085 ppm PAHs: 49.62 ppm SVOCs: 49.62 ppm CN: 1.48 ppm					
MW-07B	12/02/08	1/13/2009	7.5	43	Fill. Asphalt over Gravel subbase to 8"', over Sand, Silt, Gravel, and Concrete and Brick to 5'.	Fill. Sand and Silt, some Gravel and Brick.	Fill. Sand, Silt, and Gravel, some Brick at 14'.	Fill. Sand, Silt, and Gravel, over Gneiss with Schist lenses. Black staining in rock throughout.	Gneiss with Schist lenses. Black staining in rock throughout.	Gneiss with Schist lenses. Black staining in rock throughout.	Gneiss with Schist lenses. Black staining in rock throughout.	Gneiss with Schist lenses. Black staining in rock throughout.	Gneiss with Schist lenses. Black staining in rock throughout.	Hydrocarbon odor 10-12' and 15-19', with black staining in rock core fractures.
					PID=0 No odor.	PID=0-1.5 ppm No odor.	PID=1.2-32.9 ppm Hydrocarbon odor 10-12'.	PID= 46.5 ppm Hydrocarbon odor 15-19'.						
							MW-07B/SB-12 (11-13') BTEX: 1.002 ppm VOCs: 4.702 ppm PAHs: 122.85 ppm SVOCs: 131.29 ppm CN: ND	**MW-07B/SB-12 (17-19')** BTEX: 113.3 ppm VOCs: 151.3 ppm PAHs: 158.49 ppm SVOCs: 166.24 ppm CN: ND						

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Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
MW-08A	10/29/13	10/30/13	10.8	16	Fill. Silt, sands and gravel.	Silts, sands and gravel.	Fill. Silts, sands and gravel. Refusal 16'							No Impacts.
					PID=0.0 No odor.	PID=6.4 ppm No odor.	PID=2.3 ppm No odor.							
					MW-08A (2.7-2.9') BTEX: ND VOCs: 0.0023 ppm PAHs: 3.58 ppm SVOCs: 3.58 ppm CN: ND **S. vapor sample SVMW-08A (6.5-7')**	**MW-08A (9.5-10')** BTEX: ND VOCs: ND PAHs: ND SVOCs: ND CN: ND	**MW-08A (15-16')** BTEX: ND VOCs: 0.0044 ppm PAHs: ND SVOCs: ND CN: ND							
MW-08B	10/29/13	11/26/2013	10	38	Fill. Silt, sands and gravels.	Silts, sands and gravel.	Fill. Silts, sands and gravel. Refusal 16' with overburden rig.	Weathered Schist and Silt to 23'.	Weathered Schist and Silt to 23'. Gneiss and Schist.	Gneiss and Schist.	Gneiss and Schist.	Gneiss and Schist.		No Impacts.
					PID=0.0 No odor.	PID=6.4 ppm No odor.	PID=2.3 ppm No odor.	PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.		
					MW-08B (3-3.2') BTEX: ND VOCs: ND PAHs: 2.2 ppm SVOCs: 2.2 ppm CN: ND	**MW-08B (9.5-10.5')** BTEX: ND VOCs: ND PAHs: ND SVOCs: 0.071 ppm CN: ND	**MW-08B (15-16')** BTEX: ND VOCs: ND PAHs: ND SVOCs: ND CN: ND							
MW-09	10/28/13	10/30/13	15	15.5	Fill. Silt, sands and concrete.	Sand, silt and gravel.	Sand, silt and gravel. Refusal at 15.5'							No Impacts.
					PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.							
					S. vapor sample SVMW-09 (6.5-7')	**MW-09 (8.2-8.8')** BTEX: ND VOCs: 0.0273 ppm PAHs: ND SVOCs: ND CN: ND	**MW-09 (14.8-15.5')** BTEX: ND VOCs: 0.002 ppm PAHs: ND SVOCs: ND CN: ND							
MW-10	10/30/13	10/31/13	8.5	22	Fill. Silt, sands and gravels.	Silts, sand and gravel	Silts, sand and gravel	Silts, sand and gravel	Silts, sand and gravel Refusal at 22'.					No Impacts.
					PID=0.0 No odor.	PID=4.4 ppm No odor.	PID=1.2 ppm No odor.	PID=0.1 ppm No odor.	PID=0.4 ppm No odor.					
					S. vapor sample SVMW-10 (6.5-7')	**MW-10 (7-8.5')** BTEX: ND VOCs: 0.0064 ppm PAHs: ND SVOCs: ND CN: ND			**MW-10 (21-22')** BTEX: ND VOCs: 0.0039 ppm PAHs: ND SVOCs: ND CN: ND					
MW-11A	11/18/13	11/19/13	8	12.7	Fill. Sand, silt, gravel and wood.	Sand, silt and gravel.	Sand, silt and gravel. Refusal at 12.7' with DPT.							No Impacts.
					PID=0.1 ppm No odor.	PID=0.1 ppm No odor.	PID=0.1 ppm No odor.							
					MW-11A (3-3.5') BTEX: ND VOCs: 0.0361 ppm PAHs: 15.857 ppm SVOCs: 15.945 ppm CN: ND	**MW-11A (8.5-9.5')** BTEX: ND VOCs: 0.011 ppm PAHs: ND SVOCs: ND CN: ND	**MW-11A (11.5-12.7')** BTEX: ND VOCs: ND PAHs: 0.081 ppm SVOCs: 0.081 ppm CN: ND	**Soil vapor sample SVMW-11A (6.5-7')**						

Table 4-1
Qualitative Observations in Soil Borings, Monitoring Wells and Test Pits
Consolidated Edison Company of New York, Cedar Street Works Site, New Rochelle, NY

Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
MW11B	11/20/13	1/16-3/25/14	8	40.9	Fill. Sand, silt, gravel and wood. PID=0.1 ppm No odor.	Sand, silt and gravel. PID=0.1 ppm No odor.	Sand, silt and gravel. Refusal at 12.7'. PID=0.1 ppm No odor.	Granitic Gneiss. PID=0 No odor.	Granitic Gneiss. Slight sheen on return water. PID=0 No odor.	Granitic Gneiss. PID=0 No odor.	Granitic Gneiss. NAPL blebs on return water. PID=0 No odor.	Granitic Gneiss. PID=0 No odor.	Granitic Gneiss. PID=0 No odor.	Slight sheen on return water during coring 25-30', and NAPL blebs 30-35' on return water.
MW-12A	11/20/13	1/24/2014	7	12	Fill. Asphalt over Sand, some Silt and Gravel, and Concrete to 5'.	Sand, some Gravel, few Cobbles to 12'.	Sand, some Gravel, few Cobbles to 12', over Weathered Gneiss/Schist.							No impacts.
					PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.							
					MW-12A (2.8-3.2') BTEX: ND VOCs: 0.0361 ppm PAHs: 9.42 ppm SVOCs: 9.42 ppm CN: ND	**MW-12A (7-10')** BTEX: ND VOCs: ND PAHs: ND SVOCs: 0.12 ppm CN: ND	**MW-12A (10-12')** BTEX: ND VOCs: ND PAHs: ND SVOCs: ND CN: ND							
MW-12B	11/20/13	1/14-3/26/14	7	40	Fill. Asphalt over Sand, some Silt and Gravel, and Concrete to 5'.	Sand, some Gravel, few Cobbles to 12'.	Sand, some Gravel, few Cobbles to 12', over Weathered Gneiss/Schist.	Schist and Gneiss, no sheens.	Schist and Gneiss, no sheens.	Schist and Gneiss, no sheens.	Schist and Gneiss, no sheens.	Schist and Gneiss, no sheens.		No impacts.
					PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.		
Test Pits:														
TP-01		12/4/2008		6	Fill. Topsoil to 5", Sand, some Slag, Cinders, and Ash, little Cobble to 3', Clayey Silt	Clayey Silt to 6'								No MGP impacts. Two pipes were observed, 8" clay pipe located 3' bgs near north end of test pit and a 1.25" metal culvert at 4' bgs.
					PID=0.0 No odor.	PID=0.0 No odor.								
					TP-01 (2.0-3.0') BTEX: 0.038 PPM VOCs: 0.038 ppm PAHs: 722.09 ppm SVOCs: 725.59 ppm CN: 2.35 ppm	**TP-01 (6.0')** BTEX: ND VOCs: ND PAHs: 24.049 ppm SVOCs: 24.299 ppm CN: 0.703 ppm								
TP-02		12/5/2008	10.5	10.5	Fill. Topsoil to 5", Sand, little Silt, Gravel, and Cobbles to 1.1', Sand, some Slag, Cinders, Ash, and Gravel, trace Silt to 3', Clayey Silt	Clayey Silt	Clayey Silt to 10.5'							No MGP impacts. Two 2" PVC pipes were observed at 8" bgs on eastern end of test pit, one 1" metal conduit was observed at 3' bgs on western end of test pit.
					PID=0.0 No odor.	PID=0.0 No odor.	PID=0.0 No odor.							
					TP-02 (2.0-3.0') BTEX: 0.014 PPM VOCs: 0.014 ppm PAHs: 452.43 ppm SVOCs: 454.63 ppm CN: 2.1 ppm	**TP-02 (3.0-4.0')** BTEX: ND VOCs: ND PAHs: 20.801 ppm SVOCs: 20.998 ppm CN: 0.0925 ppm	**TP-02 (10.5')** BTEX: ND VOCs: ND PAHs: ND SVOCs: ND CN: ND							

Table 4-1
Qualitative Observations in Soil Borings, Monitoring Wells and Test Pits
Consolidated Edison Company of New York, Cedar Street Works Site, New Rochelle, NY

Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
TP-03		12/9/2008		2.9	Fill. Topsoil to 5", Sand, Silt, and Gravel to 8", Cobbles to 1.2', Sand, Silt, and Gravel to 2.9'									No impacts. 1" metal pipe observed at 3' bgs.
					PID=0.0 No odor.									
					TP-03 (1.0-3.0') BTEX: ND VOCs: ND PAHs: 89.06 ppm SVOCs: 89.06 ppm CN: 1.57 ppm	**TP-03 (3.0')** BTEX: ND VOCs: ND PAHs: 75.1 ppm SVOCs: 75.1 ppm CN: 4.63 ppm								
TP-04		12/1/2008		7.5	Fill. Asphalt to 4", Trap Rock to 7", Sand, some Boulders and Cobbles (Schist), little Gravel	Sand, some Boulders and Cobbles (Schist), little Gravel to 7.5'								No impacts. Large boulders encountered. Moist at 7' bgs.
					PID=0.3 No odor.	PID=0.0 No odor.								
					TP-04 (5.7') BTEX: ND VOCs: ND PAHs: 5.722 ppm SVOCs: 5.795 ppm CN: ND	**TP-04 (7.5')** BTEX: ND VOCs: ND PAHs: 2.273 ppm SVOCs: 2.273 ppm CN: ND								
TP-05		12/2/2008	12.2	12.5	Fill. Asphalt to 4", Trap Rock to 7", Sand, some Slag and Coal Tar (Solid Phase)	Sand, some Slag and Coal Tar (Solid Phase) to 7.2', Clayey Silt	Clayey Silt to 12', Sand, some Silt to 12.5'. Sheen on groundwater at 12.2'.							MGP impacts. Solid phase tar at 7.2'. Sheen observed on groundwater at 12.2' bgs.
					PID=0.1 No odor.	PID=0.0 No odor.	PID=435 No odor.							
					TP-05 (2.4') BTEX: 0.011 ppm VOCs: 0.011 ppm PAHs: 660.7 ppm SVOCs: 670 ppm CN: 1.01 ppm	**TP-05 (12.5')** BTEX: ND VOCs: 1.6 ppm PAHs: 141.71 ppm SVOCs: 143.95 ppm CN: ND								
TP-06		12/3/2008		9.5	Fill. Topsoil to 4", Sand, some Gravel, trace Silt to 2.7', Slag, Ash, some Sand, little Silt to 3.7', Sand, some Gravel, little Silt	Sand, some Gravel, little Silt to 7', Clayey Silt to 9.5'								No impacts. 12" cast iron pipe encountered at 5.5' bgs. Scrap metal noted on south end of test pit at 3' bgs.
					PID=0.1 No odor.	PID=0.0 No odor.								
					TP-06 (2.5-3.5') BTEX: ND VOCs: ND PAHs: 278.35 ppm SVOCs: 279.26 ppm CN: 9.52 ppm	**TP-06 (6.0-7.0')** BTEX: ND VOCs: ND PAHs: 12.93 ppm SVOCs: 12.93 ppm CN: 2.65 ppm	**TP-06 (9.5-9.5')** BTEX: ND VOCs: ND PAHs: 7.8 ppm SVOCs: 7.8 ppm CN: 1.98 ppm							

Table 4-1
Qualitative Observations in Soil Borings, Monitoring Wells and Test Pits
Consolidated Edison Company of New York, Cedar Street Works Site, New Rochelle, NY

Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
TP-07		12/10/2008		9	Fill. Asphalt to 4", Trap Rock and Sand to 7", Boulders, Cobbles, some Gravel, Little Sand, Trace Silt	Boulders, Cobbles, some Gravel, Little Sand, Trace Silt to 9'								MGP odor. Metal debris noted inside holder at 6 to 8' bgs. Odors noted started at 7' bgs.
					PID=0.0 No odor.	PID=5.9 (inside holder PID=189 (outside holder) Odor 7-9'								
						TP-07 IH (7-9') BTEX: ND VOCs: ND PAHs: 47.92 ppm SVOCs: 48.39 ppm CN: 0.992 ppm	**TP-07 IH (9-9')** BTEX: 0.088 ppm VOCs: 0.0964 ppm PAHs: 187.5 ppm SVOCs: 191.2 ppm CN: ND	**TP-07 OH (9-9')** BTEX: 7.717 ppm VOCs: 8.754 ppm PAHs: 257.9 ppm SVOCs: 263.2 ppm CN: ND					
TP-07 (Ext)		12/11/2008		8	Fill. Asphalt to 4", Trap Rock, some Sand to 7", Sand, some Gravel, Ash, Cinder, and Slag, trace Silt to 1.2', Sand, some Gravel and Silt	Sand, some Gravel and Silt to 8'								No impacts. Test pit located on outside of holder wall and was an extension of TP-07. 12" pipe (cast iron) which was observed in TP-6 was not found.
					PID=121 No odor.	PID=0.0 No odor.								
TP-08		1/14/2014		6.2	Fill. Asphalt to 5", Cinders, Brick, Slag, Ash, Gravel, Sand, some to trace Silt to 5.1'	Silt, some Sand to 6.2'								No impacts. Two 12" metal pipes found at 5.7' bgs.
					PID=0.0 No odor.	PID=0.0 No odor.								
TP-09		1/15/2014		5.1	Fill. Asphalt to 5", Sand, Gravel, trace Silt to 7", Schist rock, some Gravel, few Sand and Silt to 1.5', Sand and Silt, trace Gravel to 2.7', Schist rock and Sand, some Gravel and Silt to 5.1'									Faint MGP odor. A large, flat Schist rock was exposed at 3.6' bgs measuring 2.5'x3'x1.5", too large to remove from excavation.
					PID=0.0 Faint MGP-like odor									
					TP-09 (2.7-2.9') BTEX: ND VOCs: 0.0074 ppm PAHs: 0.662 ppm SVOCs: 0.662 ppm CN: ND	**TP-09 (3.9-4.2')** BTEX: ND VOCs: ND PAHs: 2.862 ppm SVOCs: 2.862 ppm CN: ND								

Table 4-1
Qualitative Observations in Soil Borings, Monitoring Wells and Test Pits
Consolidated Edison Company of New York, Cedar Street Works Site, New Rochelle, NY

Boring/Well/ Test Pit #	Date(s) Hand Cleared	Date(s) Drilled / Constr.	Water Table (feet bgs)	Bottom of Boring (feet bgs)	0-5'	5-10'	10-15'	15-20'	20-25'	25-30'	30-35'	35-40'	40-45'	Comments
TP-12		1/13/2014		7.3	Fill. Sand, some Gravel, Concrete Pavers, and Cinders to 2.5', Silt, Sand, some Brick to 4.5', Silt, some Sand, trace Gravel	Silt, some Sand, trace Gravel to 7.3'								No impacts. 1.5" steel line perpendicular to trench and covered with white material found at 2' bgs.
					PID=0.0 No odor.	PID=0.0 No odor.								

TABLE 4-2
Cedar Street Works Former MGP Site
Summary of Field Observations and Measurements by Site Portion

Site Portion	Former MGP Structures/ Targets	Boring Summary					
		Boring ID	Boring Position Relative to Target	PID Range (ppm)	Staining	NAPL	Comment/ Impact
Toyota Dealership	North Gas Holder	TP-04	Within Footprint	0.0 to 0.3	None	None	No impacts.
		TP-09		0	None	None	Faint MGP odor.
		SB-03		0.0 to 2,266	Stained Black 10-15'	None	Hydrocarbon odor 10-13'.
		SB-15		0.0 to 1,209	Stained Black 10-22'	None	Hydrocarbon odor 5-17', with black staining in rock core fractures.
		TP-06	Between Footprint and Cedar Street	0.0 to 0.1	None	None	No impacts.
		TP-07		0.0 to 189	None	None	MGP odor.
		TP-08		0	None	None	No impacts.
		MW-01		0	None	None	No impacts.
		MW-07A		0.0 to 125	Stained Black 15-21.5'	None	Hydrocarbon odor 15-21.5'.
		MW-07B		0.0 to 46.5	Stained Black 15-43'	NAPL 17-19'	Hydrocarbon odor 10-12' and 15-19', with black staining in rock core fractures, NAPL 17-19'.
		SB-16	Adjacent Sidewalk	0.0 to 92.1	None	NAPL tar on liner 18-19'	MGP impacts/odor 5-19', NAPL tar on liner 18-19'.
		SB-18	Near Footprint	0.0 to 1,017	Staining 13-15'	Sheen at 15-20'	MGP impacts with strong MGP odor, staining, and sheen.
		TP-05		0.0 to 435	None	Coal Tar Product at 7.2'	MGP impacts. Solid phase tar at 7.2'. Sheen observed on groundwater at 12.2' bgs.
		SB-13		0.0 to 118	Stained Black 14-15'	None	Undifferentiated odor 5-10'.
		MW-03A		0.0 to 10.5	None	None	No impacts.
		MW-03B		0.0 to 117	None	Coal Tar Product at 33'2"	Coal Tar NAPL in core fracture at 33'2", and sheen on water return at 33'.
	Coal Shed	SB-17	Near Footprint	0.0 to 6.1	None	None	MGP odor 10.5-12.3'
		TP-01		0	None	None	No impacts.
		SB-01		0	None	None	No impacts.
		TP-02		0	None	None	No impacts.
		SB-26		0.0 to 904.4	Staining 12.5-14.8'	None	MGP odor 5 to 11.5', strongest 7.5-8'. Sheen and staining 12.5-14.8'.
		SB-07		0.0 to 187	None	None	Hydrocarbon odor 8-14' and 16-17'
	Coal, Repair Shop	TP-12	Within Footprint	0	None	None	No impacts.
		MW-02A	Near Footprint	0	None	None	No impacts.
		MW-02B		0	None	None	No impacts.
		TP-03		0	None	None	No impacts.
	South Gas Holder	SB-27	Within Footprint	0.0 to 7.7	None	None	Faint MGP odor and sheen.
		SB-11		0.0 to 205	Black Staining 19-21'	None	Hydrocarbon odor 5-10' and 19-21'.
		SB-28		0.0 to 1.8	Sheen at 17-20'	None	MGP impacts. Faint MGP odor 10-23' and sheen 17-20'.
		SB-29		0.0 to 137.1	None	None	Faint MGP odor 14-15' and 20-22.6'.
		SB-04		0.0 to 56.7	Black Staining 13-15', 21-24'	None	Hydrocarbon odor 10-15' and 20-24'.
		SB-05		0.0 to 10.2	Black Staining 8-23'	None	Hydrocarbon odor 12-15'.
		SB-10		0.0 to 14.4	None	None	No impacts.
		SB-31	Near Footprint	0.1 to 883	None	None	MGP impacts. MGP odors 4.5 -9.5' and 10-14.5'.
		SB-06		0.0 to 55.5	Stained 11-13'	None	Hydrocarbon odor 18-21.5'
		SB-32		0.1 to 0.2	None	None	No impacts.
		MW-11A		0.0 to 0.1	None	None	No impacts.
		MW-11B		0	None	Blebs 30-35'	Slight sheen on return water during coring 25-30', and NAPL blebs 30-35' on return water.
	Eastern End, Along River Street (No Structures)	SB-30	Northern Portion	0.0 to 0.2	None	None	No impacts.
		SB-09		0	None	None	No impacts.
		SB-08		0	None	None	No impacts.
		MW-05		0.0 to 28.7	None	None	Hydrocarbon odor 10 - 14'.
		MW-06	Central Portion	0.0 to 46.5	Black Staining 15-17'	None	Hydrocarbon odor 9 - 16'.
		SB-32		0.0 to 0.2	None	None	No impacts.
		MW-12B	Southern Portion	0	None	None	No impacts.
	Engine House	None	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

TABLE 4-2
Cedar Street Works Former MGP Site
Summary of Field Observations and Measurements by Site Portion

Site Portion	Former MGP Structures/ Targets	Boring Summary					
		Boring ID	Boring Position Relative to Target	PID Range (ppm)	Staining	NAPL	Comment/ Impact
Cedar Street	Purifying Generators	SB-19	Within Footprint	0.0 to 1,425	None	None	Undifferentiated chemical impacts.
	Coal & Coke Shed	SB-20	Within Footprint	0.0 to 2.4	None	None	None.
	Office		Near Footprint				
	North Purifier House	SB-22	Within Footprint	0.0 to 27.1	None	None	PAH-like odor 2-5'.
	Meter House	SB-21	Within Footprint	0.0 to 81.5	None	None	MGP impacts with MGP odor. Sheen in seam 13.8 - 14'.
	West Gas Holder	SB-23	Within Footprint	0.0 to 109	None	None	MGP impacts.
	South Purifier House	SB-24	Within Footprint	0.0 to 8.5	None	None	MGP impacts. Faint MGP odor 3.5-5' and undifferentiated chemical odor 7.0-7.4'.
		SB-25	Within Footprint	0.0 to 113	None	None	Undifferentiated chemical impacts.
	Dwelling	SB-14	Near Footprint	0	None	None	No impacts.
		SB-02	Near Footprint	0	None	None	No impacts.
West of Cedar Street and North of Spring Street	None	MW-08A	Not Applicable	0.0 to 6.4	None	None	No impacts.
		MW-08B		0.0 to 6.4	None	None	No impacts.
		MW-09		0.0 to 0.5	None	None	No impacts.
		MW-10		0.0 to 4.4	None	None	No impacts.

NAPL - Non-Aqueous Phase Liquid
MGP - Manufactured Gas Plant

N

CEDAR ST

SPRING ST

COMMERCE DR

PALMER AVE

PALMER AVE

RIVER ST

RIVER ST

CEDAR ST

RADISSON PLZ

MW-08B

MW-08A

MW-09

MW-10

CONCRETE CURB

CONCRETE SIDEWALK

CONCRETE RETAINING WALL

SB-16

SB-30

SB-19

MW-01

TP-05

SB-13

SB-03

SB-20

TP-06

TP-08

TP-07

TP-04

TP-09

SB-09

MW-07A

SB-15

MW-07B

SB-12

PARKING LOT

CONCRETE APRON

SB-18

MW-03A

MW-03B

1 STORY BLOCK BUILDING

SB-21

SB-17

MW-05

SB-22

TP-01

SB-26

SHED

SB-23

SB-08

SB-01

TP-02

1 STORY BRICK BUILDING

SB-24

SB-07

SB-31

TP-12

MW-02A

MW-02B

CONCRETE RETAINING WALL

MW-06

SB-25

SB-27

SB-11

TP-03

CONCRETE RETAINING WALL

SB-29

SB-28

SB-04

SB-06

PARKING LOT

SB-14

SB-10

SB-05

CONCRETE RAMP

SB-32

2 STORY BRICK BUILDING

SB-02

MW-11A

MW-11B

PARKING LOT

MW-12B

CONCRETE APRON

CONCRETE SIDEWALK

CONCRETE CURB

50 0 50 Feet

Legend

Former MGP Structure

Boring Log Observations

Blebs, Globs, Sheen

Staining, Odor

Petroleum Impacts
Saturation & Sheens

Hardened Tar

Tar Saturated

No Observed Impacts

Petroleum Impacts
Staining & Odors

J:\Projects\117\93445\Maps\RI\03-06 QUALITATIVE OBSERVATIONS (0-325).mxd 6/15/2014

CONSOLIDATED EDISON
CEDAR STREET WORKS
REMEDIAL INVESTIGATION
QUALITATIVE OBSERVATIONS

URS

FIGURE 4-1

Table 2-1
Existing Monitoring Well Inspection

Well ID	Northing[1]	Easting[1]	Depth to Water (feet)	Depth to Bottom (constructed; feet)	Depth to Bottom (measured; feet)	Accumulated Sediment (Yes/No)	NAPL Observed (Yes/No)	Notes/Recommendations
MW-01	759084.6	691308.4	9.51	18.00	18.10	No	No	None
MW-02A	758977.4	691381.2	9.50	14.00	13.55	No	No	None
MW-02B	758971.0	691381.2	8.88	39.00	38.40	No	No	None
MW-03A	759096.7	671444.0	8.05	16.00	14.95	No	No	Replace bolts
MW-03B	759098.4	691447.0	7.60	43.00	42.19	No	No	None
MW-05	759147.6	691568.7	6.39	14.00	13.05	No	No	None
MW-06	759091.1	691623.3	7.99	17.00	16.32	No	No	Possible obstruction in monitoring well
MW-07A	759147.6	691339.8	9.47	19.00	18.88	No	No	None
MW-07B	759070.8	691345.2	9.05	40.00	42.10	No	No	None
MW-08A	759092.3	691163.8	9.49	15.00	14.83	No	No	None
MW-08B	759092.3	691158.9	10.82	38.00	37.94	No	No	None
MW-09	759185.3	691291.9	12.62	15.50	15.13	No	No	None
MW-10	758975.4	691253.5	9.14	16.00	16.00	No	No	None
MW-11A	758926.0	691444.8	5.40	12.50	12.19	No	No	None
MW-11B	758929.5	691550.4	9.00	40.90	39.66	No	No	Possible obstruction in monitoring well
MW-12A	758949.7	691680.4	5.83	14.00	13.55	No	No	Repair damaged concrete pad; possible obstruction in monitoring well
MW-12B	758944.8	691672.6	4.49	41.00	39.70	No	No	None

Notes:
1. Coordinates shown are in NAD83 (NAD83/2011), NYSPCS East Zone (3101).
NAD83: North American Datum of 1983
NAPL: nonaqueous phase liquid
NYSPCS: New York State Plane Coordinate System

Table 2-2
Soil Boring Observations

Station ID	Date Completed	Northing[1]	Easting[1]	Total Depth (feet)	Attempts	NAPL Observations	Piezometer Installed[2] (Yes/No)
SB-1	5/23/2025	759103.4	691455.9	13	1	None	No
SB-2	5/23/2025	759079.5	691398.7	28	1	Coated at 25 to 28 feet	Yes
SB-3	5/23/2025	759129.6	691377.0	20	1	Coated at 12 to 20 feet	Yes
SB-4	5/22/2025	759054.2	691322.2	25	1	Blebs at 9 to 15 feet	No
SB-5	5/22/2025	758990.9	691352.9	15	1	None	No
SB-6	5/22/2025	758862.7	691427.2	28	1	None	No
SB-7	5/23/2025	758924.4	691552.5	15	1	None	No
SB-8	5/22/2025	758970.5	691598.6	18	1	None	No

Notes:

1. Coordinates shown are in NAD83 (NAD83/2011), NYSPCS East Zone (3101).

2. Piezometers installed during Pre-Design Investigation Field Work.

NAD83: North American Datum of 1983

NAPL: nonaqueous phase liquid

NYSPCS: New York State Plane Coordinate System

Table 2-3
NAPL Recovery Testing

Method	Well ID	Date(s)	Volume Water Removed[1] (gallons)	NAPL Observed (Yes/No)	Notes
Bailing	PZ-SB-2	May 27-28, June 4, July 2	9.33	No	Manuel bailing; 1-hour recovery gap
	PZ-SB-3	May 27-28, June 4, July 2	9.33	No	Manuel bailing; 1-hour recovery gap
	MW-1	May 27-28, July 2	0.33	No	Inspection with interface probe and bailer
	MW-7A	May 27-28, July 2	0.33	No	Inspection with interface probe and bailer
	MW-7B	May 27-28, July 2	0.33	No	Inspection with interface probe and bailer
	MW-3A	May 27-28, July 2	0.33	No	Inspection with interface probe and bailer
	MW-3B	May 27-28, July 2	0.33	No	Inspection with interface probe and bailer
Pump Purging	PZ-SB-2	June 4	20	No	Electric submersible pump followed by manual bailing
	PZ-SB-3	June 4	20	No	Electric submersible pump followed by manual bailing

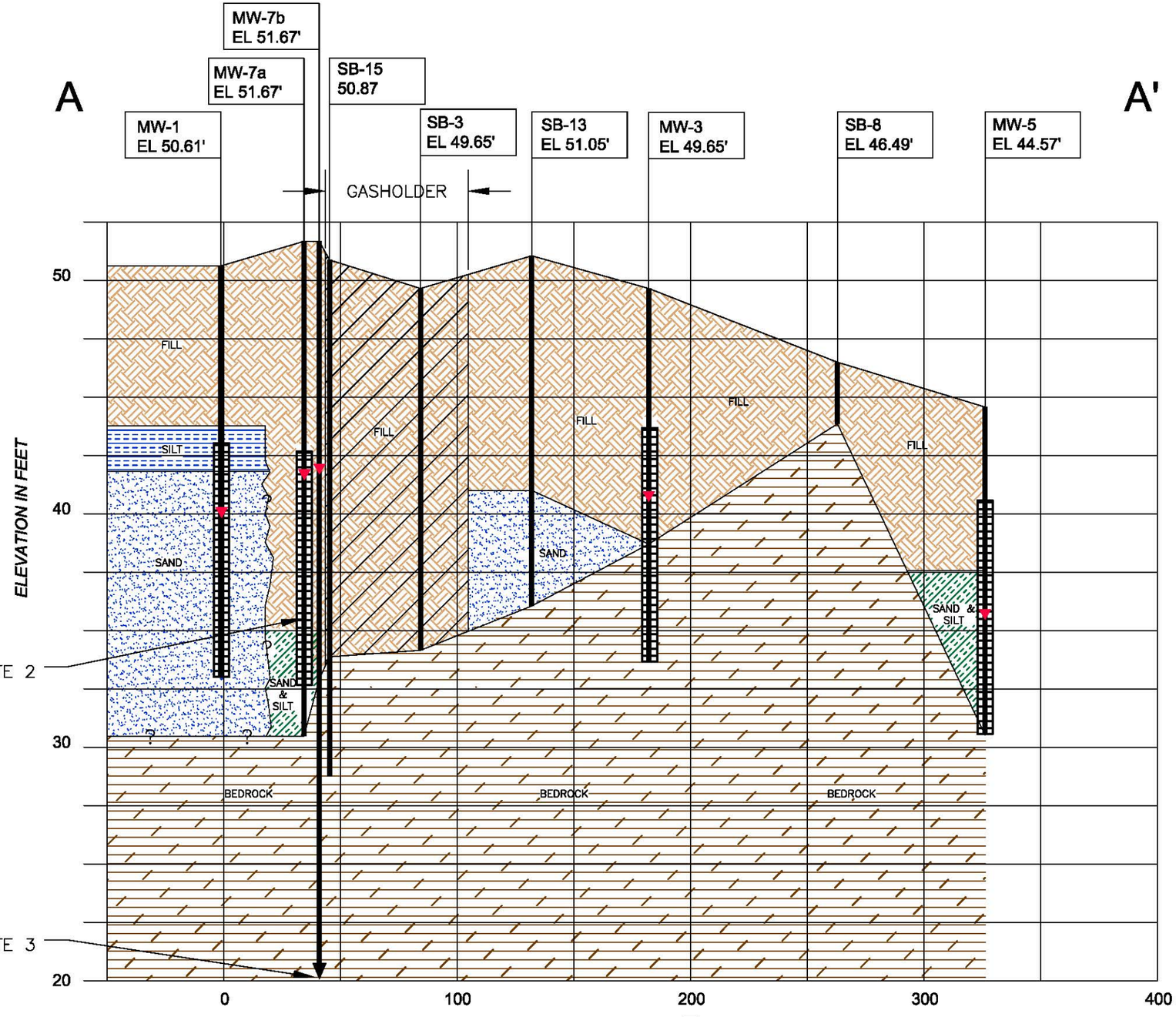
Notes:

1. Values represent total volume in gallons purged for each day of NAPL recovery testing.

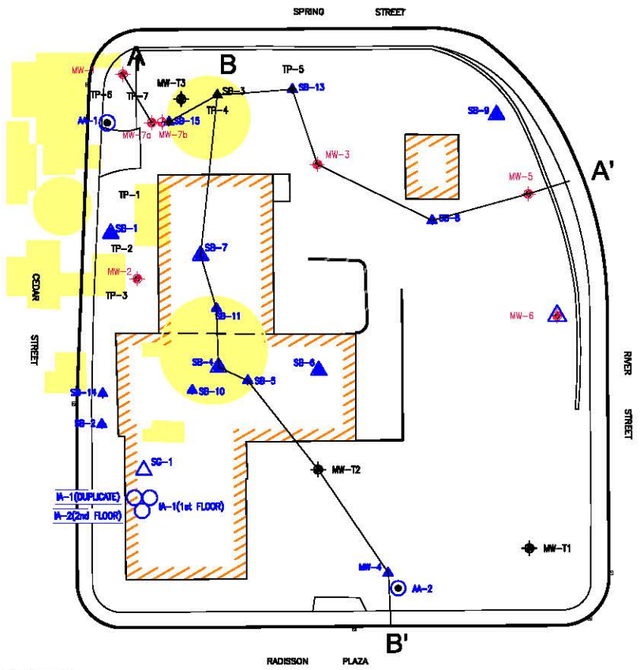
NAPL: nonaqueous phase liquid

Cross Sections

- Site cross sections (Parsons 2009)
- Site cross sections (URS 2017)



FILE NAME: P:\CONED\442098 – CEDAR STREET\CAD\442098–SK004.DWG
PLOT DATE: 4/22/2009 2:18 PM PLOTTED BY: WINTERS, CHRIS



NOTES:

1. ELEVATIONS BASED ON NAVD 88.

2. NAPL WAS OBSERVED IN THE MW–7b SOIL BORING, 17–19 FT BELOW GROUND SURFACE.

3. THE TOTAL DEPTH OF MW–7b IS 43 FT. THE MONITORING WELL IS SCREENED FROM 30–40 FT BELOW GROUND SURFACE.

50 25 0 50 100

SCALE: 1"=50'
HORIZONTAL SCALE

5 2.5 0 5 10

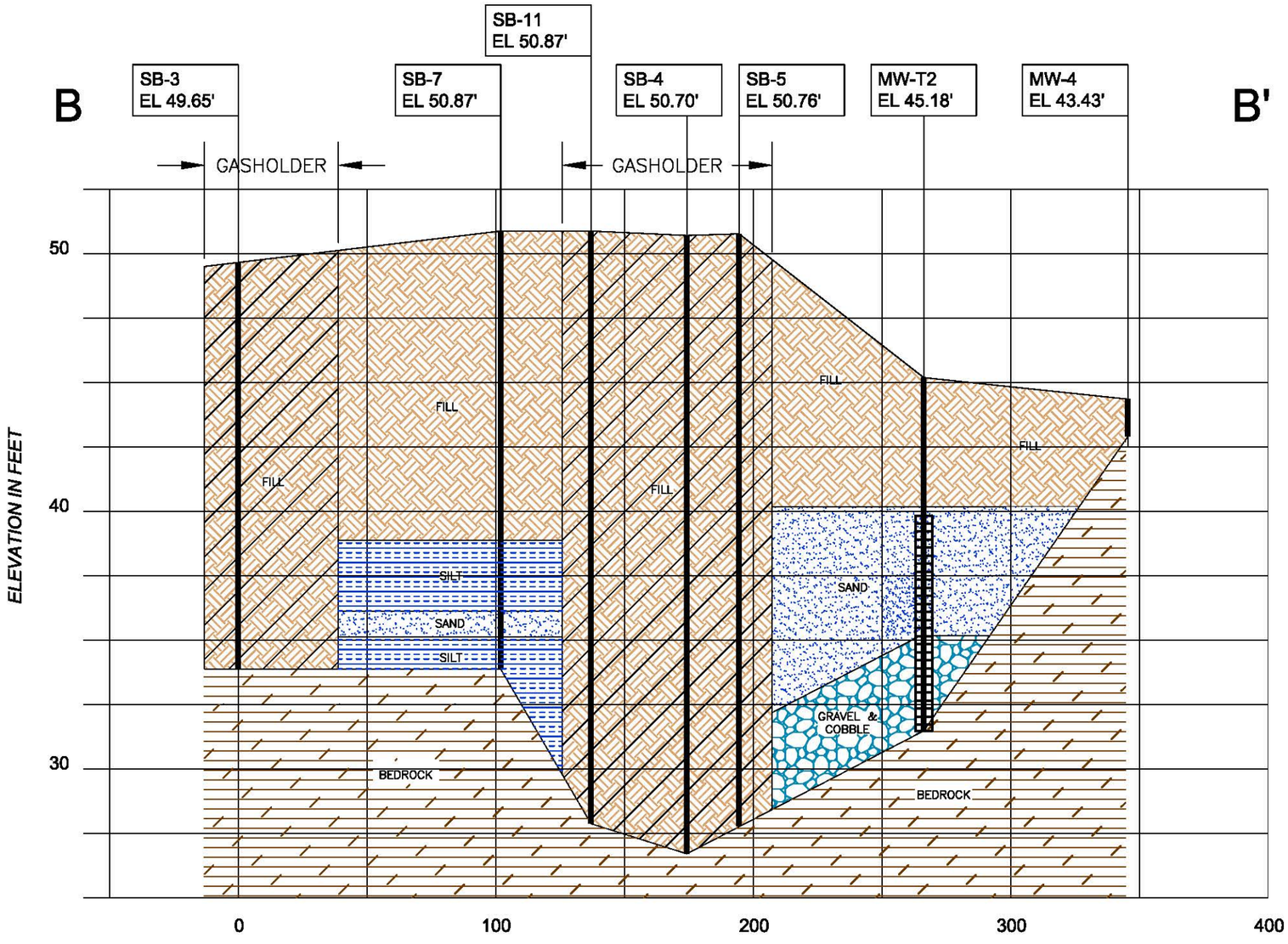
SCALE: 1"=5'
VERTICAL SCALE

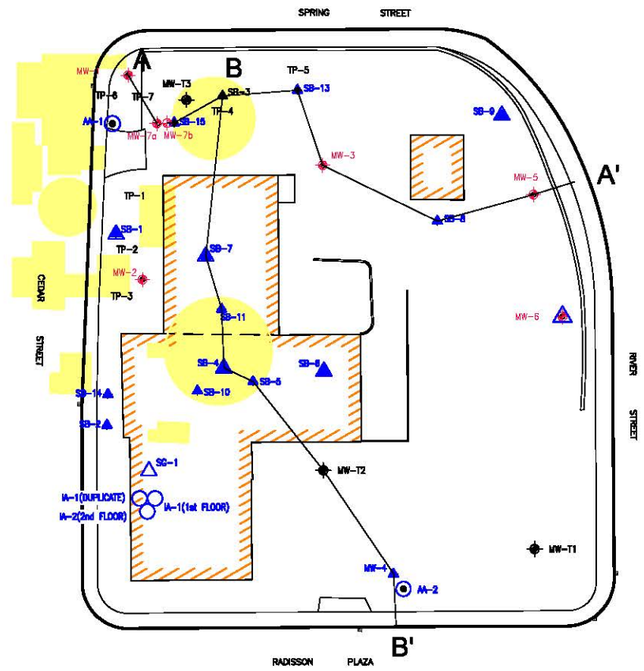
FIGURE 3

CONSOLIDATED EDISON
CEDAR STREET WORKS
NEW ROCHELLE, NY

CROSS SECTION A–A'

PARSONS
290 ELWOOD DAVIS ROAD, SUITE 312, LIVERPOOL, N.Y. 13088, PHONE: 315–451–9560





50 25 0 50 100

SCALE: 1"=50'
HORIZONTAL SCALE

5 2.5 0 5 10

SCALE: 1"=5'
VERTICAL SCALE

FILL (SAND, SILT, GRAVEL, BRICK, CONCRETE)

BEDROCK

GASHOLDER

WELL SCREEN FOR MONITORING WELL

SAND

GRAVEL & COBBLE

SILT

SOIL BORING

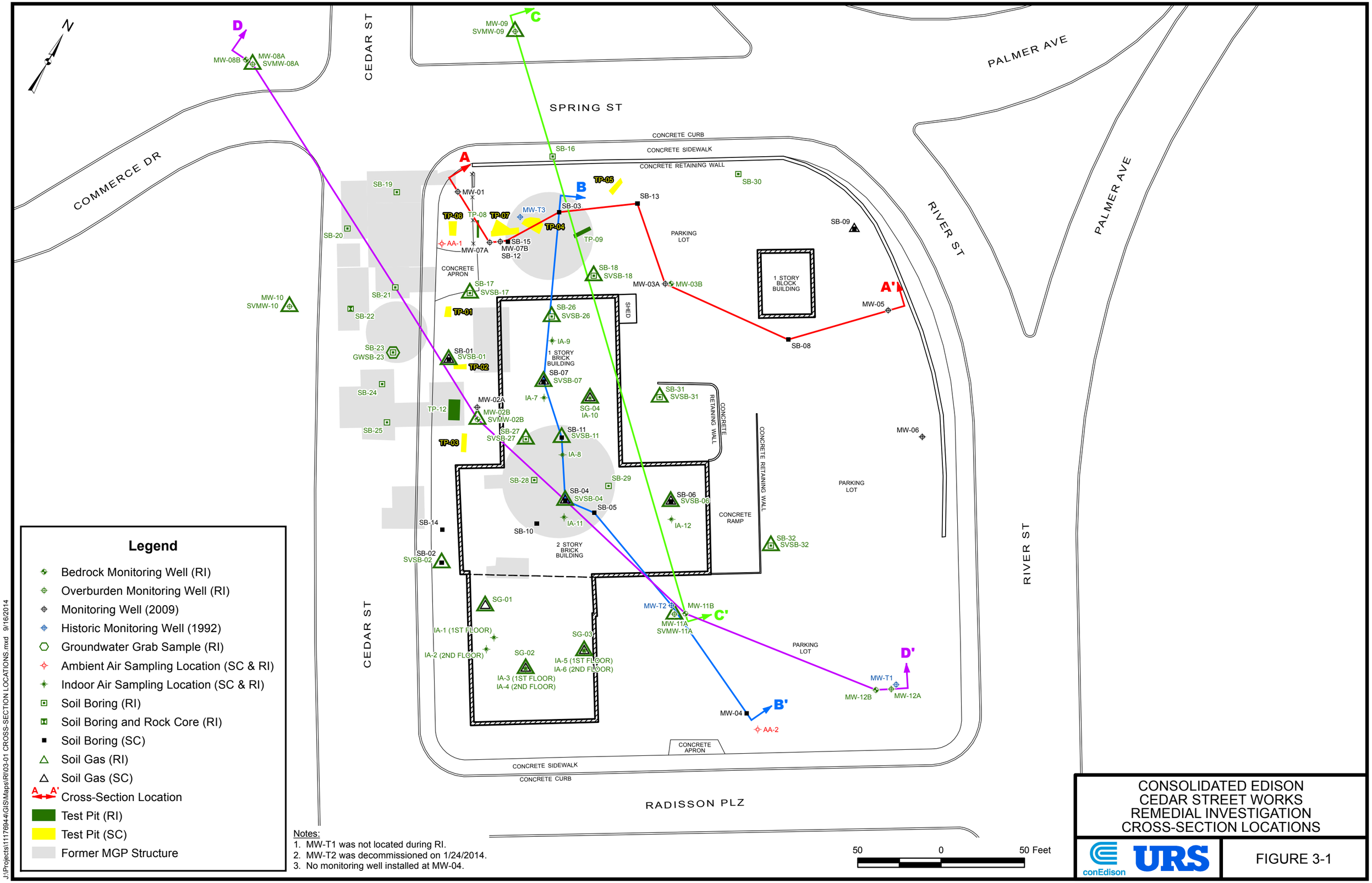
FIGURE 4

CONSOLIDATED EDISON
CEDAR STREET WORKS
NEW ROCHELLE, NY

CROSS SECTION B–B'

PARSONS
290 ELWOOD DAVIS ROAD, SUITE 312, LIVERPOOL, N.Y. 13088, PHONE: 315–451–9560

FILE NAME: P:\CONED\442098 – CEDAR STREET\CAD\442098–SK004.DWG
PLOT DATE: 4/22/2009 12:47 PM PLOTTED BY: WINTERS, CHRIS



Legend

- Bedrock Monitoring Well (RI)
- Overburden Monitoring Well (RI)
- Monitoring Well (2009)
- Historic Monitoring Well (1992)
- Groundwater Grab Sample (RI)
- Ambient Air Sampling Location (SC & RI)
- Indoor Air Sampling Location (SC & RI)
- Soil Boring (RI)
- Soil Boring and Rock Core (RI)
- Soil Boring (SC)
- Soil Gas (RI)
- Soil Gas (SC)
- A A' Cross-Section Location
- Test Pit (RI)
- Test Pit (SC)
- Former MGP Structure

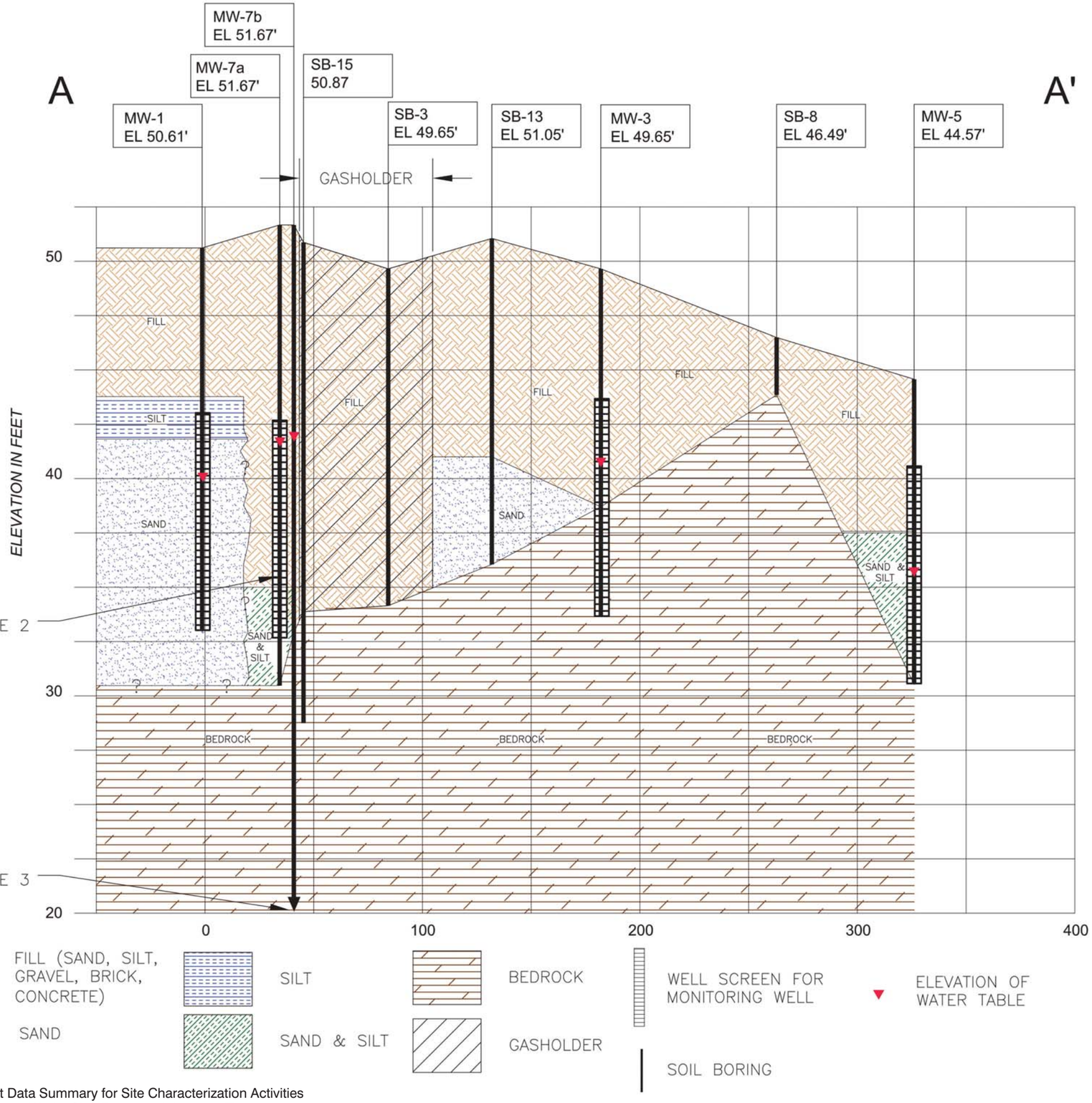
Notes:
1. MW-T1 was not located during RI.
2. MW-T2 was decommissioned on 1/24/2014.
3. No monitoring well installed at MW-04.

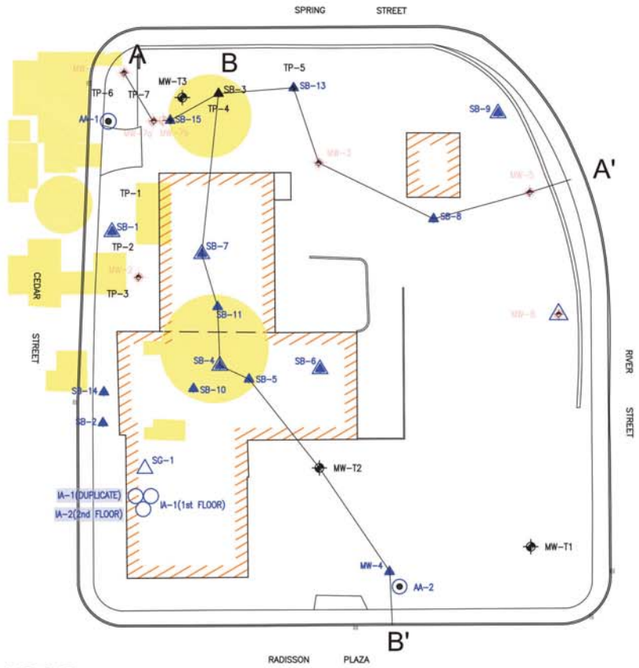
CONSOLIDATED EDISON CEDAR STREET WORKS REMEDIAL INVESTIGATION CROSS-SECTION LOCATIONS

conEdison URS

FIGURE 3-1

J:\Projects\11176944\GIS\Maps\RI\03-01 CROSS-SECTION LOCATIONS.mxd 9/16/2014





NOTES:

1. ELEVATIONS BASED ON NAVD 88.

2. NAPL WAS OBSERVED IN THE MW–7b SOIL BORING, 17–19 FT BELOW GROUND SURFACE.

3. THE TOTAL DEPTH OF MW–7b IS 43 FT. THE MONITORING WELL IS SCREENED FROM 30–40 FT BELOW GROUND SURFACE.

50 25 0 50 100

HORIZONTAL SCALE

5 2.5 0 5 10

VERTICAL SCALE

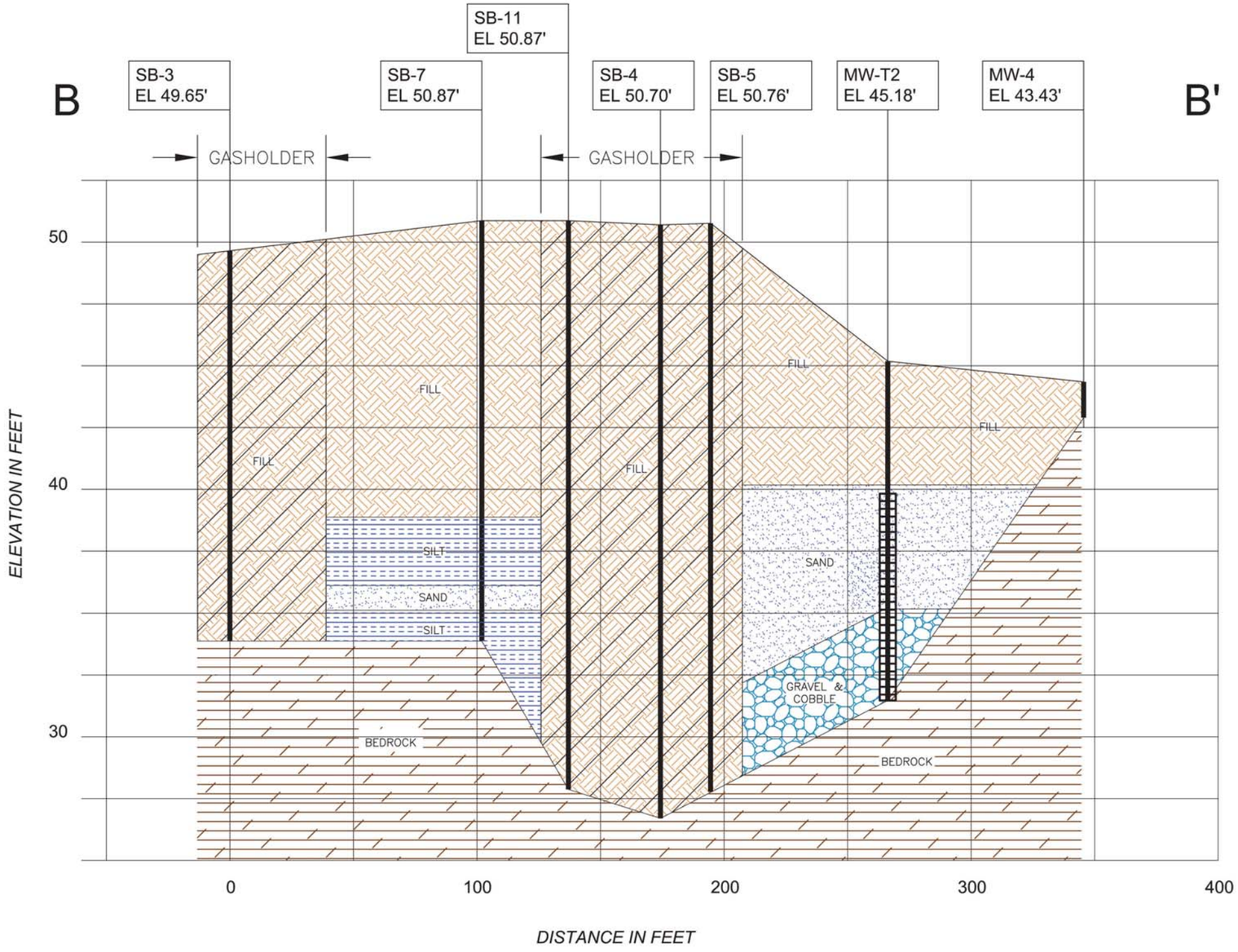
SOURCE: Draft Data Summary for Site Characterization Activities at the Cedar Street Works Site; Parsons; July 2009; Figure 3

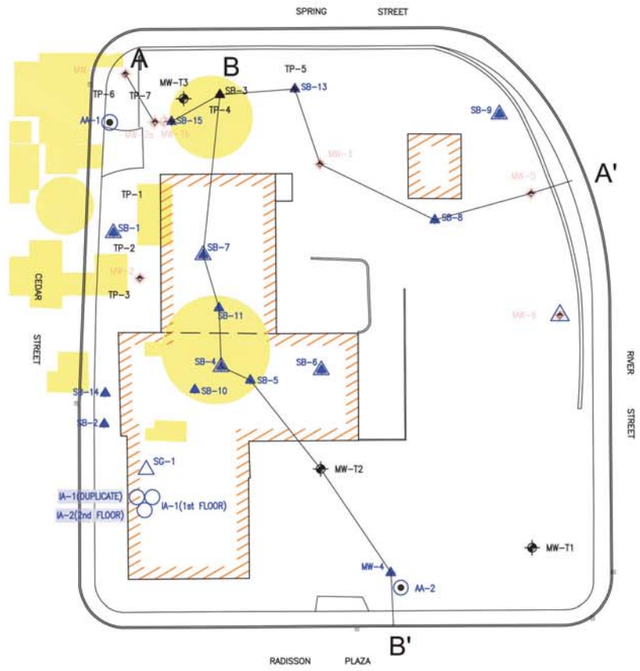
CEDAR STREET WORKS SITE
CROSS SECTION A-A'

conEdison URS

FIGURE 3-2

AG20987-1117694-081214-GCM











SOURCE: Draft Data Summary for Site Characterization Activities at the Cedar Street Works Site; Parsons; July 2009; Figure 4

CEDAR STREET WORKS SITE
CROSS SECTION B-B'

conEdison URS

FIGURE 3-3

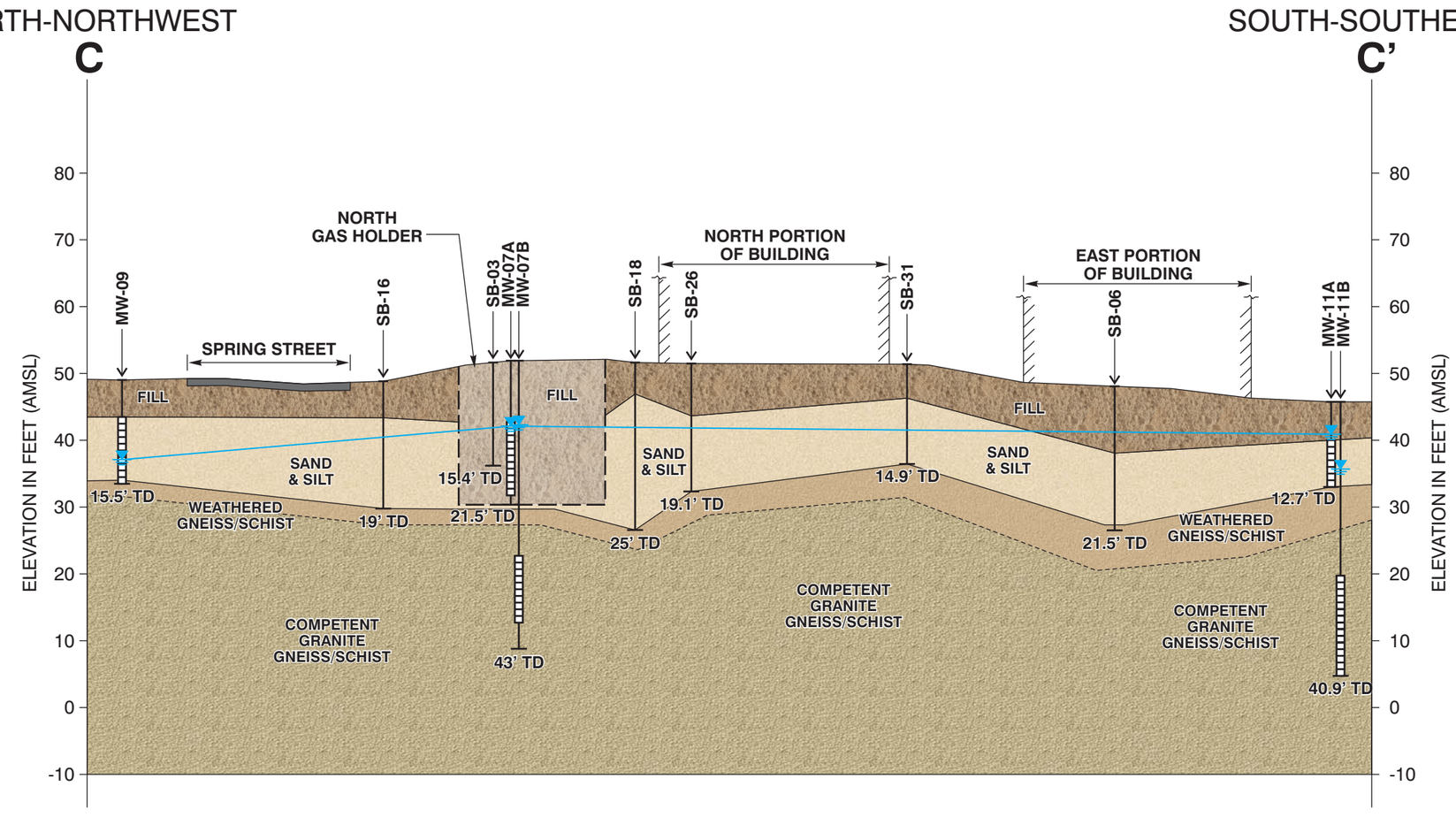
AG20988-11176944-081214-GCM

NORTH-NORTHWEST

C

SOUTH-SOUTHEAST

C’



Fill

Weathered Gneiss/Schist

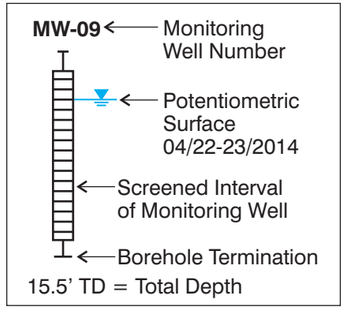
Fill Within Former Holder

Sand & Silt

Competent Granite Gneiss/Schist

NOTES:

1. Geologic conditions shown are representative of conditions encountered at each boring location to the depth drilled. Extrapolations between borings have been interpreted using standardly accepted geologic practices and principles. Actual conditions may vary between borings from those shown.
2. Elevations based on North American Vertical Datum, 1988.



Horizontal Scale: 1” = 40’
Vertical Scale: 1” = 20’
10x Vertical Exaggeration

CONSOLIDATED EDISON
CEDAR STREET WORKS
REMEDIAL INVESTIGATION
CROSS SECTION C-C’

conEdison URS

FIGURE 3-4

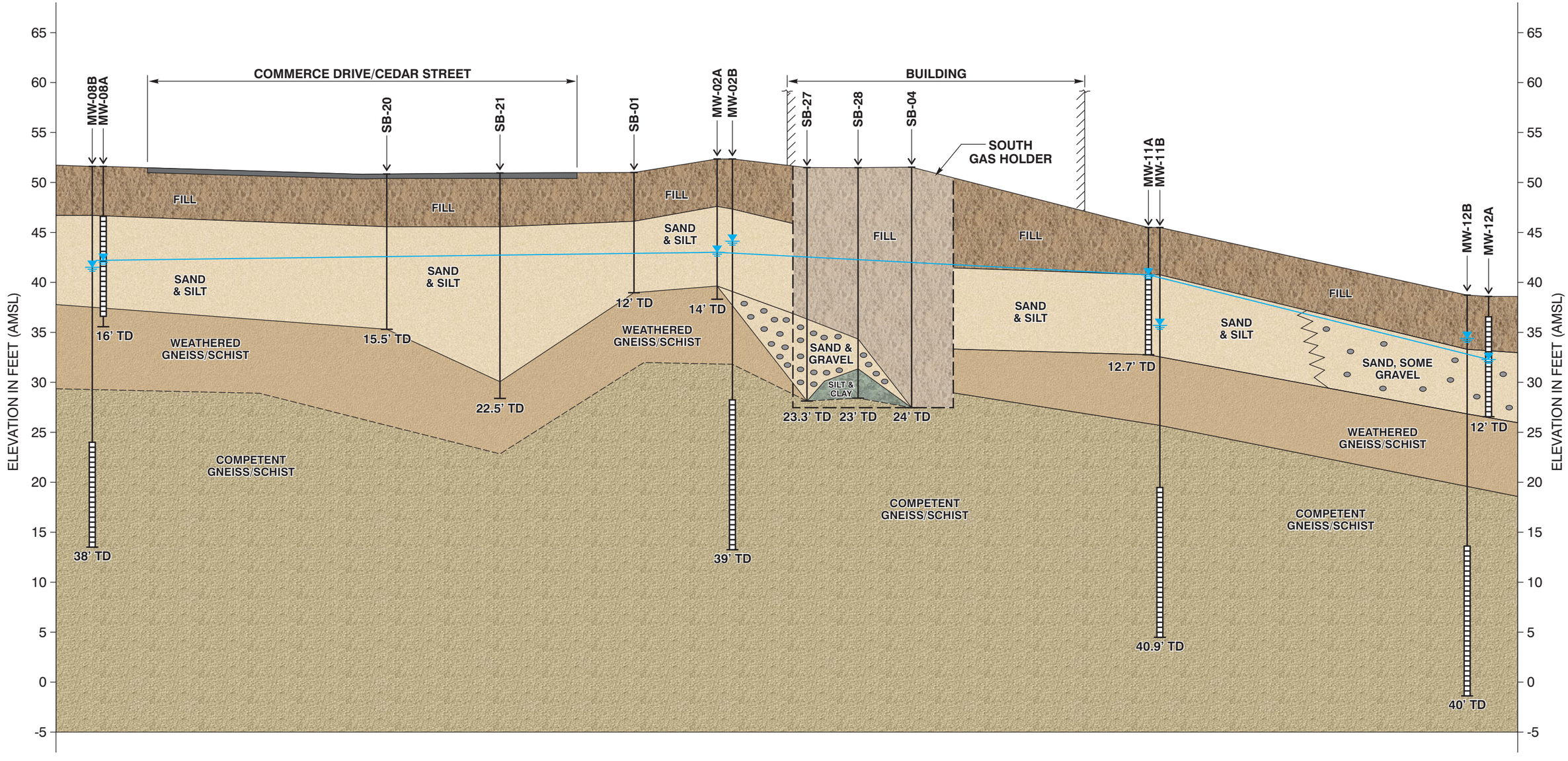
AG20994-111769944-082014-GCM

NORTHWEST

D

SOUTHEAST

D’



Fill

Weathered Gneiss/Schist

Sand & Gravel

Fill Within Former Holder

Sand & Silt

Competent Granite Gneiss/Schist

Silt & Clay

MW-02A ← Monitoring Well Number

← Potentiometric Surface 04/22-23/2014

← Screened Interval of Monitoring Well

← Borehole Termination

14’ TD = Total Depth

NOTES:

1. Geologic conditions shown are representative of conditions encountered at each boring location to the depth drilled. Extrapolations between borings have been interpreted using standardly accepted geologic practices and principles. Actual conditions may vary between borings from those shown.
2. Elevations based on North American Vertical Datum, 1988.

Horizontal Scale: 1” = 40’
Vertical Scale: 1” = 10’
10x Vertical Exaggeration

CONSOLIDATED EDISON
CEDAR STREET WORKS
REMEDIAL INVESTIGATION
CROSS SECTION D-D’

conEdison URS

FIGURE 3-5

AG20995-111769440820l4-GCM

N

MW-08B, 37.69
MW-08A, 37.77
MW-09, 34.22

CEDAR ST
COMMERCE DR
SPRING ST
PALMER AVE
PALMER AVE
RIVER ST
RIVER ST
CEDAR ST
RADISSON PLZ

CONCRETE CURB
CONCRETE SIDEWALK
CONCRETE RETAINING WALL
CONCRETE APRON
CONCRETE SIDEWALK
CONCRETE CURB
CONCRETE RETAINING WALL
CONCRETE RETAINING WALL
CONCRETE RAMP

SB-16, 29.14
SB-30, 43.12
SB-19, 32.11
MW-01, 33.19
SB-13, --
SB-03, --
SB-20, 35.73
MW-07A, 30.14
MW-07B/SB-12, 32.75
SB-15, 34.82
SB-09, 39.22
PARKING LOT
SB-18, 26.25
SB-21, 30.01
SB-17, 35.53
MW-03B, 39.07
MW-03A, 39.07
1 STORY BLOCK BUILDING
SB-22, 32.09
MW-10, 30.05
SB-26, 32.27
SHED
MW-05, 31.13
SB-08, --
SB-23, 37.31
SB-01, 39.78
1 STORY BRICK BUILDING
SB-24, 37.46
SB-07, 34.48
SB-31, 36.56
MW-02A, 38.33
MW-02B, 38.34
SB-25, 38.83
SB-11, 28.48
MW-06, 25.76
SB-27, 28.20
SB-28, 28.48
SB-29, --
PARKING LOT
SB-04, 27.30
SB-06, --
SB-14, --
SB-05, 28.25
SB-10, 26.51
SB-32, 35.18
2 STORY BRICK BUILDING
SB-02, 28.43
MW-11A, 33.05
MW-11B, 32.97
PARKING LOT
MW-12A, 26.93
MW-12B, 27.45

50 0 50 Feet

Legend

- Bedrock Monitoring Well (RI)
- Overburden Monitoring Well (RI)
- Monitoring Well (2009)
- Soil Boring (RI)
- Soil Boring and Rock Core (RI)
- Soil Boring (SC)
- Top of Bedrock Elevation Contour (ft amsl)
- Former MGP Structure

J:\Projects\11176944\GIS\Maps\RI\03-07 EST TOP OF BEDROCK.mxd 9/16/2014

CONSOLIDATED EDISON
CEDAR STREET WORKS
REMEDIAL INVESTIGATION
ESTIMATED TOP OF BEDROCK SURFACE

conEdison URS

FIGURE 3-6

Groundwater Elevation Data

- Summary of groundwater elevation data (Parsons 2009)
- Summary of groundwater elevation data (URS 2017)

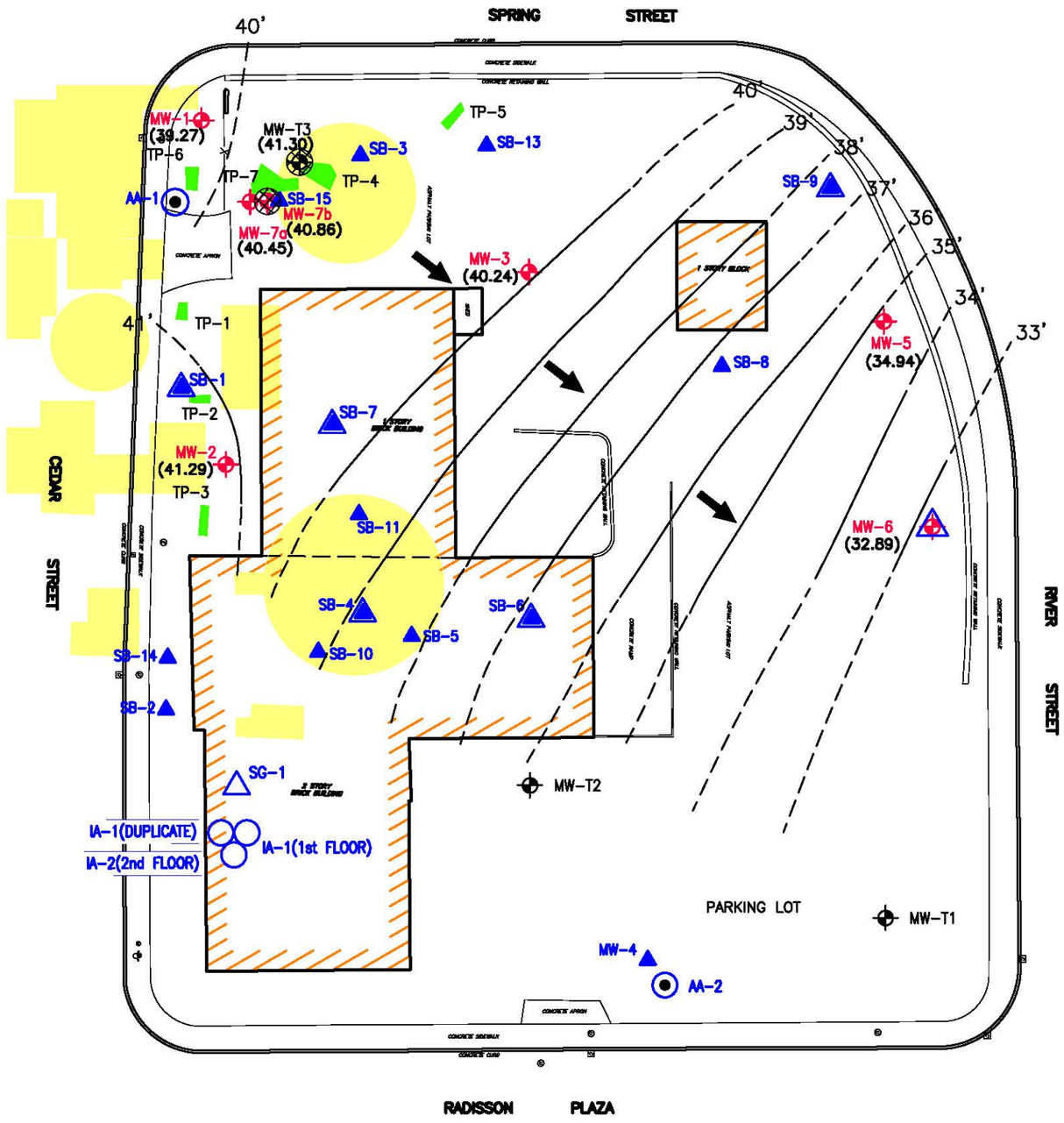
Table 4
Groundwater Elevation Summary
Ceder Street

Monitoring Well Number	Elevation of Top of Well	Depth to bottom of Well (ft)	Depth to Water[(1)] (ft)	Elevation of Groundwater
MW-1	50.26	17.08	10.99	39.27
MW-2	51.34	13.64	10.05	41.29
MW-3	49.31	15.00	9.07	40.24
MW-5	44.17	13.15	9.23	34.94
MW-6	42.18	10.18	9.29	32.89
MW-7A	50.67	19.02	10.22	40.45
MW-7B	50.70	42.15	9.84	40.86
MW-T3	50.94	22.91	9.64	41.30

Note:

(1) Measured from top of PVC well casing on 2/16/09

Elevations are based on the North American Vertical Datum of 1988.



LEGEND:

- SOIL BORING LOCATION
- MONITORING WELL
- HISTORIC MONITORING WELL
- TEST PIT LOCATION
- APPROXIMATE LOCATION OF FORMER MGP STRUCTURES
- SOIL GAS LOCATION
- INDOOR AIR SAMPLING LOCATION
- AMBIENT AIR SAMPLING LOCATION
- GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- (32.89) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (NAVD 88) BASED ON 2/16/09 WATER LEVEL MEASUREMENTS
- NAPL OBSERVED

NOTES:

1. HISTORIC MONITORING WELLS MW–T1 AND MW–T2 ARE DAMAGED AND NOT USEABLE.

2. REFUSAL WAS ENCOUNTERED WITHIN THE TOP 2 FT AT LOCATION MW–4. THEREFORE A MONITORING WELL COULD NOT BE INSTALLED.

3. DATA FROM MONITORING WELL MW–T3 WAS NOT UTILIZED TO DEVELOP THE GROUNDWATER CONTOURS BECAUSE IT IS LOCATED WITHIN THE GASHOLDER AND THE WALLS OF THE GASHOLDER APPEAR TO BE INTACT.

4. THE GROUNDWATER CONTOUR DEVELOPED BASED ON DATA FROM MONITORING WELL MW–1 IS CONSIDERED INFERRED. ADDITIONAL DATA WILL BE COLLECTED DURING THE REMEDIAL INVESTIGATION.

50 25 0 50 100

SCALE: 1"=50'

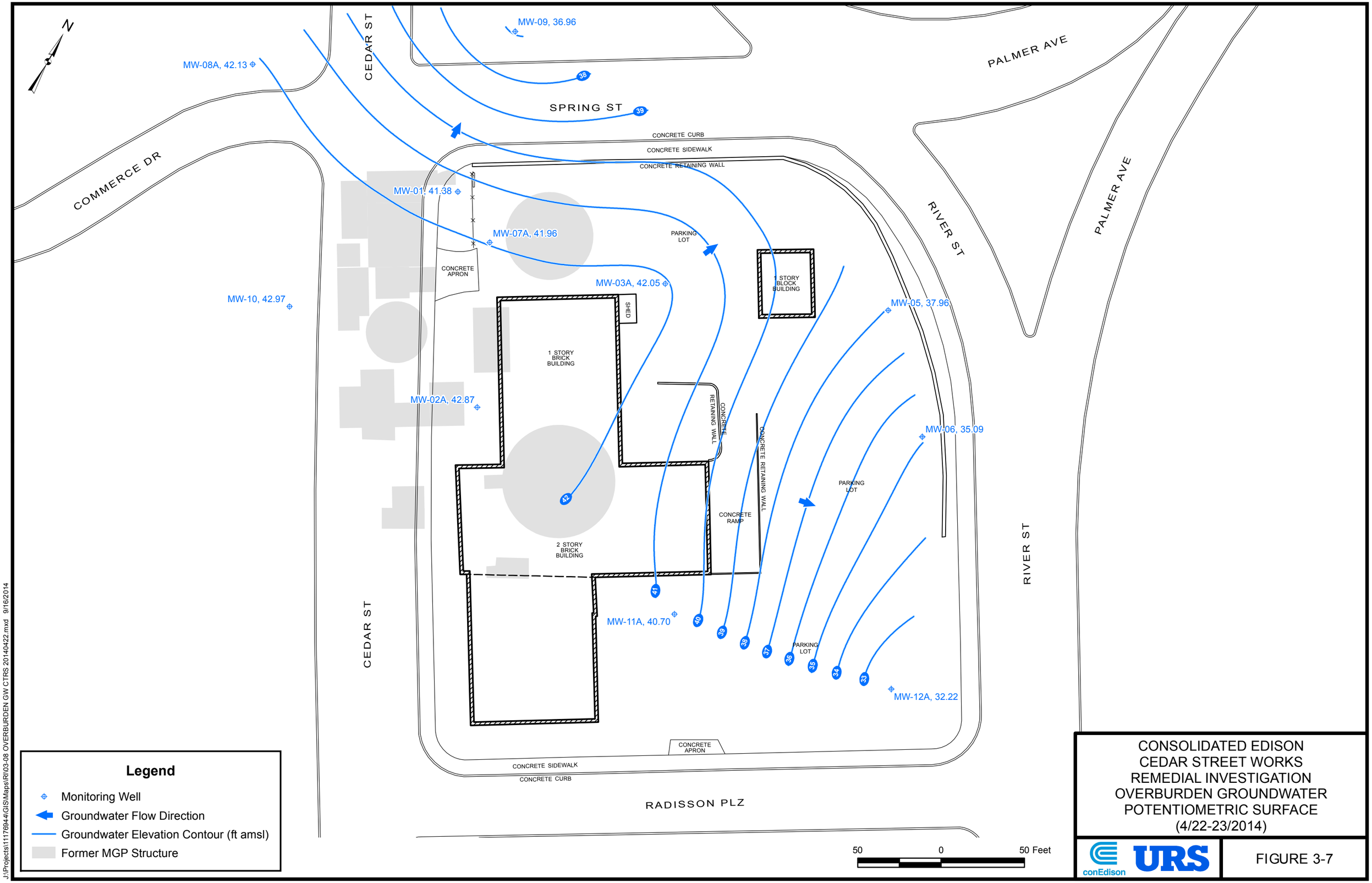
FIGURE 8

CONSOLIDATED EDISON
CEDAR STREET WORKS
NEW ROCHELLE, NY

GROUNDWATER CONTOUR MAP

PARSONS
290 ELWOOD DAVIS ROAD, SUITE 312, LIVERPOOL, N.Y. 13088, PHONE: 315-451-9560

FILE NAME: P:\CONED\442098 – CEDAR STREET\CAD\442098–SK003.DWG
PLOT DATE: 4/20/2009 1:31 PM PLOTTED BY: RUSSO, JILL



Legend

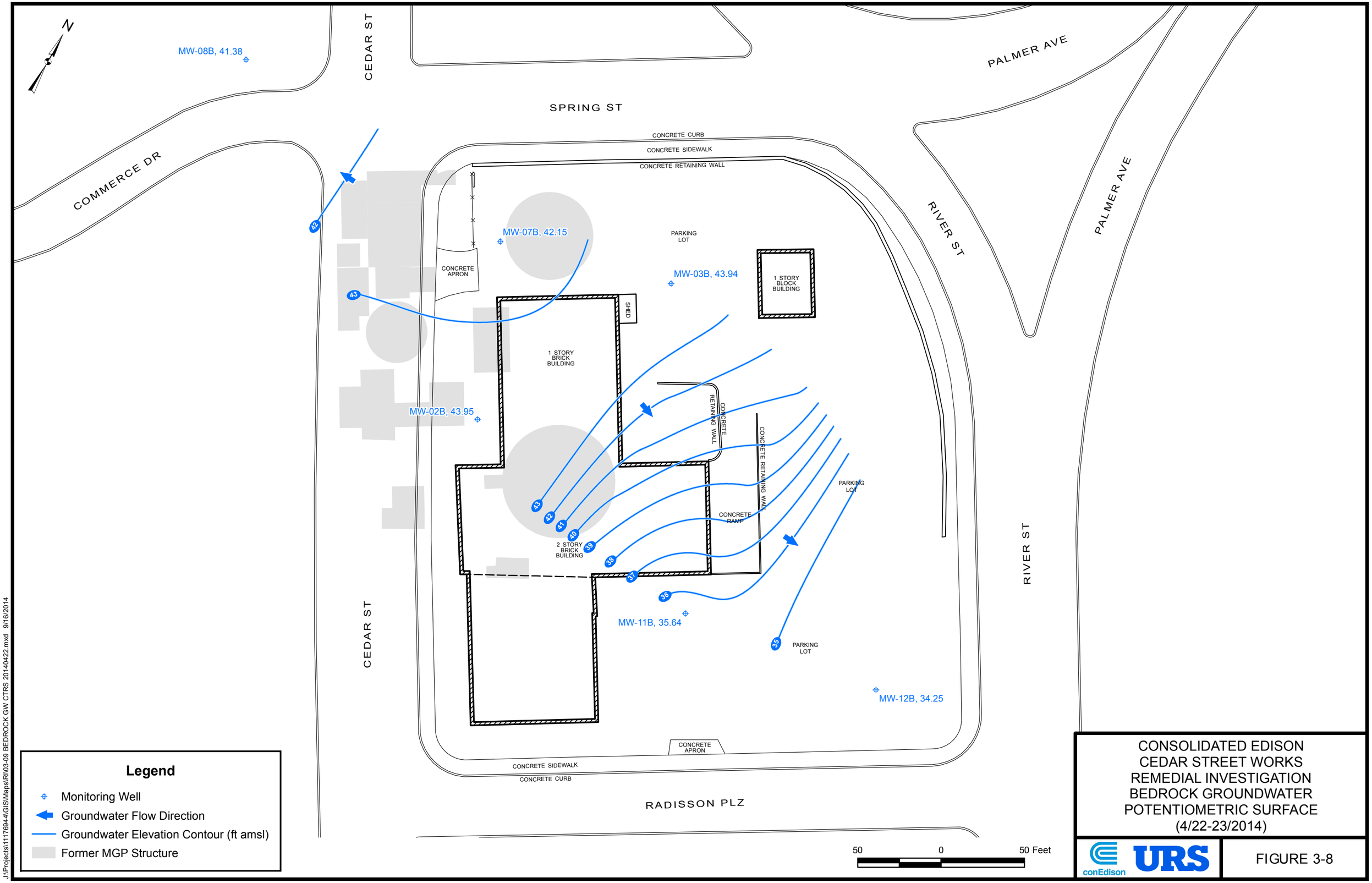
- Monitoring Well
- Groundwater Flow Direction
- Groundwater Elevation Contour (ft amsl)
- Former MGP Structure

CONSOLIDATED EDISON
CEDAR STREET WORKS
REMEDIAL INVESTIGATION
OVERBURDEN GROUNDWATER
POTENTIOMETRIC SURFACE
(4/22-23/2014)

conEdison URS

FIGURE 3-7

J:\Projects\11176944\GIS\Maps\RI\03-08 OVERBURDEN GW CTRS 20140422.mxd 9/16/2014



Legend

- Monitoring Well
- Groundwater Flow Direction
- Groundwater Elevation Contour (ft amsl)
- Former MGP Structure

CONSOLIDATED EDISON
CEDAR STREET WORKS
REMEDIAL INVESTIGATION
BEDROCK GROUNDWATER
POTENTIOMETRIC SURFACE
(4/22-23/2014)

conEdison URS

FIGURE 3-8

J:\Projects\11176944\GIS\Maps\RI\03-09 BEDROCK GW CTRS 20140422.mxd 9/16/2014

N

MW-09, 34.33

MW-08A, 42.09

CEDAR ST

SPRING ST

PALMER AVE

COMMERCE DR

CONCRETE CURB

CONCRETE SIDEWALK

CONCRETE RETAINING WALL

MW-01, 44.08

MW-07A, 42.40

PARKING LOT

CONCRETE APRON

MW-03A, 42.05

1 STORY BLOCK BUILDING

RIVER ST

PALMER AVE

MW-10, 46.82

SHED

MW-05, 37.98

1 STORY BRICK BUILDING

MW-02A, 46.60

CONCRETE RETAINING WALL

CONCRETE RETAINING WALL

MW-06, 34.99

PARKING LOT

CONCRETE RAMP

1 STORY BRICK BUILDING

CEDAR ST

RIVER ST

MW-11A, 41.46

PARKING LOT

MW-12A, 33.27

CONCRETE APRON

CONCRETE SIDEWALK

CONCRETE CURB

RADISSON PLZ

50 0 50 Feet

Legend

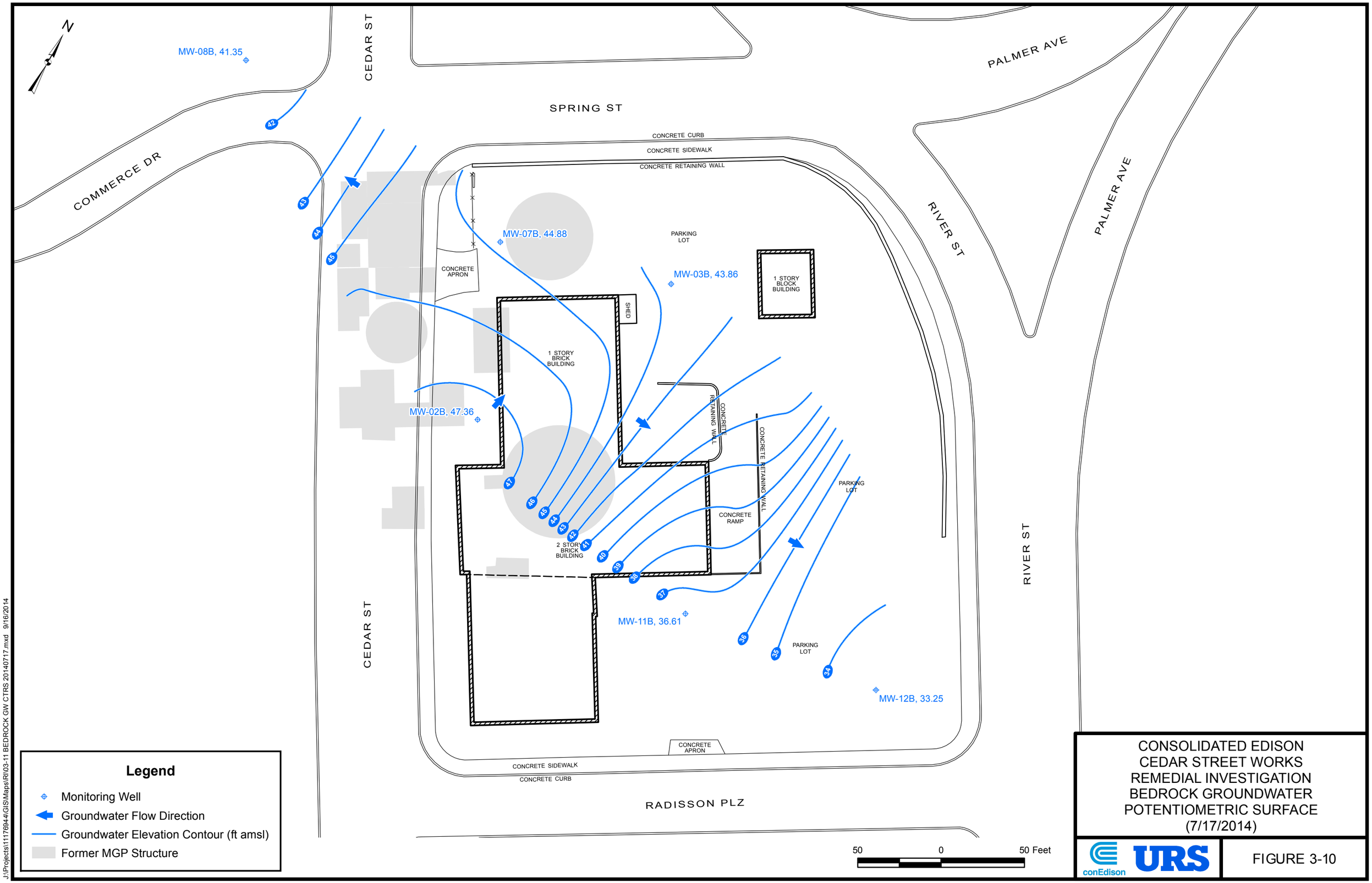
- Monitoring Well
- Groundwater Flow Direction
- Groundwater Elevation Contour (ft amsl)
- Former MGP Structure

CONSOLIDATED EDISON
CEDAR STREET WORKS
REMEDIAL INVESTIGATION
OVERBURDEN GROUNDWATER
POTENTIOMETRIC SURFACE
(7/17/2014)

conEdison URS

FIGURE 3-9

J:\Projects\11176944\GIS\Maps\RI\03-10 OVERBURDEN GW CTRS 20140717.mxd 9/16/2014



Legend

- Monitoring Well
- Groundwater Flow Direction
- Groundwater Elevation Contour (ft amsl)
- Former MGP Structure

CONSOLIDATED EDISON
CEDAR STREET WORKS
REMEDIAL INVESTIGATION
BEDROCK GROUNDWATER
POTENTIOMETRIC SURFACE
(7/17/2014)

conEdison URS

FIGURE 3-10

J:\Projects\11176944\GIS\Maps\RI\03-11 BEDROCK GW CTRS 20140717.mxd 9/16/2014

APPENDIX D
EXCAVATION WORK PLAN (EWP)

D-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination or breach or alter the site's cover system, the site owner or their representative will notify the NYSDEC contacts listed in the table below. Table D-1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix B.

Table D-1: Notifications*

NYSDEC DER Project Manager: Caroline Jalanti, PE	1-518-402-9543; Caroline.jalanti@dec.ny.gov
NYSDEC DER Project Manager's Supervisor: Steven McCague	1-518-402-9543; Steve.mccague@ny.dec.gov
NYSDEC Site Control: Kelly Lewandowski	518-402-9569; kelly.lewandowski@dec.ny.gov

* Note: Notifications are subject to change and will be updated as necessary.

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated, any modifications of truck routes, and any work that may impact an engineering control;
- A summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;

- A schedule for the work, detailing the start and completion of all intrusive work, and submittals (e.g., reports) to the NYSDEC documenting the completed intrusive work;
- A summary of the applicable components of this EWP;
- A statement that the work will be performed in compliance with this EWP, 29 CFR 1910.120 and 29 CFR 1926 Subpart P;
- A copy of the contractor's health and safety plan (HASP), in electronic format, if it differs from the HASP provided in Appendix E of this SMP;
- Identification of disposal facilities for potential waste streams; and
- Identification of sources of any anticipated backfill, along with the required request to import form and all supporting documentation including, but not limited to, chemical testing results.

The NYSDEC project manager will review the notification and may impose additional requirements for the excavation that are not listed in this EWP. The alteration, restoration and modification of engineering controls must conform with Article 145 Section 7209 of the Education Law regarding the application professional seals and alterations.

D-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based (e.g. photoionization detector) soil screening will be performed during all excavations into known or potentially contaminated material (remaining contamination) or a breach of the cover system. A qualified environmental professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State will perform the screening. Soil screening will be performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal and material that requires testing to determine

if the material can be reused on-site as soil beneath a cover or if the material can be used as cover soil. Further discussion of off-site disposal of materials and on-site reuse is provided in Sections D-6 and D-7 of this Appendix.

D-3 SOIL STAGING METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by the NYSDEC.

D-4 MATERIALS EXCAVATION AND LOAD-OUT

Other than excavations that are limited to the upper 2 feet of soil in landscaped areas on-site, a qualified environmental professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and remedial party (if applicable) and its contractors are responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the site. A site

utility stakeout will be completed for all utilities prior to any ground intrusive activities at the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements). Trucks transporting contaminated soil must have either tight-fitting opaque covers that are secured on the sides and/or back, or opaque covers that are locked on all sides.

A truck wash will be operated on-site, as appropriate. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the site until the activities performed under this section are complete. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials. Material accumulated from the street cleaning and egress cleaning activities will be disposed off-site at a permitted landfill facility in accordance with all applicable local, State, and Federal regulations.

D-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

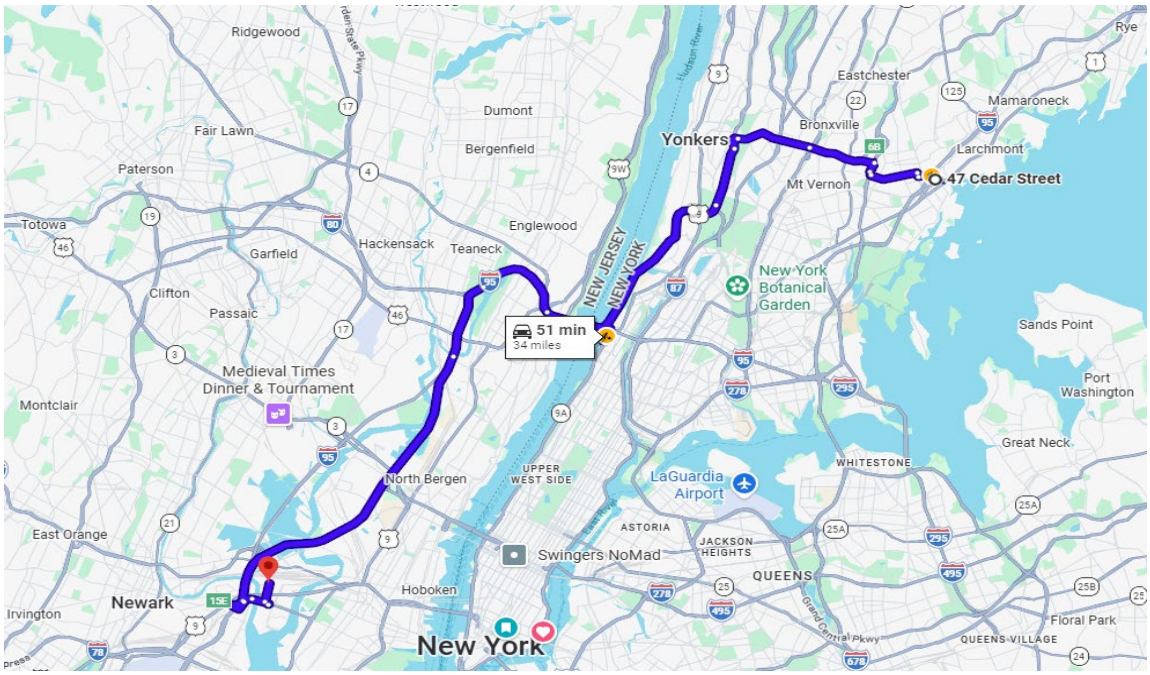
Material transported by trucks exiting the site will be secured with either tight-fitting opaque covers that are secured on the sides and/or back, or opaque covers that are locked on all sides. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

Truck transport routes are as follows:

Leaving the Site:

- Depart the Site via Cedar Street and proceed to River Street.
- Turn right (south) onto River Street and continue to Memorial Highway.
- Turn right onto Memorial Highway and proceed to Lincoln Avenue.
- Turn left onto Lincoln Avenue and follow signs to merge onto the Hutchinson River Parkway North.
- Take Hutchinson River Parkway North to Cross County Parkway westbound.
- Continue on Cross County Parkway and merge onto the Saw Mill River Parkway South
- Proceed on Saw Mill River Parkway South and merge onto NY-9A South toward Manhattan.
- Take exit 14 from NY-9A South to Riverside Drive.
- Continue south and follow signs to merge onto I-95 South (New Jersey Turnpike) toward New Jersey.
- Take exit 15E from I-95 South to US-1 Truck North/US-9 Truck/Raymond Boulevard.
- Continue to US-1 Truck North/US-9 Truck and proceed toward Kearny.
- Turn on Jacobus Avenue and proceed to 115 Jacobus Avenue, Kearny, New Jersey.

Figure D-1. Proposed Truck Transport Route



All trucks loaded with site materials will exit the vicinity of the site using only these approved truck routes. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport; (g) community input. Alternate truck routes may be permissible depending on conditions at the time of site work but must be in accordance with the New York State Department of Transportation Traffic Rules and Regulations and Truck Routes, and must be recorded, documenting the alternate route and the times that route was used and reported in the Periodic Review Report (PRR).

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

D-6 MATERIALS DISPOSAL OFF-SITE

All material excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed off-site in a permitted facility in accordance with all local, State and Federal regulations. If disposal of material from this site is proposed for unregulated off-site disposal (i.e., clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC project manager. Unregulated off-site management of materials from this site will not occur without formal NYSDEC project manager approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, (e.g. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C&D debris recovery facility). Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include, but will not be limited to: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled consistent with 6 NYCRR Parts 360, 361, 362, 363, 364 and 365. Material that does not meet Unrestricted SCOs is prohibited from being taken to a New York State C&D debris recovery facility (6 NYCRR Subpart 361-5 registered or permitted facility).

D-7 MATERIALS REUSE ON-SITE

The qualified environmental professional, as defined in 6 NYCRR Part 375, will ensure that procedures defined for materials reuse in this SMP are followed and that

unacceptable material (i.e., contaminated) does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for reuse on-site will be placed below the demarcation layer or impervious surface, and will not be reused within the cover system or within landscaping berms. Contaminated on-site material may only be used beneath the site cover as backfill for subsurface utility lines with prior approval from the DEC project manager.

Proposed materials for reuse on-site must be sampled for full suite analytical parameters including per- and polyfluoroalkyl substances (PFAS) and 1,4-dioxane. The sampling frequency will be in accordance with DER-10 Table 5.4(e)10 unless prior approval is obtained from the NYSDEC project manager for modification of the sampling frequency. The analytical results of soil/fill material testing must meet the site use criteria presented in NYSDEC DER-10 Appendix 5 – Allowable Constituent Levels for Imported Fill or Soil for all constituents listed, and the NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances [April 2023] guidance values. Approvals for modifications to the analytical parameters must be obtained from the NYSDEC project manager prior to the sampling event.

Soil/fill material for reuse on-site will be segregated and staged as described in Sections X-2 and X-3 of this EWP. The anticipated size and location of stockpiles will be provided in the 15-day notification to the NYSDEC project manager. Stockpile locations will be based on the location of site excavation activities and proximity to nearby site features. Material reuse on-site will comply with requirements of NYSDEC DER-10 Section 5.4(e)4. Any modifications to the requirements of DER-10 Section 5.4(e)4 must be approved by the NYSDEC project manager.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site may only be reused on-site with written approval from the NYSDEC project manager.

D-8 FLUIDS MANAGEMENT

All liquids to be removed from the site, including but not limited to, excavation dewatering, decontamination waters and groundwater monitoring well purge and development waters, will be handled, transported and disposed off-site at a permitted facility in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, and will be managed off-site, unless prior approval is obtained from NYSDEC.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

D-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the decision document. The existing cover system is comprised of a minimum of 24 inches of clean soil (existing landscaped areas), asphalt pavement, concrete slabs. concrete sidewalks and buildings. In any area in which soil removal or any other invasive activities occur the existing Site cover, a demarcation layer, consisting of orange snow fencing material, white geotextile or equivalent material, etc. will be placed prior to backfilling to provide a visual reference to the top of the remaining contamination zone, the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this SMP. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt) this will constitute a modification of the cover element of the remedy and the upper surface of the remaining contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in an updated SMP. The alteration, restoration and modification of engineering controls must conform with Article 145 Section 7209 of the Education Law regarding the application professional seals and alterations.

D-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the site will be approved by the qualified environmental professional, as defined in 6 NYCRR Part 375, and will be in compliance with provisions in this SMP prior to receipt at the site. A Request to Import/Reuse Fill or Soil form, which can be found at http://www.dec.ny.gov/regulations/67386.html, will be prepared and submitted to the NYSDEC project manager allowing a minimum of 5 business days for review. A copy of the form is presented in Appendix I.

Material from industrial sites, spill sites, other environmental remediation sites, or potentially contaminated sites will not be imported to the site.

All imported soils will meet the backfill and cover soil quality standards established in 6 NYCRR 375-6.7(d). and DER-10 Appendix 5 for restricted residential use. Soils that meet 'general' fill requirements under 6 NYCRR Part 360.13, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC project manager. Soil material will be sampled for the full suite of analytical parameters, including PFAS and 1, 4-dioxane. Solid waste will not be imported onto the site.

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

D-11 STORMWATER POLLUTION PREVENTION

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by the NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

D-12 EXCAVATION CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition. The NYSDEC project manager will be promptly notified of the discovery.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes [TAL metals, TCL volatiles and semi-volatiles (including 1,4-dioxane), TCL pesticides and PCBs, and PFAS], unless the site history and previous sampling results provide sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC project manager for approval prior to sampling. Any tanks will be closed as per NYSDEC regulations and guidance.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone within two hours to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report.

D-13 COMMUNITY AIR MONITORING PLAN

A Site-specific CAMP was prepared for the Site as part of the SMP. The CAMP is included in Appendix F of the SMP for reference purposes. The CAMP is in compliance with DER-10 and all other applicable federal, state, and local regulations. Based on future changes to state and federal health and safety requirements, and specific methods employed by future contractors, the CAMP will be updated and re-submitted for NYSDEC approval.

A figure showing the location of air sampling stations based on generally prevailing wind conditions is shown in Figure 1 of Appendix F. These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and at least two downwind monitoring stations.

Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

D-13A: Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures

When work areas are within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates must reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative-pressure enclosures, or special ventilation devices should be considered to prevent exposures related to the work activities and to control dust and

odors. Consideration should be given to implementing the planned activities when potentially exposed populations are at a minimum, such as during weekends or evening hours in non-residential settings.

- If total VOC concentrations opposite the walls of occupied structures or next to intake vents exceed 1 part-per-million, monitoring should occur within the occupied structure(s). Depending upon the nature of contamination, chemical-specific colorimetric tubes of sufficient sensitivity may be necessary for comparing the exposure point concentrations with appropriate pre-determined response levels (response actions should also be pre-determined). Background readings in the occupied spaces must be taken prior to commencement of the planned work. Any unusual background readings should be discussed with NYSDOH prior to commencement of the work
- If total particulate concentrations opposite the walls of occupied structures or next to intake vents exceed 150 micrograms per cubic meter, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 micrograms per cubic meter or less at the monitoring point.
- Depending upon the nature of contamination and remedial activities, other parameters (e.g., explosivity, oxygen, hydrogen sulfide, carbon monoxide) may also need to be monitored. Response levels and actions should be pre-determined, as necessary, for each site.

D-13B: Special Requirements for Indoor Work with Co-Located Residences or Facilities

Unless a self-contained, negative-pressure enclosure with proper emission controls will encompass the work area, all individuals not directly involved with the planned work must be absent from the room in which the work will occur. Monitoring requirements shall be as stated above under "Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures" except that in this instance "nearby/occupied structures" would be adjacent occupied rooms. Additionally, the

location of all exhaust vents in the room and their discharge points, as well as potential vapor pathways (openings, conduits, etc.) relative to adjoining rooms, should be understood and the monitoring locations established accordingly. In these situations, it is strongly recommended that exhaust fans or other engineering controls be used to create negative air pressure within the work area during remedial activities. Additionally, it is strongly recommended that the planned work be implemented during hours (e.g. weekends or evenings) when building occupancy is at a minimum.

D-14 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors off-site and on-site. Specific odor control methods to be used on a routine basis will include odor controlling foam, covering soil stockpiles and open excavations with plastic sheeting, and potential use of odor neutralizing chemicals. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the remedial party's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

D-15 DUST CONTROL PLAN

Particulate monitoring must be conducted according to the Community Air Monitoring Plan (CAMP) provided in Appendix F. If particulate levels at the site exceed the thresholds listed in the CAMP or if airborne dust is observed on the site or leaving the site, the dust suppression techniques listed below will be employed. The remedial party will also take measures listed below to prevent dust production on the site.

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved using a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

APPENDIX E
GENERIC HEALTH AND SAFETY PLAN

March 2022
Cedar Street Works Former Manufactured Gas Plant Site
NYSDEC Site No. V00570

Appendix E
Health and Safety Plan

Prepared for
Consolidated Edison Company of New York, Inc.
3101 20th Avenue, Building 136, 2nd Floor
Long Island City, New York 11105

Prepared by
Anchor QEA, PLLC
290 Elwood Davis Road, Suite 340
Liverpool, New York 13088

Certification Page

Nicholas Smith, PG

Project Manager

Anchor QEA, PLLC

Date: _____

Scott Andrews

Field Lead

Anchor QEA, PLLC

Date: _____

The information in this Health and Safety Plan has been designed for pre-design investigations presently contemplated by Anchor QEA, PLLC (Anchor QEA) and outlined in the Pre-Design Investigation Work Plan (Anchor QEA 2022). Therefore, this document may not be appropriate if the work is not performed by or using the methods presently contemplated by Anchor QEA. In addition, as the work is performed, conditions different from those anticipated may be encountered and this document may have to be modified. Therefore, Anchor QEA only intends this plan to address currently anticipated activities and conditions and makes no representations or warranties as to the adequacy of the Health and Safety Plan for all conditions encountered.

Health and Safety Plan Acknowledgement Form

Project Number: E10921-02.05

Project Name: Cedar Street Works Former Manufactured Gas Plant – Emergent Contaminant Sampling

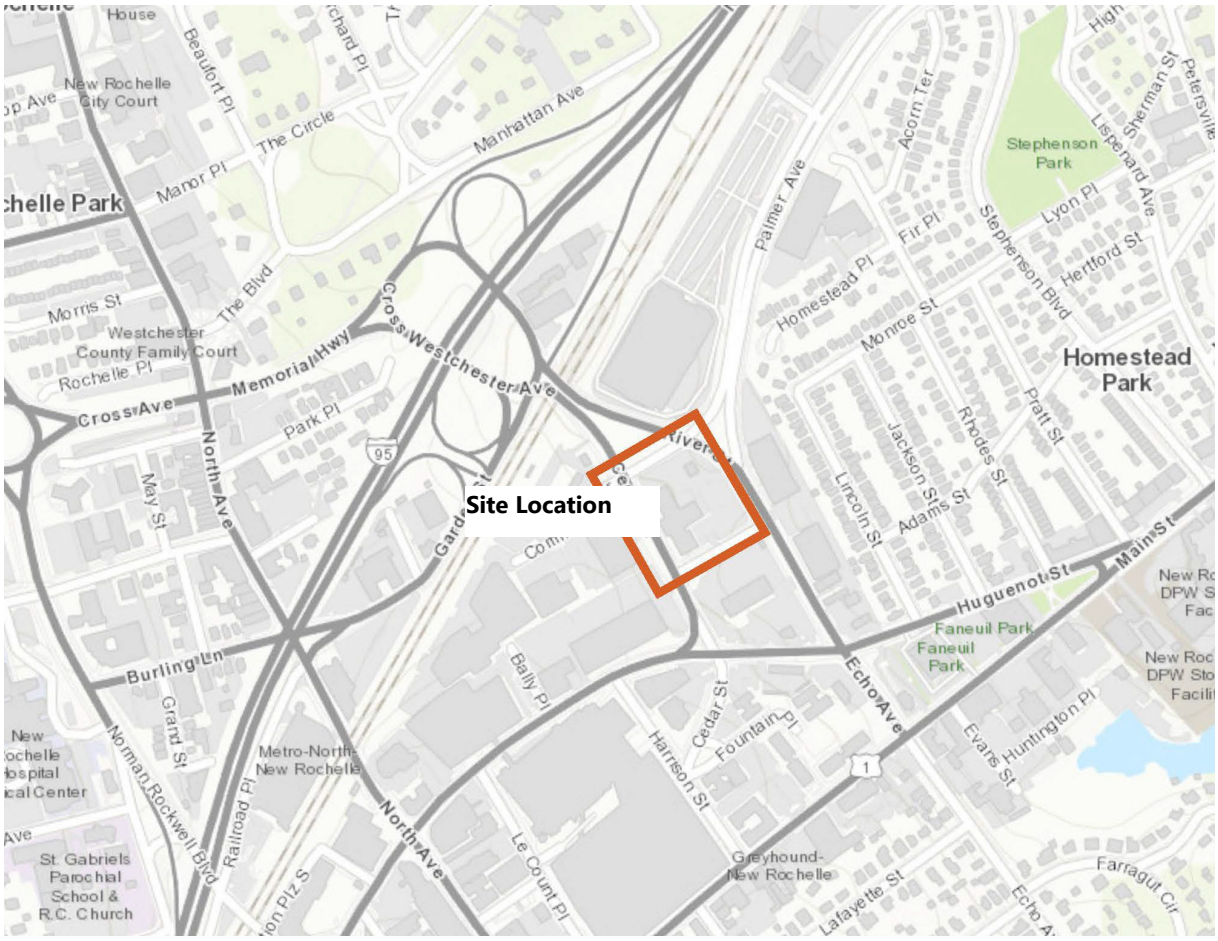
My signature below certifies that I have read and understand the policies and procedures specified in this Health and Safety Plan (HASP). For non-Anchor QEA employees, this HASP may include company-specific attachments to this plan developed by entities other than Anchor QEA.

Date	Name (print)	Signature	Company

Date	Name (print)	Signature	Company

Site Emergency Procedures

Exhibit A
Site Map



Emergency Contact Information

Table A
Site Emergency Form and Emergency Phone Numbers*

Category	Information	
Possible Chemicals of Concern	Benzene, o-,m-,p-Xylenes, Toluene, Ethyl Benzene, Hydrogen Sulfide, coal tar pitch volatiles, Naphthalene, Polycyclic Aromatic Hydrocarbons (PAHs), Cyanide	
Minimum Level of Protection	Modified Level D	
Site(s) Location Address	Point location – 47 Cedar Street, New Rochelle, New York 10801	
Emergency Phone Numbers		
Ambulance	911	
Fire	911	
Police	911	
Poison Control	(800) 222-1222	
Con Edison Project Manager: Melissa Abt	(646) 860-5143	
Project Manager/Superintendent: Nicholas Smith, PG	(315) 414-2017	
Field Lead: Scott Andrews	Cell: (206) 303-7070	
Corporate Health and Safety Manager	David Templeton	Office: (206) 287-9130 Cell: (206) 910-4279
NYS Spill Hotline	(800) 457-7362	
EPA Emergency Response Team,[1] Region 2	(212) 637-3660	

Notes:

* In the event of any emergency, contact the PM and FL.

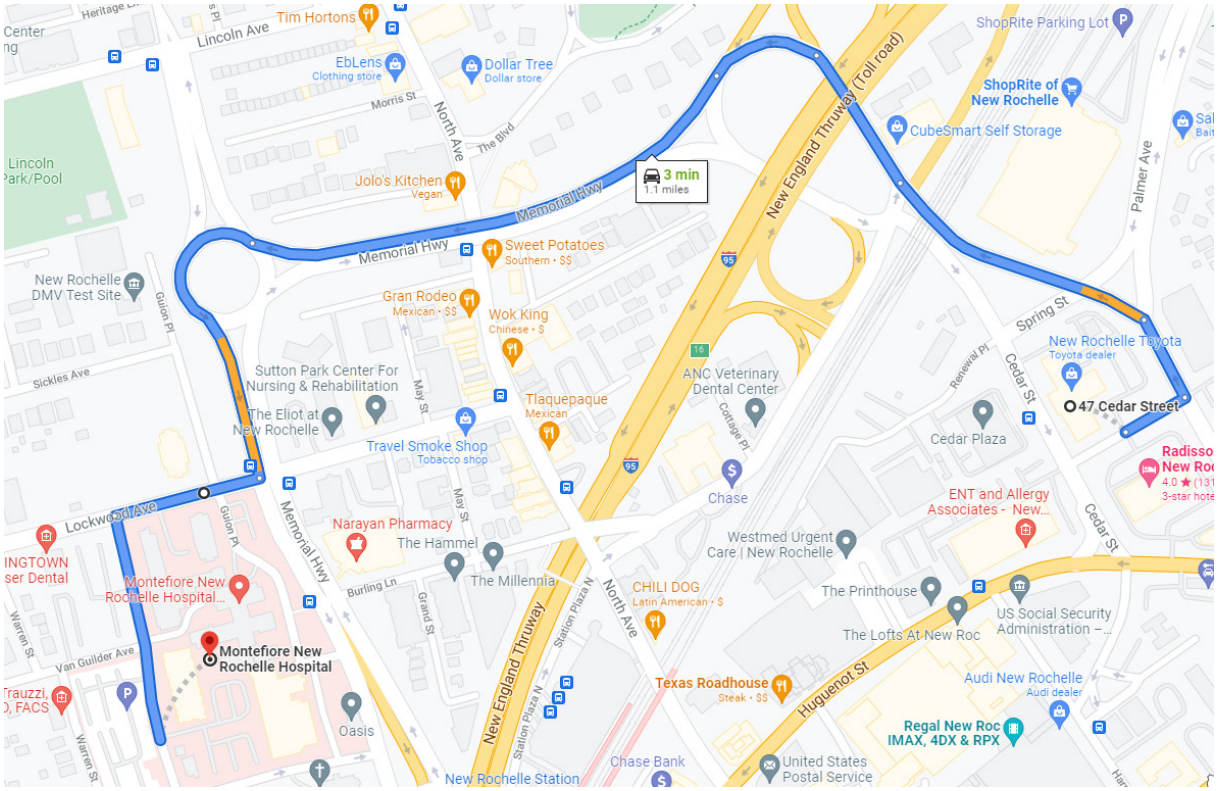
1. For local resources, please visit: http://www2.epa.gov/emergency-response/emergency-response-my-community. The National Response Center hotline is (800) 424-8802.

Table B
Hospital Information

Category	Information
Hospital Name	Montefiore New Rochelle Hospital
Address	16 Guion Place
City, State	New Rochelle, New York 10801
Phone	(914) 365-3770
Emergency Phone	911

Hospital Route Map and Driving Directions

Exhibit B
Hospital Route Map



1. Head northeast on Radisson Plaza towards River Street; approximately 200 feet.
2. Turn left onto River Street.
3. Continue on River Street, and merge onto Cedar Street; 0.3 miles.
4. Continue straight and then continue onto Memorial Highway; 0.1 miles.
5. Continue onto Norman Rockwell Blvd; 0.2 mile.
6. Turn right onto Lockwood Avenue; approximately 130 feet.
7. Turn left on Glover Johnson Pl and follow signs to emergency room

WorkCare Incident Intervention

Anchor QEA has an additional Incident Intervention resource from WorkCare to help answer questions, alleviate uncertainty and stress in a potential injury situation, and maintain the health and safety of our employees. Incident Intervention is an injury and illness management tool that provides employees with 24 hours a day/7 days a week (24/7) immediate telephone access to a member of

WorkCare's clinical staff of nurses and physicians who intervene at the time of a workplace injury or illness. Contact information is provided below:

- **Access WorkCare 24/7 from anywhere using the toll-free number: 1-888-449-7787**

At the time of a workplace injury or illness, the employee, manager, or another employee at the scene notifies WorkCare using the toll-free number listed above. The caller provides information on the type of incident, possible cause, and the scope of the situation. With the details of the incident recorded, an experienced nurse or physician provides the following:

- Responsive evaluation of the incident
- Direction on the appropriate course of action
- Consultation with the employee's treating physician to design a quality care treatment plan that meets the needs of the employee and Anchor QEA

All employees are encouraged to use this service should a workplace injury or illness occur.

Key Safety Personnel

The following people share responsibility for health and safety at the site. See Section 4 of this Health and Safety Plan (HASP) for a description of the role and responsibility of each.

Client Contact: Con Edison Project Manager, Melissa Abt	Cell: (646) 860-5143
Project Manager: Anchor QEA, Nicholas Smith, PG	Office: (315) 414-2017
Field Lead: Anchor QEA, Scott Andrews	Cell: (206) 303-7070
Corporate Health and Safety Manager: David Templeton	Office: (206) 287-9130 Cell: (206) 910-4279

Emergency Response Procedures

In the event of an emergency, immediate action must be taken by the first person to recognize the event. Use the following steps as a guideline:

1. Survey the situation to ensure that it is safe for you and the victim. Do not endanger your own life. Do not enter an area to rescue someone who has been overcome unless properly equipped and trained. Ensure that all protocols are followed. If applicable, review Safety Data Sheets (SDS) to evaluate response actions for chemical exposures.
2. Call the appropriate emergency number (911, if available) or direct someone else to do this immediately (see **Table A**). Explain the physical injury, chemical exposure, fire, or release and location of the incident.
3. Have someone retrieve the nearest first aid kit (containing appropriate items for the particular work scope) and Automated External Defibrillator (AED), if available. Note: Only use an AED if you have been properly trained and are currently certified to do so.
4. Decontaminate the victim without delaying life-saving procedures (see Section 8).

5. Administer first aid and cardiopulmonary resuscitation (CPR), if properly trained, until emergency responders arrive.
6. Notify the Project Manager (PM), Field Lead (FL), and owner.
7. Complete the appropriate incident investigation reports.
8. In the event that evacuation is required, the FL must perform a head count to verify that all Anchor QEA personnel are accounted for.

First Aid and CPR Guidelines

Personnel qualified and currently certified in basic first aid and/or CPR procedures may perform these procedures as necessary. Personnel qualified and currently certified in basic first aid and/or CPR are protected under Good Samaritan policies as long as they only perform the basic tasks that they were taught. Do not perform first aid and/or CPR tasks if you have not been trained in first aid and/or CPR.

Fire

In the case of a fire on the Site, the Health and Safety Representative and/or Key Foreperson will assess the situation and direct fire-fighting activities. The Health and Safety Representative and/or Key Foreperson will ensure the client and PM/Superintendent is notified immediately of any fires, as soon as it is safe to do so. Site personnel may attempt to extinguish small fires with available fire extinguishers, if it is safe to do so and qualified personnel are available. In the event of a fire when Site personnel are not qualified or otherwise unable to safely extinguish, the local fire department will be summoned (see **Table A** for contact information).

Injury Management/Incident Notification

Observe the following injury management/incident notification procedures and practices:

Injury Management

- Once a personal injury incident is discovered, the first action will be to ensure that the injured party receives appropriate medical attention.
- If it is safe to do so, the nearest site personnel will immediately assist a person who shows signs of medical distress or who is involved in an accident.
- Call 911 or the appropriate emergency number and render first aid as soon as possible.
- Escort the injured person to the occupational clinic or hospital or arrange for an ambulance.
- Proceed immediately to Notification Requirements, below.

Notification Requirements

- Directly after caring for an injured person, summon the FL. The FL will immediately contact the PM or other designated individual to alert them of the medical emergency. The FL will advise them of the following:
  - Location of the victim at the work site
  - Nature of the emergency
  - Whether the victim is conscious
  - Specific conditions contributing to the injury, if known
- Contact the PM (if not contacted previously) and owner immediately.
- The PM will contact upper line management, including the Corporate Health and Safety Manager (CHSM).
- The CHSM will facilitate the incident investigation.

All client requirements pertinent to personal injury incident reporting will also be adhered to.

Incident Other Than Personal Injury

All incidents including, but not limited to, fire, explosion, property damage, or environmental release will be responded to in accordance with the site-specific HASP. In general, this includes securing the site appropriate to the incident, turning control over to the emergency responders, or securing the site and summoning appropriate remedial personnel or equipment. Anchor QEA will immediately notify the client of any major incident, fire, equipment or property damage, or environmental incident with a preliminary report. A full report will be provided within 72 hours.

Near-miss Reporting

All near-miss incidents (i.e., those that could have reasonably led to an injury, environmental release, or other incident) must be reported to the FL and/or PM immediately so action can be taken to ensure that such conditions that led to the near-miss incident are readily corrected in order to prevent future occurrences.

Spills and Releases of Hazardous Materials

Contaminant Release

In the event of a contaminant release, the following steps will be taken:

- Notify the Key Foreperson and Health and Safety Representative immediately.
- Evacuate the area of release and assess what type of release/chemicals may be involved.
- Conduct air monitoring to determine the needed level of personal protective equipment (PPE).

- Don appropriate PPE, if it is safe to do so and personnel are qualified, and implement control measures to stop and control the release. If the release is unable to be contained safely, or Site personnel are not qualified to respond to the release, the local fire department will be summoned (see **Table A** for contact information).

When required, the PM/Superintendent will coordinate with the client and site owner (as applicable) to notify the National Response Center and local state agencies (see **Table A** for contact information). If hazardous waste has been released or produced through control of the incident, the PM/Superintendent will ensure that:

- Waste is collected and contained by qualified personnel
- Containers of waste are removed or isolated from the immediate site of the emergency
- Treatment or storage of the recovered waste, contaminated soil or surface water, or any other material that results from the incident or its control is provided
- No waste that is incompatible with released material is used or stored at the Site until cleanup procedures are completed
- All emergency equipment used is decontaminated, recharged, and fit for its intended use before operations resume.

When required, notify the National Response Center and local state agencies. The following information should be provided to the National Response Center:

- Name and telephone number
- Name and address of facility
- Time and type of incident
- Name and quantity of materials involved, if known
- Extent of injuries
- Possible hazards to human health or the environment outside of the facility

The emergency telephone number for the National Response Center is 1-800-424-8802. If hazardous waste is released or produced through control of the incident, ensure that:

- Waste is collected and contained
- Containers of waste are removed or isolated from the immediate site of the emergency
- Treatment or storage of the recovered waste, contaminated soil or surface water, or any other material that results from the incident or its control is provided
- No waste that is incompatible with released material is treated or stored in the facility until cleanup procedures are completed

Ensure that all emergency equipment used is decontaminated, recharged, and fit for its intended use before operations are resumed.

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Attachment B	Training Records
Attachment C	Safety Data Sheets for Chemicals of Concern
Attachment D	Activity Hazard Analysis Forms
Attachment E	Consolidated Edison Corporate Environmental Health and Safety Procedures
Attachment F	COVID-19 Management Plan

ABBREVIATIONS

AED	Automated External Defibrillator
AHA	Activity Hazard Analysis
ANSI	American National Standards Institute
ASTM	ASTM International
BTEX	benzene, ethylbenzene, toluene, and xylenes
CAMP	Community Air Monitoring Program
CDC	Centers for Disease Control
CFR	Code of Federal Regulations
CHSM	Corporate Health and Safety Manager
COC	contaminant of concern
Con Edison	Consolidated Edison Company of New York, Inc.
CPR	cardiopulmonary resuscitation
CRZ	Contamination Reduction Zone
DEET	N,N-diethyl-meta-toluamide
DNAPL	dense non-aqueous phase liquid
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency
EZ	Exclusion Zone/Hot Zone
GFCI	Ground-fault Circuit Interrupter
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
HEPA	High Efficiency Particulate Air
IDLH	Immediately Dangerous to Life and Health
IDW	investigation-derived waste
kPa	kilopascal
LEL	lower exposure limit
LNAPL	light non-aqueous phase liquid
LO/TO	lock out/tag out
mg/m^3	milligrams per cubic meter
MGP	manufactured gas plant
MHR	maximum heart rate
NAPL	nonaqueous phase liquid
NEC	National Electrical Code
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PAH	Polychlorinated aromatic hydrocarbon

PE	Professional Engineer
PEL	Permissible Exposure Limit
PFD	personal floatation device
PID	Photo Ionization Detector
PM	Project Manager
PPE	Personal Protective Equipment
ppm	parts per million
RIR	Remedial Investigation Report
SDS	Safety Data Sheet
Site	Con Edison Former MGP Site
STEL	Short Term Exposure Limit
SVOC	semivolatile organic compound
SC	Support Zone/Clean Zone
TBD	to be determined
TLV	Threshold Limit Value
TWA	time-weighted average
USCG	U.S. Coast Guard
UV	ultraviolet
VOC	Volatile Organic Compounds
WBGT	wet bulb globe temperature

1 Introduction

This *Health and Safety Plan* (HASP) has been prepared on behalf of Consolidated Edison Company of New York, Inc. (Con Edison), and presents health and safety requirements and procedures that will be followed by Anchor QEA, PLLC (Anchor QEA) personnel and subcontractors during work activities at the Cedar Street Works former manufactured gas plant (MGP). The location of the former MGP is situated within Cedar Street and the parcel designated as Section 1, Block 247, Lot 15 (the parcel) on the Tax Map of the City of New Rochelle, County of Westchester (hereinafter referred to as the "Site"). This HASP has been developed in accordance with Title 29 of the Code of Federal Regulations (CFR), Part 1910.120 (b), and will be used in conjunction with Anchor QEA's Corporate Health and Safety Program.

The provisions of this HASP are mandatory for all Anchor QEA personnel assigned to the project. A copy of this HASP must be maintained on site and available for employee review at all times. Anchor QEA subcontractors are also expected to follow the provisions of this HASP unless they have their own HASP that covers their specific activities related to this project. Any subcontractor HASPs must include the requirements set forth in this HASP, at a minimum. All visitors to the work site associated with Anchor QEA work activities must also abide by the requirements of this HASP and will attend a pre-work briefing where the contents of this HASP will be presented and discussed.

Each member of the project team will endorse the signature page of this HASP indicating they understand and agree to abide by the health and safety requirements for the Site. For each new task, a project kick-off meeting will be conducted to review the site-specific HASP and discuss the Scope of Work and planned activities for the day.

1.1 Health and Safety Plan Modifications

This HASP will be modified by amendment, if necessary, to address changing field conditions or additional work tasks not already described in this document. Modifications will be proposed by the Field Lead (FL) using the Modification to Health and Safety Plan form included in **Attachment A.** Modifications will be reviewed by the Corporate Health and Safety Manager (CHSM) or authorized representative and approved by the Project Manager (PM).

2 Statement of Health and Safety Policy

Anchor QEA's Corporate Health and Safety Program is designed to provide guidelines to ensure that Anchor QEA provides its employees a place of employment that is free from recognized hazards that may cause death, serious physical harm, or illness. It is not intended to replace direct, ongoing communication. Cooperation and communication from all employees are essential for an effective health and safety program.

Safety is one of Anchor QEA's Core Values. Each and every Anchor QEA employee has both the authority and responsibility to make safety-related decisions at any time, including the decision to stop a work task if conditions appear or may become unsafe. This fundamental approach is supported throughout the highest levels of management and fosters a proactive attitude toward maintaining a program that meets and, in many respects, exceeds federal, local, and client requirements.

3 Site Background Information

3.1 Site Location and Description

The Site is located in New Rochelle, New York, and is bounded by Spring Street to the north, River Street to the east, and Radisson Plaza to the south (see Exhibits A and B). The Site includes the parcel and a portion of Cedar Street.

3.2 Site History

Table 3-1 presents an overview of Site history, operations, and ownership based on information presented in the Remedial Investigation Report (RIR), unless noted otherwise.

Table 3-1
Site History and Operations

Years	Property Owner	Property Use
1863–1888	New Rochelle Gas Light Company	MGP–Coal Carbonization
1888–1895	New Rochelle Gas Light Co.	MGP–Carbureted Water Gas (beginning in 1890)
1896–1899	New Rochelle Gas and Fuel Company (operated by the American Gas Company of Philadelphia)[1]	MGP–Carbureted Water Gas
1899–1900	NY Suburban Gas Co.	MGP–Carbureted Water Gas
1900–1911	Westchester Lighting Co.	MGP–Carbureted Water Gas
1911–1951	Westchester Lighting Co.	Gas Storage
1951–1953	Con Edison	Gas Storage
1953–1992	R.E.C. Realty Corporation	Transportation (PS Trucking Company); Automotive Sales; and Repair
1992–2019	Donnybrook Realty Corp.	Automotive Sales and Repair

Note:

1. Based on a review of Sanborn Fire Insurance Maps provided in the RIR, and February 11, 1895 edition of The American Gas Light Journal, in 1895, the gas works was noted as owned and operated by the American Gas Works of Philadelphia.

Information regarding the decommissioning or removal of former MGP subsurface structures is not available, nor is information regarding the installation of the current Cedar Street right-of-way over the former MGP structures.

3.3 Nature and Extent of Constituents of Interest

The results of the remedial investigation indicated that subsurface soil and groundwater contain concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX), a subset of volatile organic compounds (VOCs); a more general class of organic compounds called polycyclic aromatic hydrocarbons (PAHs); and cyanide. PAHs are a subgroup of semi-volatile organic compounds

(SVOCs) that consists of approximately 17 commonly recognized multi-ringed, aromatic compounds. These compounds are typically associated with coal tar nonaqueous phase liquid (NAPL) from former MGP operations (USEPA 1988).

In general, the primary MGP-related byproduct responsible for most of the impacts at a former MGP site is coal tar, which generally appears as a dense nonaqueous phase liquid (DNAPL). DNAPLs are heavier than water and tend to sink below the water table if released in sufficient quantities. Depending on the type of gas manufacturing processes employed, coal tar DNAPL may range from only slightly denser (and slightly more viscous) than water, to coal tars that were solid when exposed to ambient air and highly viscous (USEPA 1988). Because the former MGP operations at this Site included both coal carbonization as well as carbureted water gas methods, the coal tar physical characteristics may vary across the Site.

Coal tar comprises of many organic compounds, including BTEX and PAHs that are regulated by the New York State Department of Environmental Conservation (NYSDEC). These two groups of compounds, in addition to NAPLs, are useful in characterizing the nature and extent of contamination on Site related to former MGP operations (hereafter referred to as MGP-related impacts or MGP impacts). Visual characterization of Site soil and laboratory analysis of environmental samples for BTEX and PAHs are appropriate methods used to identify the nature and extent of environmental media affected by coal tar. Therefore, soils containing visual indications of coal tar as well as groundwater and subsurface soils (deeper than 5 feet below ground surface [bgs]) containing BTEX and PAHs above NYSDEC standards, criteria, and guidelines have been identified as the contaminants of concern (COCs) for the Site.

4 Scope of Work Evaluation

This plan addresses health and safety issues associated with the following field task:

- Evaluation of existing monitoring wells, including well assessment, installations, and development.
- Subsurface soil investigation
- NAPL recovery testing in existing wells
- NAPL monitoring utilizing existing wells and any new temporary wells, if installed.

4.1 NAPL Recovery Well Installations and Development

A licensed drilling contractor will mobilize to the Site to install NAPL recovery wells via sonic drilling. At each location soil samples will be collected for visual inspection only while a 10-inch borehole is advanced to the target depth. The 10-inch borehole will allow for a 6-inch recovery well to be installed.

Following installation, each recovery well will be developed to remove any soil that settled within the recovery well during installation and fine-grained soils from the well screen filter pack. Each recovery well will be constructed of stainless-steel and consist of a 2-foot sump placed below the well screen and well riser pipe connected above to the ground surface. All of the well screen and riser pipe will be connected with flush-joint threads.

Soil cuttings and development water will be containerized in 55-gallon drums for profiling and disposal.

5 Hazard/Risk/Exposure Assessment

As required by Con Edison, a site- and task-specific risk analysis will be conducted before commencing any potentially intrusive work activities at the Site. An example of a site-specific risk review checklist is included as **Exhibit 5-1**, which must be modified by the PM prior to performing work at the Site and as related to the specific planned work activities. This checklist documents potential existing exposures that may impact the work, surrounding facilities, equipment, workers, or the public at large. The analysis includes locating, documenting, and/or photographing items such as the following:

- Overhead and underground utilities, including electrical power
- Sewer, water, and communications utilities
- Overhead and underground steam, fuel oil, and/or natural gas pipelines
- Existing building interferences (including foundations, footers, or other associated structures)
- Traffic
- Security
- Fences
- Water hazards
- Existing geographical and environmental conditions
- Investigation Derived Waste Disposal

Upon completion of the site-specific risk analysis, personnel must identify and control work-related hazards and propose controls and mitigation strategies for high-risk activities. This step is further detailed in the remaining sections of this HASP.

Exhibit 5-1
Example Site-Specific Risk Review Checklist

Date:	Project or Location:	
Risk/Hazard	**Detail**	**Present?**
Employee Exposure	Hazardous Chemicals	
	Overhead and underground utilities	
	Heavy equipment	
	Traffic	
	Airborne contaminants (dust, mists, fumes)	
	Other (specify):	
Hazardous Waste	Handling, removal or storage of hazardous	
Crane Work	Mobile cranes	
Drilling/ Sampling	Drill rig hazards	
	Grab Sampling	
Electrical	Staging area	
Personal Protective Equipment	Work activities or work site requires hearing protection	
	Work activities or location requires special protective clothing	
Public Exposure	Work activities or location requires special precautions to protect the public	
Permits	Required	
	Hot permit	
Other Exposures	Other exposure or high-risk activities (list):	

6 Authority and Responsibilities of Key Personnel

This section describes the authority and responsibilities of key project personnel and will be updated as applicable.

6.1 Key Project Personnel

Anchor QEA staff performing the work will be listed in the Table 6-1.

Table 6-1
Anchor QEA, LLC Information

Entity	Telephone
Anchor QEA, LLC Address: 290 Elwood Davis Rd, Suite 340, Liverpool, New York 13088	(518) 222-5486
Project Executive responsible for project: Margaret Carrillo-Sheridan	(315) 414-2049
Project Manager/Superintendent: Nicholas Smith, PG	(315) 414-2017
Health and Safety Representative/Manager: Timothy Shaner	(251) 375-5282
Key Foreperson or Forepersons: Matthew Cavas, PG	(518) 886-0643
Field Lead: Scott Andrews	Cell: (206) 303-7070

6.2 Authorities and Responsibilities of Key Personnel

6.2.1 All Personnel

All project personnel have responsibility for accident prevention and compliance with corporate, regulatory, and client requirements. No person may work in a manner that conflicts with these procedures. Prior to initiating site activities, all project personnel and subcontractor personnel will receive training in accordance with applicable regulations and be familiar with the requirements and standards referenced in the site-specific HASP. Training records for Anchor QEA field personnel are included in **Attachment B**. In addition, all personnel will attend daily safety meetings (tailgate meetings) to discuss site-specific hazards prior to beginning each day's work. Every employee, subcontractor, and client representative at the site has the responsibility to stop or suspend work if conditions arise that pose an unacceptable health and safety risk to the field crew or environment, or if conditions arise that warrant revision or amendment of the site-specific HASP.

6.2.2 Project Executive

The project executive is responsible for providing resources so that the project activities are completed in accordance with the site-specific HASP and for meeting all regulatory and contractual requirements.

6.2.3 Project Manager/Superintendent

The PM/Superintendent provides overall direction for the project. They are responsible for ensuring that the project meets the client's objectives in a safe and timely manner. The PM/Superintendent is responsible for providing qualified staff for the project and adequate resources and budget for the health and safety staff to carry out their responsibilities during the field work. The PM will be in regular contact with the Key Forepersons and health and safety representatives to ensure that appropriate health and safety procedures are implemented into each project task.

The PM/Superintendent has authority to direct response operations; the PM/Superintendent assumes total control over project activities but may assign responsibility for aspects of the project to others. In addition, the PM/Superintendent performs the following tasks:

- Oversees the preparation and organization of background review of the project, the work plan, and the field team.
- Ensures that the team obtains permission for site access and coordinates activities with appropriate officials.
- Briefs the Key Forepersons and field personnel on specific assignments.
- Together with the Key Forepersons, sees that health and safety requirements are met.
- Consults with the Health and Safety Representative(s) regarding unsafe conditions, incidents, or changes in site conditions or the Scope of Work.

6.2.4 Health and Safety Representative/Manager

The Health and Safety Representative/Manager (or his/her designee) will be responsible for managing on-site health and safety activities and will provide support to the PM/Superintendent and Key Forepersons on health and safety issues. The following are specific duties of the health and safety manager:

- Provide technical input into the design and implementation of the site-specific HASP, as well as review and approval of changes or addenda to the HASP.
- Advise on the potential for occupational exposure to project hazards, along with appropriate methods and/or controls to eliminate site hazards.
- Ensure that a hazard assessment has been performed and that the adequacy of the PPE selected was evaluated as required by 29 CFR 1910.132(d), 1910.134, 1926.25, and 1926.55, and is duly noted by the signatures and date appearing on the Certification Page of the site-specific HASP.
- Consult with the forepersons on matters relating to suspending site activities in the event of an emergency.
- Verify that all on-site personnel have read and signed the HASP Acknowledgement Form on page iv of this HASP.

- Verify that corrective actions resulting from deficiencies identified by audit and observations are implemented and effective.

The Health and Safety Representative/Manager or his/her designee will ensure that field staff have completed required training as applicable (e.g., Occupational Safety and Health Administration [OSHA] training, U.S. Department of Transportation [DOT] training, first aid and cardiopulmonary resuscitation [CPR] training, etc.).

6.2.5 Key Foreperson or Forepersons

The Key Foreperson or Forepersons report to the PM/Superintendent, has authority to direct response operations, and assumes control over on-site activities. The Key Foreperson will direct field activities, will coordinate the technical and health and safety components of the field program, and is responsible in general for enforcing the site-specific HASP and Corporate Health and Safety Program requirements. The Key Foreperson will be the primary point of contact for all field personnel and visitors and has direct responsibility for implementation and administration of the site-specific HASP. The Key Foreperson and any other member of the field crew have STOP WORK AUTHORITY—the authority to stop or suspend work in the event of an emergency, if conditions arise that pose an unacceptable health and safety risk to the field crew or environment, or if conditions arise that warrant revision or amendment of this HASP. It is critical that both the Key Foreperson, PM/Superintendent, and Health and Safety Representative communicate regularly to proactively identify and address any safety-related concerns that may arise. The following include, but are not necessarily limited to, the functions of the Key Foreperson related to the health and safety program:

- Conduct and document daily safety meetings or designate an alternate representative in his or her absence.
- Execute the work plan and schedule.
- Conduct periodic field health and safety inspections to ensure compliance with the site-specific HASP.
- Oversee implementation of safety procedures.
- Implement worker protection levels.
- Enforce site control measures to help ensure that only authorized personnel are allowed on site.
- After coordinating with the PM/Superintendent and Con Edison, notify (when necessary) local public emergency officials.
- Follow-up on incident reports to the PM/Superintendent and Con Edison.
- Periodically inspect protective clothing and equipment for adequacy and safety compliance.
- Ensure that protective clothing and equipment are properly stored and maintained.
- Perform or oversee air monitoring (if required) in accordance with this HASP.

- Maintain and oversee operation of monitoring equipment and interpretation of data from the monitoring equipment.
- Monitor workers for signs of stress, including heat stress, overexertion, cold exposure, and fatigue.
- Require participants to use the "buddy" system in performing tasks.
- Provide (via implementation of the site-specific HASP) emergency procedures, evacuation routes, and telephone numbers for the local hospital, poison control center, fire department, and police department.
- Communicate incidents promptly to the PM/Superintendent and Con Edison.
- Maintain communication with the Health and Safety Representative on site activities.
- If applicable, ensure that decontamination and disposal procedures are followed.
- Maintain the availability of required safety equipment.
- Advise appropriate health services and medical personnel of potential exposures.
- Notify emergency response personnel in the event of an emergency and coordinate emergency medical care.

The Key Foreperson will record health-and-safety-related details of the project in the field logbook. At a minimum, each day's entries must include the following information:

- Project name or location
- Names of all on-site personnel
- Level of PPE worn and any other specifics regarding PPE
- Weather conditions
- Type of field work being performed

6.2.6 Subcontractors

Subcontractors and their personnel must understand and comply with the requirements established in the site-specific HASP. Subcontractors may prepare their own task-specific HASPs, which must meet the requirements of the site-specific HASP, at a minimum. Subcontractor personnel must attend and participate in the daily safety meetings and all other Site safety meetings.

6.2.7 Site Visitors

All visitors must read and acknowledge their understanding of the site-specific HASP, abide by the requirements of the plan, and cooperate with Site supervisors to provide for a safe work Site. All Site personnel, including visitors, will immediately report any issues, accidents, or unsafe situations to the Site supervisors.

7 Potential Chemicals of Concern and General Site Control Measures

7.1 General

The following sections discuss the potential chemicals of concern that may be encountered during intrusive activities at the Site and general site control measures to mitigate the potential hazards.

7.2 Potential Chemicals of Concern

Table 7-1 provides a summary of potential chemicals of concern that may be encountered during intrusive activities at a Con Edison Former MGP Site. The list is not all-inclusive and will be reviewed and modified by Anchor QEA, as required based on Site-specific conditions.

These chemicals can be encountered during monitoring well sampling in and around the Site. Real-time breathing zone air-monitoring for onsite workers will be performed by Anchor QEA's field investigator, using a photoionization detector and additional gas monitors as needed in accordance with applicable regulations. The real-time data will be recorded in the field book by the field investigator/site health and safety representative following each observation and during sampling activities. Requirements for real-time breathing zone air monitoring are presented in Section 10. Safety Data Sheets (SDSs) for potential chemicals of concern are presented in **Attachment C**.

Table 7-1
Relevant Properties of Known or Suspected VOCs and SVOCs

Compound (synonym)	OSHA PEL[1] (ppm or as otherwise noted)	IDLH (ppm)	LEL (%)	Odor Threshold[2] (ppm)	Odor Character	Vapor Pressure (mm Hg)	Physical State at STP	Detectible w/ 11.7 eV lamp PID (I.P. eV)
Benzene	1 5 [STEL]	500 [Ca]	1.2	119	Aromatic, sweet	75	Flammable Liquid	Yes (9.24)
o-,m-, p-Xylenes	100 150 [STEL]	1000	0.9	20	Aromatic	7,9,9	Flammable Liquid Vapor	Yes (8.4–8.6)
Toluene	200 300 [CEIL]	500	1.1	37	Sweet, pungent Benzene- like	20	Flammable Liquid Vapor	Yes (8.82)
Ethyl Benzene	100 125 [TLV-STEL]	800	0.8	0.8	Oily Solvent	10	Flammable Liquid	Yes (8.76)

Compound (synonym)	OSHA PEL[1] (ppm or as otherwise noted)	IDLH (ppm)	LEL (%)	Odor Threshold[2] (ppm)	Odor Character	Vapor Pressure (mm Hg)	Physical State at STP	Detectible w/ 11.7 eV lamp PID (I.P. eV)
Hydrogen Sulfide	10	100	4	0.8	Rotten Egg	17.6	Flammable Liquid	No[3]
Naphthalene	10 [TLV- STEL]	250	0.9	0.64	Mothballs/ Tar/Creosote	0.08	Combustible Solid	Yes (8.2)
Polynuclear Aromatic Hydrocarbons (PAHs)	0.2 mg/m^3 [CA]	80 mg/m^3	Varies	Varies	Varies	Very low	Combustible Solid	No

Notes:

1. 29 CFR 1910, June 30, 1993 (8-hour Time weighted average unless otherwise specified.). These values may be modified by OSHA. The values should be checked and updated, as necessary, prior to commencing work activities.
2. ACGIH 1989 Highest reported value of acceptable odor threshold range. These values may be modified by ACGIH. The values should be checked and updated, as necessary, prior to commencing work activities.
3. For hydrogen sulfide detection, a gas meter with hydrogen sulfide detection capability will be used.

CA: suspected carcinogen – Minimize all possible exposures
CEIL: ceiling limit – not to de exceeded at any time during a work day
IDLH: Immediately dangerous to life or health
LEL: lower explosive limit
mg/m^3: milligrams per cubic meter
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
ppm: parts per million
SKIN: Designates that skin is an important possible route of exposure
STP: Standard Temperature and Pressure
STEL: 15-minute Short Term Exposure Limit
TLV: Threshold Limit Value

7.3 Possible Exposure Routes

Possible routes of exposure to the chemicals potentially encountered on this project include inhalation, dermal contact, and ingestion of dust, mist, gas, vapor, or liquid. Exposure will be minimized by using engineering controls, safe work practices and by wearing the appropriate PPE. Further discussion of PPE requirements is presented in Section 9.

7.3.1 Inhalation

Inhalation of particulates, dust, mist, gas, or vapor during field activities is possible. Whenever possible, work activities will be oriented so personnel are upwind of the sampling location. Section 10 describes air monitoring requirements and associated action levels.

7.3.2 Dermal Contact

Dermal contact with potentially contaminated materials, soil, sediment, or groundwater during field activities is possible. Direct contact will be minimized through the use of appropriate PPE, engineering controls, real-time air monitoring (particulates), and decontamination procedures.

7.3.3 Ingestion

Direct ingestion of contaminants can occur by inhaling airborne dust, mist, or vapors, or by swallowing contaminants that are trapped in the upper respiratory tract. Indirect ingestion can occur by introducing the contaminants into the mouth by way of food, tobacco, fingers, or other carriers. Although ingestion of contaminants can occur, proper hygiene, real-time air monitoring (particulates), decontamination, and contamination-reduction procedures should reduce the probability of this route of exposure.

7.4 General Site Control Measures

The primary purposes for site controls are to establish the Exclusion Zone perimeter, reduce migration of contaminants into clean areas by using a Contamination Reduction Zone, and prevent unauthorized access or exposure to hazardous materials by site personnel and the public. Site control is especially important in emergency situations.

7.4.1 General Site Control Safety Procedures

The following standard safe work practices apply to all site personnel and shall be discussed in the safety briefing prior to initiating work on the Site:

- Eating, drinking, chewing gum or tobacco, and smoking are prohibited on site, except in designated areas.
- Hands and faces must be washed upon leaving the work area and before eating, drinking, chewing gum or tobacco, and smoking.
- A buddy system shall be used. Radio, cell phone, or hand signals will be established to maintain communication.
- During site operations, each worker will consider himself/herself as a safety backup to his/her partner.
- Visual contact will be maintained between buddies on site when performing potentially hazardous duties.
- No personnel will be admitted to the site without the proper safety equipment, training, and (if required) medical surveillance certification.
- All personnel must comply with established safety procedures. Any staff member who does not comply with safety policy as established in this HASP may be subject to corrective action, potentially including reprimanded or immediate dismissal.

- Proper decontamination procedures must be followed before leaving a contaminated work area.

7.4.2 Work Area Access Control

If work is performed in public areas, the following precautions shall be taken to protect the workers and the public. Access control to the work area will be accomplished by the use of a combination of the following devices and/or methods:

- Traffic-control devices and/or use of flaggers
- Caution tape
- Other methods to keep the site secure and provide a visual barrier to help keep unauthorized personnel from entering the site and active work areas

7.4.3 Hazardous Waste Site Work Control Procedures

To prevent contamination from migrating from personnel and equipment, work areas will be clearly specified as an Exclusion Zone/Hot Zone (EZ), Contamination Reduction Zone (CRZ), or Support Zone/Clean Zone (SZ) prior to beginning operations. Each work area will be clearly identified using signs or physical barriers. At the end of each workday, the site should be secured and/or guarded to prevent unauthorized entry.

Site work zones will include the following:

- **Exclusion Zone/Hot Zone**. The EZ will be the "hot zone" or contaminated area inside the site perimeter. The EZ is the defined area where potential respiratory and/or health hazards exist. All personnel entering the EZ must use the required PPE, as set forth in the site-specific HASP, and meet the appropriate training and medical clearance. Entry to and exit from this zone will be made through a designated point. Appropriate warning signs to identify the EZ should be posted (e.g., DANGER, AUTHORIZED PERSONNEL ONLY, PROTECTIVE EQUIPMENT REQUIRED BEYOND THIS POINT). Personnel and equipment decontamination must be performed upon exiting the EZ.
- **Contamination Reduction Zone**. The CRZ, also known as the "warm zone," is a transitional zone between the EZ and the SZ (also known as the "cold zone" or "clean zone"). The CRZ provides a location for removal and decontamination of PPE and tools leaving the EZ. A separate decontamination area will be established for heavy equipment. All personnel and equipment must exit via the CRZ. If the CRZ is compromised at any time, a new CRZ will be established.
- **Support Zone/Clean Zone**. This uncontaminated zone will be the area outside the EZ and CRZ and within the geographic perimeters of the site (including sample processing and analysis areas). The SZ is used for support personnel; staging materials; parking vehicles; office, laboratory, and sanitation facilities; and receiving deliveries. Personnel entering this

zone may include delivery personnel, visitors, security guards, and others who will not necessarily be permitted in the EZ or CRZ.

A log of all personnel (including subcontractors) visiting, entering, or working on the site shall be maintained by the Key Foreperson. No personnel (or subcontractors) will be allowed in the EZ without showing proof of training and medical certification, per 29 CFR 1910.120l, (f) (and 29 CFR 1926.1101(k)(9), (m) if appropriate).

7.5 Activity Hazard Analysis

The party performing the work and their subcontractors are required to conduct an Activity Hazard Analyses (AHA) for all aspects of the work activities. The AHA consists of the following three steps:

1. Identify the task and break it down into steps.
2. Identify the hazards associated with each step.
3. Identify the specific hazard control measure(s) (e.g., engineering controls, administrative controls, and/or PPE) that will be used to ensure these tasks are conducted in a safe manner.

Exhibit 7-1 shows an example AHA form. **Exhibit 7-2** shows a training record to be completed and kept on file for each AHA. Example AHAs can be found in **Attachment D**. The intent of an AHA is to identify the steps, hazards, and control measures involved with performing a specific task. The AHAs included in this HASP are not inclusive of all activities that may be performed at the site, and may not include all of the steps, hazards, or control measures required to safely complete a task. Any individual given a work assignment shall review the corresponding AHA prior to commencing work activities to determine whether the AHA needs to be modified for site-specific conditions or if an additional AHA should be developed.

Exhibit 7-1
Example Activity Hazards Analysis Form

Topic

Project Name: Fill in	**Project Number:** Fill in	**JSA Number:** 0XX	**Issue Date:** Fill in
Location: Fill in	**Contractor:** Fill in	**Analysis by:** Fill in	**Analysis Date:** Fill in
Work Operation: Fill in – same as Topic	**Superintendent/Competent Person:** Fill in	**Revised by:** Fill in	**Revised Date:** Fill in
Required Personal Protective Equipment (PPE): • • •		**Reviewed by:** Fill in	**Reviewed Date:** Fill in
		Approved by: Fill in	**Approved Date:** Fill in

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
		• • •	•
		• • •	•
		• • •	•

Training Requirements:

-
-
-

1 of 1

Exhibit 7-2
Example Activity Hazards Analysis Training Record

JOB NUMBER _____
AHA NUMBER _____
JOB LOCATION _____
DATE: _____

NAME OF TRAINER: _____
SUBJECTS COVERED: _____

TRAINING AIDS USED: _____

ATTENDEES (PLEASE SIGN NAME LEGIBLY):

(Use additional sheets if necessary)

8 Health and Safety Training, Informational, and Communication Programs

8.1 General

This section describes the health and safety training and informational programs with which all project site personnel must comply. All certifications required in this section will be kept on internal file.

Anchor QEA personnel performing the work and/or their subcontractors will, as applicable, identify OSHA-regulated and certified competent persons for work or tasks requiring that level of training and/or supervision. The project personnel listed below will be assigned to the project and have the designated certifications.

This section will be updated by Anchor QEA based on site-specific requirements and prior to the commencement of work at the Site.

Name	Job Title	40-hour HAZWOPER	8-hour HAZWOPER Supervisor	8-hour HAZWOPER Refresher Expires	Other Training (i.e., excavation, confined space, first aid, CPR)
Scott Andrews	Field Lead	Yes	Yes	03/2020	First aid, CPR
Sylvia Jacobson	Field staff	Yes	No	05/2020	First aid, CPR
Peter Kwon	Field Staff	Yes	No	07/2019	First aid, CPR

8.2 Initial Project Site Orientation

Work on the project site will require participation in an initial health and safety orientation presented by the PM/Superintendent or Key Foreperson that will consist of, at a minimum, the following topics:

- A review of the contents of the site-specific HASP, including the Scope of Work and associated site hazards and control methods and procedures.
- Provisions of this plan are mandatory for all personnel assigned to the project.
- Subcontractors are also expected to follow the provisions of this plan unless they have their own HASP that covers their specific activities related to this project and includes the minimum requirements of the site-specific HASP.
- All visitors to the work Site will also be required to abide by the requirements of this plan.
- Personnel assigned to perform work at the project Site, working under the provisions of the site-specific HASP, will be required to read the plan and must sign the Health and Safety Plan Acknowledgement Form to confirm that they understand and agree to abide by the

provisions of the plan. Personnel not directly affiliated with the project (i.e., visitors) may also be required to sign a Liability Waiver (prepared on behalf of Anchor QEA).

8.3 Daily Safety Meetings

Daily safety meetings ("tailgate meetings") make accident prevention a top priority for everyone and reinforce awareness of important accident-prevention techniques. The following daily safety meeting procedures and practices are required:

- Daily safety meetings will be held each morning prior to conducting site activities.
- The example Daily Safety Briefing form shown in **Exhibit 8-1** below will be used (at a minimum) to document each meeting.
- Copies of the completed Daily Safety Briefing forms will be maintained on site while the project.

8.4 End-of-Day Wellness Checks

Similar to the daily safety meetings, field staff will gather at the end of the day to verify group health and wellness and discuss any near misses that occurred that day. The wellness checks will be recorded on that day's Daily Safety Briefing form.

Exhibit 8-1
Example Pre-Field Work Safety Meeting (Daily Safety Meeting)

Notes: _____

_____

Reviewed by:_____ Title:_____ Date:_____

Date:		Project/Location:	
Subcontractor Representative:		Project Manager (Anchor QEA):	
Phone:		Phone:	
Subcontractor Safety Representative:		Safety Manager (Anchor QEA):	
Phone:		Phone:	

The following items were identified and reviewed:

Health and Safety	
Site-Specific Safety Plans/Model Program	
Competent/Qualified Person Documentation	
Safety Audits/Inspections	
Subcontractor Responsibilities	
Site Orientation Requirements	
Pre-mobilization Safety Meeting/Date	
Crane Inspection Certification	
Personal Protective Equipment (PPE)	
Environmental Hazards	
Other:	
Medical	
Emergency Procedures	
Site Security	
Smoking Policy	
Medical Services Requirements	
Treatment Locations/Addresses/Phone	
Other	

Additional Notes/Comments:

_____

_____

_____

8.5 Hazardous Waste Operations Training

Anchor QEA staff working on project sites that present a potential exposure to hazardous wastes or other hazardous substances shall be trained in accordance with the requirements of the 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation. Training requirements will consist of the following:

- Field personnel must complete a minimum of 40 hours of hazardous waste activity instruction.
- Field personnel must complete a minimum of 3 days of supervised field instruction.
- Field personnel assigned to the site will also have received 8 hours of refresher training if the time lapse since their previous training has exceeded 1 year.
- On-site managers and supervisors directly responsible for employees engaged in hazardous waste operations will receive an additional 8 hours of supervisory training.
- Field personnel shall be current in first aid/CPR training offered by the American Red Cross or equivalent.
- Other training may be required depending on the task to be performed (e.g., confined space, excavation/trenching, underground storage tank removal, fall protection, lock out/tag out (LO/TO), respiratory protection, and hazard communication).

8.6 Hazard Communication Program

The purpose of hazard communication (Employee Right-to-Know) is to ensure that the hazards of all chemicals located at the field project site are communicated to all project personnel and subcontractors according to 29 CFR 1926.59.

Every container of hazardous materials must be labeled by the manufacturer, who must also provide a SDS upon initial order of the product and upon request thereafter. Maintain manufacturer labels where possible and practicable. The label may use words or symbols to communicate the following:

- Introduction
- Hazard(s) identification
- Composition/information on ingredients
- First-aid measures
- Fire-fighting measures
- Accidental release response measures
- Handling and storage
- Exposure controls/personal protection
- Physical and chemical properties
- Stability and reactivity properties
- Toxicological properties
- Ecological properties

- Disposal considerations
- Transport considerations
- Regulatory information
- Other information, including at a minimum, label preparation or last revision date

SDS for all chemicals brought onto the site or anticipated to be used on site shall be provided in an attachment of the Site-specific HASP. SDSs for potential chemicals of concern (for a generic MGP site) are presented in **Attachment C.** These SDSs shall be readily available for reference by Site personnel and emergency response personnel.

Hazardous materials received without proper labels will be set aside and not distributed for use until properly labeled.

If a hazardous chemical is transferred into a portable container (approved safety can), even if for immediate use only, the contents (e.g., acetone or gasoline) of the portable container must be identified.

8.7 Employee Communication System and Policy

An open, two-way communication between management and staff on health and safety issues is essential to an injury-free, productive workplace. The following system of communication is designed to facilitate a continuous flow of health and safety information between management and staff in a form that is readily understandable and consists of one or more of the following checked items:

- New worker orientation including a discussion of health and safety policies and procedures.
- Workplace health and safety training programs.
- Regular weekly and daily safety meetings.
- Effective communication of health and safety concerns between workers and supervisors, including translation where appropriate.
- Posted or distributed safety information.

8.8 Medical Surveillance Program

This section describes the medical surveillance program that Anchor QEA field personnel must comply with when working on sites where there is a potential for exposure to hazardous wastes or other hazardous substances.

8.8.1 General Requirements

Anchor QEA employees shall be enrolled in a medical surveillance program in compliance with OSHA standards (29 CFR 1910.120(f)) under the following circumstances.

If they are involved with any of the following operations:

- *Cleanup operations* required by a governmental body, whether federal, state, local, or other involving hazardous substances that are conducted at uncontrolled hazardous waste sites (including, but not limited to, the EPA's National Priority List [NPL] sites, state priority list sites, sites recommended for the EPA NPL, and initial investigation of government-identified sites that are conducted before the presence or absence of hazardous substances has been ascertained)
- *Corrective actions* involving cleanup operations at sites covered by the Resource Conservation and Recovery Act of 1976 (RCRA) as amended (42 United States Code 6901 et seq.)
- *Voluntary cleanup operations* at sites recognized by federal, state, local, or other governmental bodies as uncontrolled hazardous waste sites
- *Operations involving hazardous wastes* that are conducted at treatment, storage, and disposal (TSD) facilities regulated by 40 CFR 264 and 40 CFR 265 pursuant to RCRA or by agencies under agreement with the EPA to implement RCRA regulations
- *Emergency response operations* for releases of, or substantial threats of releases of, hazardous substances without regard to the location of the hazard

And, if they meet the following criteria:

- Are or may be exposed to hazardous substances or health hazards at or above the established PEL, above the published exposure levels for these substances, without regard to the use of respirators, for 30 days or more per year

In addition, employees are required to be enrolled in the medical surveillance program if they meet any of the following conditions:

- Wear a respirator for 30 days or more per year
- Are injured, become ill, or develop signs or symptoms due to possible overexposure involving hazardous substances or health hazards from an emergency response or hazardous waste operations
- Are members of a Hazardous Materials (HAZMAT) team

Anchor QEA employees required to be enrolled in a medical surveillance program under 29 CFR 1910.120(f) shall have medical examinations and consultations made available to them by Anchor QEA on the following schedule:

- Prior to assignment
- At least once every 12 months unless the attending physician believes a longer interval (not greater than biennially) is appropriate
- At termination of employment or reassignment to an area where the employee would not be covered if the employee has not had an examination within the last 6 months

- As soon as possible upon notification that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards, or that the employee has been injured or exposed above the PEL or published exposure levels in an emergency situation
- At more frequent times, if the examining physician determines that an increased frequency of examination is medically necessary

The content of medical examinations or consultations made available to employees shall be determined by the attending physician but shall include, at a minimum, a medical and work history with special emphasis on symptoms related to the handling of hazardous substances and health hazards, and to fitness for duty including the ability to wear any required PPE under conditions (i.e., temperature extremes) that may be expected at the work site.

The attending physician shall provide Anchor QEA with a written opinion for each examined employee that contains the following information:

- Whether the employee has any detected medical conditions that would place the employee at an increased risk of impairment of the employee's health from hazardous waste operations work, emergency response, or respirator use
- Any recommended limitations on the employee's assigned work
- A statement that the employee has been informed of the results of the medical examination and any medical conditions that require further examination or treatment

The written opinion obtained by Anchor QEA shall not reveal specific findings or diagnoses unrelated to occupational exposures. Medical surveillance and other employee-related medical records shall be retained for at least the duration of employment plus 30 years.

9 General PPE Requirements

The minimum level of PPE should be selected according to the hazards that may be encountered during Site activities in accordance with established EPA levels of protection (D and C) and following Con Edison procedures included in **Attachment E**. Only PPE that meets American National Standards Institute (ANSI) standards shall be worn. Workers must maintain proficiency in the use and care of PPE. Damaged or defective PPE must be replaced and may not be used. Anchor QEA will provide all necessary PPE for its employees as described in the site-specific HASP.

9.1 Minimum Requirements – Level D Protection

The minimum level of protection will be Level D protection, which consists of the following equipment:

- Standard work uniform/coveralls
- Work boots with safety toe conforming to ASTM International (ASTM) F2412-05/ASTM F2413-05
- Approved safety glasses or goggles (meets ANSI Z87.1 – 2010 requirements for eye protection)
- Hard hat (meets ANSI Z89.1 – 1986 requirements for head protection)
- Traffic safety vest
- Hearing protection when there are high noise levels
- Disposable boot covers

Level D protection will be used only when:

- The atmosphere contains no known hazards
- Work functions preclude splashes, immersions, generation of dust particulates or the potential for unexpected inhalation of, or contact with, hazardous concentrations of chemicals
- Atmospheric concentrations of contaminants are less than the Permissible Exposure Limit (PEL) and/or Threshold Limit Value (TLV)

9.1.1 Modified Level D Protection Requirements

Depending on the Scope of Work and the potential hazards to be encountered, Level D protection shall be modified to include additional protective equipment such as face shields/goggles, and disposable gloves of varying materials depending on the chemical substances involved. An upgrade to Modified Level D occurs when there is a possibility that contaminated media can contact the skin or work uniform, or if unique, site-specific hazards exist.

Initially at portions of the site where remaining contaminants may be encountered based on the site-specific conditions, work will start in Modified Level D (including disposable gloves).

9.2 Respiratory Protection Requirements

Respiratory protection devices may potentially be used for protection against particulates and potential site-specific contaminants during the course of an intrusive field project. The need for respiratory protection will be determined by air monitoring results and site conditions. However, engineering and administrative controls must first be evaluated for use as the primary controls for protection against site respiratory hazards. In the event that engineering and administrative controls are deemed not feasible, respiratory protection will be required.

9.2.1 Level C Protection Requirements

An upgrade to Level C protection occurs when the results of air monitoring reveal that action levels have been exceeded.

Level C protection, in addition to Level D equipment, involves the use of full-face and/or half-face air-purifying respirators equipped with P-100/organic vapor or P-100/mercury vapor or equivalent (OSHA/National Institute for Occupational Safety and Health [NIOSH] approved) as applicable based on air monitoring. For this site, the potential for particulate and organic vapor action level exceedances exists.

Level C protection shall be used in the following situations:

- When there is a recognized need for protection against particulates, organic vapors, or other airborne contaminants during the course of the project.
- During activities where product odors or exposure symptoms are noted.

If, during the use of respiratory protection, any unusual odors or other evidence of elevated concentrations of chemicals in the workers' breathing zone is noted, the work shall be stopped, workers shall exit the work area, and the PM/Superintendent and Health and Safety Representative shall be contacted for instructions.

This HASP has not provided requirements for upgrade to Level B protection. If Anchor QEA believes that a potential upgrade to Level B protection may be necessary, based on Site-specific conditions, appropriate requirements for upgrade to Level B will be included in the Site-specific HASP.

9.2.2 Cartridge Change-out Schedule

Anchor QEA will prepare a cartridge change-out schedule based on the type of equipment used and include this information in the Site-specific HASP. Cartridges will be changed immediately if breakthrough, a chemical warning property (e.g., eye, nose, or throat irritation or odor), or cartridge end-of-life indicator activation occurs. All workers will use the buddy system when using respirators and periodically check all end-of-life indicators on the cartridges of all other workers (every 30 minutes at a minimum). The Key Foreperson will review this requirement after monitoring the

employee's breathing zone for site contaminants and will revise this schedule as may be necessary to avoid overexposure.

9.2.3 Respirator Fit Testing

All project personnel who may be required to wear an air-supplied, or negative-pressure, air-purifying respirator in the performance of their work duties at the site shall be quantitatively fit-tested on an annual basis. Employees who wear a respirator for more than 30 days per year shall be enrolled in a medical surveillance program as pursuant to the Anchor QEA's policies and applicable regulations. Employees shall have the opportunity to handle the respirators and wear them in normal air for a familiarity period prior to fit testing. On each occasion that employees don a respirator for work purposes, they shall test the piece-to-face seal by use of the following positive and negative pressure tests:

- Positive Pressure Test: With the exhaust port(s) blocked, the positive pressure of slight exhalation should remain consistent for several seconds.
- Negative Pressure Test: With the intake ports blocked, the negative pressure of slight inhalation should remain constant for several seconds.

Air-purifying respirators shall not be worn when conditions prevent a seal of the respirator to the wearer. Such conditions may be the growth of a beard, sideburns, a skull cap that projects under the face piece, or temple pieces on glasses. No employee may wear a beard if it interferes with the fit of the respirator. Also, the absence of one or both dentures can seriously affect the fit of a face piece and should be worn at all times when respirators are being used.

9.2.4 Respirator Cleaning, Maintenance, and Inspection

All respirators used on site shall be cleaned and maintained in the following manner:

- Remove filters and cartridges.
- Visually inspect face piece and parts, discard faulty items.
- Remove all elastic headbands.
- Remove exhalation cover and inhalation valves.
- Wash, sanitize, and rinse face piece. Wash any parts that were removed separately.
- Dry the mask. Wipe face pieces and valves.
- Disassemble and clean the exhalation valve.
- Visually inspect face piece and all parts for deterioration, distortion, or other faults that might affect the performance of the respirator.
- Replace any questionable or faulty parts.
- Reassemble mask and visually inspect completed assembly.
- Seal mask in plastic bag.

10 General Air Monitoring Requirements

10.1 General Requirements

In general, air monitoring shall be conducted when the possibility of hazardous atmospheres, chemical volatilization, or contaminated airborne dust exists (e.g., from intrusive activities involving contaminated soils or groundwater, confined space entry, or others). Anchor QEA will determine if the planned activities at the site require air monitoring activities and develop a site-specific air monitoring program as part of the site-specific HASP. Typically, air monitoring will be conducted, as necessary, during implementation of groundwater sampling activities at the Site (including activities when staging/handling waste materials with potential contamination). The monitoring devices to be used, at a minimum, are a RAE Systems MultiRAE (or equivalent) photoionization detector that measures organic vapors, oxygen, combustible gases, carbon monoxide, and hydrogen sulfide.

10.2 Air Monitoring Action Levels

Air monitoring action levels for a Site with remaining MGP-related contaminants are provided as a reference in **Table 10-1** below. This Site-specific HASP includes air monitoring requirements in accordance with all local, state, and federal regulations and existing site conditions. All air monitoring results shall be documented in the field logbook or similar form.

Table 10-1
Air Monitoring Action Levels

Contaminant/ Instrument[1]	Job Tasks/Functions	Measurement	Monitoring Schedule[2]	Actions[3]
Total Organic Vapors (using Photoionization Detector with 11.7 eV Lamp)	Conduct air monitoring for organic vapors during intrusive activities. Monitor in the workers' breathing zone.	0 to 1 ppm above background	Every 15 to 30 minutes	Acceptable, continue work.
		> 1 ppm[4] above background	Stop Work	Stop work, investigate cause of reading, consult with Project Manager and Qualified Health and Safety Representative to determine PPE, mechanical ventilation, or possible changes in work task.

Contaminant/ Instrument[1]	Job Tasks/Functions	Measurement	Monitoring Schedule[2]	Actions[3]
Hydrogen Sulfide Real-Time Gas Monitor	Conduct air monitoring for hydrogen sulfide during activities. Monitor in the workers' breathing zone.	< 1 ppm hydrogen sulfide	If PID greater than 5 ppm sustained, periodically (every 15 minutes)	Acceptable, continue work.
		≥ 1 ppm hydrogen sulfide	Stop Work	Stop work, investigate cause of reading, consult with Project Manager and Qualified Health and Safety Representative to determine PPE, mechanical ventilation, or possible changes in work task.
Carbon Monoxide Meter	Conduct air monitoring for carbon monoxide during activities. Monitor in the workers' breathing zone.	< 10 ppm	Continuous in areas carbon monoxide may be present	Acceptable, continue work.
		≥ 10 ppm		Stop work required. Leave work area and contact Project Manager and Qualified Health and Safety Representative to determine PPE, mechanical ventilation, or possible changes in work task.
Oxygen (O_2) Multi-Gas Meter	Conduct air monitoring for O_2 in work area. Monitor in the workers' breathing zone.	19.5% to 23.5%	Continuous in areas where O_2 may be out of normal range	Acceptable, continue work.
		< 19.5%, >23.5%		Stop work required. Leave work area and contact Project Manager and Qualified Health and Safety Representative for guidance.
Lower Explosive Limit (LEL) Multi-Gas Meter	Conduct air monitoring in work area. Monitor in the workers' breathing zone.	≤ 5%	Continuous	Acceptable, continue work.
		> 5% to 10%		Stop work required. Contact Project Manager and Qualified Health and Safety Representative. Implement engineering controls following consult with Project Manager and Qualified Health and Safety Representative.
		> 10%		Stop work and evacuate.

Notes:

1. Instruments must be calibrated according to manufacturer's recommendations.
2. Monitoring frequency is from the beginning of each task and at specified intervals thereafter, or when detectable contamination is encountered (as indicated by strong, sustained odor; visual evidence of product; or discolored sampling matrices).
3. For VOCs, a sustained reading for greater than 2 minutes in excess of the action level will trigger a protective measure.
4. 25 ppm total organic vapors as measured at the downwind perimeter of the work area as described in *New York State DER-10 Technical Guidance for Site Investigation and Remediation*, page 204 Appendix 1A.

eV: electron volts
PID: Photo Ionization Detector
ppm: parts per million

10.3 Equipment Calibration and Maintenance

Calibration and maintenance of all air monitoring equipment shall follow manufacturer specifications and must be documented. Recalibration and adjustment of air monitoring equipment shall be completed as site conditions and equipment operation warrant. Record all air monitoring equipment calibration and adjustment information in the field logbook.

10.4 Air Monitoring Frequency Guidelines

Air monitoring will be conducted during all groundwater sampling activities and when the following situations arise:

- It is possible that an immediately dangerous to life or health condition or a flammable atmosphere has developed (e.g., confined space entry or intrusive activities)
- There is an indication that exposures may have risen over established action levels, PELs, or published exposure levels since the last monitoring. Look for a possible rise in exposures associated with the following situations:
  - Change in site area – Work begins on a different section of the Site.
  - Change in on-Site activity – One operation ends and another begins.
  - Change in contaminants – Handling contaminants other than those first identified.
  - Visible signs of particulate exposure from intrusive activities such as drilling, boring, or excavation.
  - Perceptible chemical odors or symptoms of exposure.
  - Handling leaking drums or containers.
  - Working with obvious liquid contamination (e.g., a spill or lagoon).
  - Conduct air monitoring when the possibility of volatilization exists (such as with a new monitoring well or a well containing known contaminants of concern [COCs]).

11 General Health and Safety Procedures and Practices

In addition to the Activity Hazard Analyses forms presented in **Attachment D** and Con Edison health and safety procedures included in **Attachment E** of this HASP, this section lists general health and safety procedures and practices applicable to this project. For additional information, consult with the PM. Anchor QEA will review these procedures and incorporate company-specific and additional procedures, as necessary, to the site-specific HASP.

11.1 Physical Hazards

Physical hazards that may be encountered include but are not limited to heat stress, cold related illness, ultra-violet radiation, working on or adjacent to a waterway, and noise hazards.

11.1.1 General Site Activities

Observe the following general procedures and practices to prevent physical hazards:

- Legible and understandable precautionary labels shall be affixed prominently to containers of potentially contaminated soil, sediment, water, and clothing.
- No food or beverages shall be present or consumed in areas that have the potential to contain COCs and/or contaminated materials or equipment.
- No tobacco products or cosmetics shall be present or used in areas that have the potential to contain COCs and/or contaminated materials or equipment.
- An emergency eyewash unit shall be located immediately adjacent to employees who handle hazardous or corrosive materials, including decontamination fluids. All operations involving the potential for eye injury or splash must have approved eyewash units locally available capable of delivering at least 0.4 gallons per minute for at least 15 minutes.
- Personnel working within 10 feet of bodies of water shall wear U.S. Coast Guard (USCG)-approved personal floatation devices (PFDs).
- Certain project sites may have newly finished work (e.g., concrete, paving, framing, habitat reconstruction, or sediment caps) that may be damaged by unnecessary contact, or that could cause dangerous conditions for personnel (e.g., slipping, sinking, or tripping). Personnel working in or around these areas shall communicate with the PM, FL, and property owner as needed to prevent damaging new work or entering dangerous conditions.
- Generally, all on-site activities will be conducted during daylight hours. If work after dusk is planned or becomes necessary due to an emergency, adequate lighting must be provided.
- Hazardous work, such as handling hazardous materials and heavy loads and operating equipment, should not be conducted during severe storms.
- All temporary electrical power must have a Ground-fault Circuit Interrupter (GFCI) as part of its circuit if the circuit is not part of permanent wiring. All equipment must be suitable and approved for the class of hazard present.

11.1.2 Slips, Trips, and Falls

Observe the following procedures and practices to prevent slips, trips, and falls:

- Inspect each work area for slip, trip, and fall potential prior to each work task.
- Slip, trip, and fall hazards identified must be communicated to all personnel. Hazards identified shall be corrected or labeled with warning signs to be avoided.
- All personnel must be aware of their surroundings and maintain constant communication with each other at all times.

11.1.3 Ergonomic Considerations

Certain field tasks may involve workers in fixed positions (e.g., observing subcontractor work) or performing repetitive motions over a period of time (e.g., sediment sample processing). It is important that workers self-monitor for ergonomic fatigue (e.g., soreness, tightness, stiffness, or pain in muscles) and make adjustments to work tasks, body positions, or work areas so that ergonomic stressors are minimized. Suggestions for decreasing the likelihood of ergonomic stress include the following:

- Limit fixed positions. Periodically vary standing and sitting positions, take frequent short walks, and modify observation locations when possible.
- Minimize extreme postures. Conduct work tasks using comfortable postures (particularly if the tasks are repetitive) and use tools or structures to minimize the need to hold or work with materials or access the work area.
- Limit contact stress. Be aware of soft tissue resting on hard surfaces, and limit these occurrences (e.g., use comfortable footwear, and use tools to hold materials).
- Contact the Field Mobilization Team in advance for prolonged field efforts that involve a field trailer. This group can set up field staff with a monitor, mouse, and keyboard so they are not working solely on laptops.
- Take breaks from work tasks, particularly repetitive ones.
- Consider performing stretching exercises before and during work activities, if those tasks are anticipated to be long in duration and/or strenuous.

11.1.4 Electric Safety

Observe the following procedures and practices to prevent electric shock:

- General
  - Use only appropriately trained and certified electricians to perform tasks related to electrical equipment. A good rule of thumb is to defer any task that would not normally and reasonably be completed by the average public consumer.
  - Each circuit encountered will be considered live until proven otherwise.
  - Only proper tools will be used to test circuits.

  - No wire will be touched until the circuit is determined to be de-energized.
- Extension Cords
  - All extension cords used on any project will be three-pronged.
  - All extension cords will be in good working order.
  - Each extension cord ground will be tested for continuity on at least a quarterly basis and marked to indicate when the inspection occurred.
  - Each extension cord will be visually inspected before each use.
  - If any extension cord is found in disrepair or fails the continuity test, it will be taken out of service.
  - Any extension cord that does not have the grounding pin will be taken out of service and not used.
  - Extension cords will not be used in place of fixed wiring.
  - Extension cords will not be run through holes in walls, ceilings, or floors.
  - Extension cords will not be attached to the surface of any building.
  - No extension cord will be of the "flat wire" type. Every extension cord will have each individual wire insulated and further protected by an outside cover.
  - Be sure to locate extension cords out of traffic areas or, if this is unavoidable, flag cords and protect workers from tripping over them (i.e., use barricades and tape the cord down).
  - Do not stage extension cords or powered equipment in wet areas, to the degree possible. Elevate cords, connections, and equipment out of puddles.
- Power Tools/Plug and Cord Sets
  - Any cord that is cut in a way that exposes insulation will be removed from service.
  - All tools and plug and cord sets will be tested for continuity.
  - If grounding pins are missing, the plug and cord will be removed from service.
  - Any tool or plug and cord set failing the continuity test will be removed from service.
  - All power tools will have three-pronged plugs unless double insulated.
- Ground-fault Circuit Interrupters
  - Each 120-volt electrical wall receptacle providing power to the job site will be protected by a portable GFCI.
  - Each GFCI will be tested quarterly and marked to indicate when the inspection occurred.
  - Each 120-volt, single-phase, 15- and 20-ampere receptacle outlet, including those on generators, will have an approved GFCI.
  - GFCIs will be located in line as close to the piece of equipment as possible.
- Specific
  - If unsure if a task requires specific electrical training, err on the side of caution and contact the PM/Superintendent prior to proceeding.

- If subsurface work is to be performed, follow the guidelines and conduct utility locating prior to work and in accordance with local ordinances. Use of a checklist such as shown in **Exhibit 11-1**, below, is recommended. All Con Edison procedures listed in the Con Edison Utility Clearance Process for Intrusive Activities Revision 1, dated October 8, 2003 (Con Edison 2003), included as **Attachment B**, must be followed.
- If LO/TO procedures are required (i.e., de-energizing machinery or equipment so work may be performed), the equipment owner must provide LO/TO procedures and training. By default, the equipment owner should perform any LO/TO. If it becomes necessary for personnel to perform LO/TO tasks, contact the PM/Superintendent prior to doing so.
- Maintain appropriate distance from overhead utilities.
- If unexpected electrical equipment is encountered (i.e., buried wire) assume it is live, stop work, and contact the PM/Superintendent immediately.
- If working in enclosed or restricted areas where electrical hazards may be present, contact a licensed electrician or other suitably trained party to provide barriers, shields, or insulating materials to prevent electric shock.
- If working in areas where electrical hazards are present, ensure that conductive clothing and jewelry is replaced with non-conductive clothing, or removed.

11.1.4.1 Lockout/Tagout Procedures

Only fully qualified and trained personnel will perform maintenance procedures. Before maintenance begins on energized equipment, LO/TO procedures per OSHA 29 CFR 1910.147 will be followed.

Lockout is the placement of a device that uses a positive means, such as lock, to hold an energy- or material-isolating device such that the equipment cannot be operated until the lockout device is removed. If a device cannot be locked out, a tagout system must be used. Tagout is the placement of a warning tag on an energy- or material-isolating device to indicate that the equipment controls may not be operated until the tag is removed by the person who attached the tag.

11.1.5 General Falls/Ladders

Observe the following general falls/ladders procedures and practices:

- Assess work areas for fall hazards. A fall protection system that meets OSHA and ANSI Z3591 standards must be used if work is conducted 6 feet or more above the surface.
- Use ANSI Type 1A rated ladders.
- Ensure that ladders are placed so their rungs, cleats, and steps are parallel, level, and uniformly spaced prior to use.
- Make sure ladder rungs are sturdy and free of cracks.
- Use ladders with secure safety feet.

- Pitch ladders at a 1 horizontal to 4 vertical (1H:4V) ratio.
- Secure ladders at the top or have another person at the bottom to help stabilize it.
- Ladders used to access an upper landing surface shall extend at least 3 feet above the upper landing surface.
- Use non-conductive ladders near electrical wires.
- The top rung of a ladder should not be used as a step.
- Do not carry any object or load that could cause a loss of balance or a fall.
- If a ladder is defective, damaged, or in disrepair (i.e., broken or missing rungs, cleats, or steps; broken or split rails; corroded components; or other faulty or defective components), tag the ladder "Do Not Use" and remove it from service until repaired.

11.1.6 Hand and Power Tools

Observe the following procedures and practices when working with hand and power tools:

- Keep hand tools sharp, clean, oiled, dressed, and not abused.
- Worn tools are dangerous. For example, the "teeth" in a pipe wrench can slip if worn smooth, an adjustable wrench will slip if the jaws are sprung, and hammerheads can fly off loose handles.
- Tools subject to impact (e.g., chisels, star drills, and caulking irons) tend to "mushroom." Keep them dressed to avoid flying spalls and use tool holders.
- Do not force tools beyond their capacity.
- Flying objects can result from operating almost any power tool, so always warn people in the vicinity and use proper eye protection.
- Each power tool should be examined before use for damaged parts, loose fittings, and frayed or cut electric cords. Tag and return defective tools for repairs. Ensure that there is adequate lighting, inspect tools for proper lubrication, and relocate tools or material that could "vibrate into trouble."
- Compressed air must be shut off or the electric cord unplugged before making tool adjustments. Air must be "bled down" before replacement or disconnection.
- Proper guards or shields must be installed on all power tools before issue. Do not use improper tools or tools without guards in place.
- Replace all guards before startup. Remove cranks, keys, or wrenches used in service work.

11.1.7 Motor Vehicle Operation

All drivers are required to have a valid driver's license, and all vehicles must have appropriate state vehicle registration and inspection stickers. **Anchor QEA prohibits the use of hand-held wireless devices while driving any vehicle for business use at any time, for personal use during business hours, and as defined by law** Additionally, site-specific motor vehicle requirements must be followed, if any.

When driving to, from, and within the job site, be aware of potential hazards including:

- Vehicle accidents
- Distractions
- Fatigue
- Weather and road conditions

To mitigate these hazards, observe the following procedures and practices regarding motor vehicle operation:

- Before leaving, inspect fuel and fluid levels and air pressure in tires, and adjust mirrors and seat positions appropriately.
- Wear a seat belt at all times and make sure that clothing will not interfere with driving.
- Plan your travel route and check maps for directions or discuss with colleagues.
- Clean windows and mirrors as needed throughout the trip.
- Wear sunglasses as needed.
- Fill up when the fuel level is low (not near empty).
- Follow a vehicle maintenance schedule to reduce the possibility of a breakdown while driving.
- Stop driving the vehicle, regardless of the speed (e.g., even 5 miles per hour) or location (e.g., a private road), when the potential of being distracted by conversation exists.
- Using hand-held communication devices (e.g., cell phones) while operating any motor vehicle is prohibited.
- Get adequate rest prior to driving.
- Periodically change your seat position, stretch, open the window, or turn on the radio to stay alert.
- Pull over and rest if you are experiencing drowsiness.
- Check road and weather conditions prior to driving.
- Be prepared to adjust your driving plans if conditions change.
- Travel in daylight hours, if possible.
- Give yourself plenty of time to allow for slowdowns due to construction, accidents, or other unforeseen circumstances.
- Use lights at night and lights and wipers during inclement weather.

11.1.8 Vehicular Traffic

Observe the following procedures and practices regarding vehicular traffic:

- Wear a traffic safety vest when vehicle hazards exist.
- Use cones, flags, barricades, and caution tape to define the work area.
- Use a vehicle to block the work area (if conditions allow).
- Engage a police detail for high-traffic situations.

- Always use a spotter in tight or congested areas for material deliveries.
- As necessary, develop traffic control plans and train personnel as flaggers in accordance with the DOT MUTCD and/or local requirements.

If work activities will take place within a street, diagrams will be provided to Con Edison for mid-street and intersection traffic protection mechanisms. Work-area protection plans shall, minimally, conform to the most recent Con Edison Work Area Protection and Traffic Control Field Manual.

The work area may be located within or adjacent to a public or private roadway or sidewalk where exposure to vehicular traffic is possible. For work within roadways and sidewalks, a permit will be required, as issued by the New York City Department of Transportation or New York State Department of Transportation, or both organizations, as applicable. Signage and other control measures stipulated by the permitting authority or authorities will be applied during field activities. This may include the closure of a travel lane or lanes or sidewalks, and erection of signs, cones, barricades, or flashing lights, as applicable.

In addition, during activities along or within a roadway, equipment will be aligned parallel to the roadway to the extent feasible, facing into the oncoming traffic so as to place a barrier between the work crew and the oncoming traffic. All crewmembers must remain behind the equipment and the traffic barrier. Crewmembers working in or near streets will wear orange reflective traffic safety vests.

The flow of traffic into and out of the adjacent business and other organizations must be assessed, and precautions taken to warn motorists of the presence of workers and equipment. Where possible, vehicles should be aligned to provide physical protection to people and equipment.

11.1.9 Lifting and Material Handling

Observe the following procedures and practices for lifting and material handling:

- Use leather gloves when handling metal, wire rope, sharp debris, or transporting materials (e.g., wood, piping, or drums).
- The size, shape, and weight of the object to be lifted must first be considered. No individual employee is permitted to lift any object that weighs more than 60 pounds. Multiple employees or mechanical lifting devices are required for objects heavier than the 60-pound limit.
- Plan a lift before doing it. Bend at the knees and lift with the legs; maintain the natural curves of the back; do not use back muscles.
- Check the planned route for clearance.
- Use the buddy system when lifting heavy or awkward objects.
- Do not twist your body while lifting.

- Know the capacity of any handling device (e.g., crane, forklift, chain fall, or come-along) that you intend to use.
- Use tag lines to control loads.
- Ensure that your body, material, tools, and equipment are safe from such unexpected movement as falling, slipping, rolling, tripping, bowing, or any other uncontrolled motion.
- Trucks (i.e., flat beds) hauling equipment or materials must not be moved once rigging has been released.
- Chock all material and equipment (such as pipe, drums, tanks, reels, trailers, and wagons) as necessary to prevent rolling.
- Tie down all light, large-surface-area material that might be moved by the wind.
- When working at heights, secure tools, equipment, and wrenches against falling.
- Do not store materials or tools on ducts, lighting fixtures, beam flanges, hung ceilings, or similar elevated locations.
- Fuel-powered tools used inside buildings or enclosures shall be vented and checked for excessive noise.

11.1.10 Fire Control

Observe the following fire control procedures and practices:

- Smoke only in designated areas.
- Keep flammable liquids in closed containers.
- Keep the work site clean; avoid accumulating combustible debris such as paper.
- Obtain and follow property owner hot work safety procedures when welding or performing other activities requiring an open flame.
- Isolate flammable and combustible materials from ignition sources.
- Ensure fire safety integrity of equipment installations according to NEC specifications.

11.1.11 Static Electricity and Transfer of Flammable Liquids

Observe the following procedures and practices regarding static electricity when transferring flammable liquids:

- Electrically bond and ground pumps, transfer vessels, tanks, drums, bailers, and probes when moving flammable liquids.
- Electrically bond and ground vacuum trucks and the tanks they are emptying.
- Do not splash fill containers with flammable liquids.
- Pour flammable liquids slowly and carefully.
- Two fire extinguishers (2A20:BC) must be available, charged, inspected, and readily accessible.

11.1.12 Cleaning Equipment

Observe the following procedures and practices when cleaning equipment:

- Wear appropriate PPE to avoid skin and eye contact with isopropyl alcohol, Alconox®, or other cleaning materials.
- Stand upwind to minimize any potential inhalation exposure.
- Dispose of spent cleaning solutions and rinses accordingly.

11.2 Environmental Hazards and Controls

11.2.1 Fatigue Management

Because personnel may be working long hours, and depending on the activity, it is important that all personnel are aware of the hazards related to fatigue. Fatigue can be defined as an increasing difficulty in performing physical or mental activities. Signs of fatigue may include tiredness, changes in behavior, loss of energy, and reduced ability to concentrate. Fatigued site personnel may have a reduced ability to recognize or avoid risks on the work site, which may lead to an increase in the number and severity of injuries and other incidents. Fatigue can occur at any time when working and may cause safety concerns due to decreased manual dexterity, reaction time, and alertness.

Fatigue results from insufficient rest and sleep between activities. Contributing factors to fatigue may include the following:

- The time of day that work takes place
- The length of time spent at work and in work-related duties
- The type and duration of a work task and the environment (e.g., weather conditions and ambient noise) in which it is performed
- The quantity and quality of rest obtained prior to, during, and after a work period
- Non-work activities
- Individual factors such as sleeping disorders, medications, or emotional state

Personnel suffering from fatigue may exhibit both physical and mental effects, such as the following:

- Slower movements
- Poor coordination
- Slower response time to interaction
- Bloodshot eyes
- Slumped or weary appearance
- Nodding off
- Distractedness or poor concentration
- Inability to complete tasks
- Fixed gaze

- Appearing depressed, irritable, frustrated, or disinterested

Employees are strongly encouraged to get sufficient pre-work rest, maintain sufficient nutritional intake during work (i.e., eat and drink at regular intervals), and communicate with team members and leaders if their level of fatigue elevates.

Use the following procedures to help detect and address fatigue-related issues:

- Periodically observe and query coworkers for signs or symptoms of fatigue.
- Site personnel that express concern over their level of fatigue, or that are observed to be fatigued such that elevated worker risk is evident, will be relieved or their work tasks adjusted so that they may rest sufficiently.
- Work schedules will consider fatigue factors and optimize continuous periods available for uninterrupted sleep. The employee is responsible for reporting to work properly rested and fit for duty. In case of an emergency or operational difficulties (e.g., limited access due to water levels or boat repairs), work hours may require adjustment.
- Maintain a routine exercise program and regular sleep schedule as much as possible over the course of the work.
- Avoid heavy meals or caffeine and minimize or eliminate the consumption of alcohol and nicotine before sleeping.

11.2.2 Heat Stress

Observe the following general procedures and practices regarding heat stress:

- Increase the number of rest breaks and/or rotate site personnel in shorter work shifts.
- Watch for signs and symptoms of heat stress and fatigue.
- During hot months, plan work for early morning or evening.
- Use ice vests when necessary.
- Rest in cool, dry areas.
- Ensure that employees have access to potable drinking water and shade.
- During conditions exceeding 95° F, ensure that the following additional procedures are adhered to:
  - Establish effective communication by voice, observation, or electronic means.
  - Observe employees for alertness and signs or symptoms of heat illness.
  - Designate one or more employees on each work site as authorized to call for emergency medical services.
  - Remind employees to drink water throughout the shift.
  - Conduct pre-shift meetings before beginning work to review the high heat procedures, encourage drinking water, and remind employees of their right to take a cool-down rest when necessary.

11.2.2.1 Signs, Symptoms, and Treatment

The Key Foreperson will be trained in heat stress prevention, including the following, prior to supervising employees:

- Procedures to prevent heat illness.
- Procedures to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.

The information provided below addresses these training requirements.

Adverse climatic conditions are important considerations in planning and conducting site operations. High ambient temperature can result in health effects ranging from transient heat fatigue, physical discomfort, reduced efficiency, personal illness, and increased accident probability to serious illness or death. Heat stress is of particular concern when chemical protective garments are worn because they prevent evaporative body cooling. Wearing PPE places employees at considerable risk of developing heat stress.

Heat stress is caused by a number of interacting factors, including environmental conditions, clothing, workload, and the individual characteristics of the worker. Because heat stress is probably one of the most common (and potentially serious) illnesses, regular monitoring and other preventive precautions are vital.

Heat Rash. Heat rash can be caused by continuous exposure to hot and humid air and skin abrasion from sweat-soaked clothing, rubber boots, or impermeable waders. The condition is characterized by a localized red skin rash and reduced sweating. Heat rash reduces the ability to tolerate heat. To treat, keep skin hygienically clean and allow it to dry thoroughly after using chemical protective clothing. Take measures to prevent heat rash by changing clothes often to maximize use of dry garments or taking frequent breaks to allow doffing of equipment and drying of skin.

Heat Cramps. Heat cramps are caused by profuse perspiration with inadequate electrolytic fluid replacement. This often robs the larger muscle groups (stomach and quadriceps) of blood, which can cause painful muscle spasms and pain in the extremities and abdomen. To treat, move the employee to a cool place and give sips of water or an electrolytic drink. Watch for signs of heat exhaustion or heat stroke.

Heat Exhaustion. Heat exhaustion is a mild form of shock caused by increased stress on various organs to meet increased demand to cool the body. Onset is gradual, and symptoms should subside within 1 hour. Symptoms include a weak pulse; shallow breathing; pale, cool, moist skin; profuse sweating; dizziness; and fatigue. To treat, move the employee to a cool place and remove as much clothing as possible. Give sips of water or electrolytic solution and fan the person continuously to

remove heat by convection. Do not allow the affected person to become chilled. Treat for shock if necessary.

Heat Stroke. Heat stroke is the most severe form of heat stress; the body must be cooled immediately to prevent severe injury and/or death. ***This is a medical emergency!*** Symptoms include red, hot, dry skin; a body temperature of 105° F or higher; no perspiration; nausea; dizziness and confusion; and a strong, rapid pulse. Because heat stroke is a true medical emergency, transport the patient to a medical facility immediately. Prior to transport, remove as much clothing as possible and wrap the patient in a sheet soaked with water. Fan the patient vigorously while transporting to help reduce body temperature. If available, apply cold packs under the arms, around the neck, or any other place where they can cool large surface blood vessels. If transportation to a medical facility is delayed, reduce body temperature by immersing the patient in a cool-water bath (however, be careful not to over-chill the patient once body temperature is reduced below 102° F). If this is not possible, keep the patient wrapped in a sheet and continuously douse with water and fan.

11.2.2.2 Prevention

The implementation of preventative measures is the most effective way to limit the effects of heat-related illnesses. During periods of high heat, adequate liquids must be provided to replace lost body fluids. Replacement fluids can be a 0.1% saltwater solution, a commercial mix such as Gatorade, or a combination of these with fresh water. The replacement fluid temperature should be kept cool, 50° F to 60° F, and should be placed close to the work area. Employees must be encouraged to drink more than the amount required to satisfy thirst. Employees should also be encouraged to salt their foods more heavily during hot times of the year.

Cooling devices such as vortex tubes or cooling vests can be worn beneath impermeable clothing. If cooling devices are worn, only physiological monitoring will be used to determine work activity.

All site personnel are to rest when any symptoms of heat stress are noticed. Rest breaks are to be taken in a cool, shaded rest area. Employees shall remove chemical protective garments during rest periods and will not be assigned other tasks.

All employees shall be informed of the importance of adequate rest and proper diet, including the harmful effects of excessive alcohol and caffeine consumption.

11.2.2.3 Monitoring

Heat stress monitoring should be performed when employees are working in environments exceeding 90° F ambient air temperature. If employees are wearing impermeable clothing, this monitoring should begin at 77° F. There are two general types of monitoring that the Health and Safety Representative can designate to be used: wet bulb globe temperature (WBGT), and

physiological. The Heat Stress Monitoring Record form (**Attachment A**) will be used to record the results of heat stress monitoring.

Wet Bulb Globe Temperature. The WBGT index is the simplest and most suitable technique to measure the environmental factors that most nearly correlate with core body temperature and other physiological responses to heat. When WBGT exceeds 25° C (77° F), the work regiment in **Table 11-2** should be followed.

Table 11-2
Permissible Heat Exposure Threshold Limit Values

Work/Rest Regimen	Workload		
	Light	Moderate	Heavy
Continuous work	86°F (30.0°C)	80°F (26.7°C)	77°F (25.0°C)
75% work, 25% rest each hour	87°F (30.6°C)	82°F (28.0°C)	78°F (25.9°C)
50% work, 50% rest, each hour	89°F (31.4°C)	85°F (29.4°C)	82°F (27.9°C)
25% work, 75% rest, each hour	90°F (32.2°C)	88°F (31.1°C)	86°F (30.0°C)
These TLVs assume that nearly all acclimated, fully-clothed site personnel with adequate water and salt intake should be able to function effectively under the given working conditions without exceeding a deep body temperature of 100.4° F (38C).			

(From OSHA Technical Manual, Section III: Chapter 4 - Heat Stress)

The TLVs denoted in **Table 11-2** above apply to physically fit and acclimatized individuals wearing light, summer clothing. If heavier clothing that impedes sweat or has a higher insulation value is required, the permissible heat exposure TLVs should be adjusted based on the WBGT Correction Factors in **Table 11-3**, below.

Table 11-3
WBGT Correction Factors

Clothing Type	WBGT Correction
Summer lightweight working clothing	0°F (0°C)
Cotton coveralls	-3.6°F (-2°C)
Winter work clothing	-7.2°F (-4°C)
Water barrier, permeable	-10.8°F (-6°C)
Fully encapsulating	-14.4°F (-10°C)

Physiological. Physiological monitoring can be used in lieu of, or in addition to, WBGT. This monitoring can be self-performed once the Health and Safety Representative demonstrates appropriate techniques to affected employees. Because individuals vary in their susceptibility to heat,

this type of monitoring has its advantages. The following two parameters are to be monitored at the beginning of each rest period:

- **Heart Rate** – The maximum heart rate (MHR) is the amount of work (beats) per minute a healthy person's heart can be expected to safely deliver. Each individual will count his/her radial (wrist) pulse for 1 minute as early as possible during each rest period. If the heart rate of any individual exceeds 75% of his/her calculated MHR (MHR – 200 - age) at the beginning of the rest period, then the work cycle will be decreased by one-third. The rest period will remain the same. An individual is not permitted to return to work until his/her sustained heart rate is below 75% of his/her calculated MHR.
- **Temperature** – Each individual will measure his/her temperature with a thermometer for 1 minute as early as possible in the first rest period. If the temperature exceeds 99.6° F at the beginning of the rest period, then the work cycle will be decreased by one-third. The rest period will remain the same. An individual is not permitted to return to work if his/her temperature exceeds 100.4° F.

11.2.2.4 Training

Employees potentially exposed to heat stress conditions will be instructed on the contents of this procedure. This training can be conducted during daily tailgate safety meetings.

11.2.3 Cold Stress

Observe the following procedures and practices regarding cold stress:

- Take breaks in heated shelters when working in extremely cold temperatures.
- Upon entering the shelter, remove the outer layer of clothing and loosen other layers to promote evaporation of perspiration.
- Drink warm liquids to reduce the susceptibility to cold stress.
- Be aware of cold stress symptoms, including shivering, numbness in the extremities, and sluggishness.
- Provide adequate insulating dry clothing to maintain warmth if work is performed in air temperature below 40° F. Wind chill cooling rates and the cooling power of air are critical factors. The higher the wind speed and the lower the temperature in the work area, the greater the insulation value of the protective clothing required.
- If the air temperature is 32° F or less, hands should be protected.
- If only light work is involved and if the clothing on the worker may become wet on the job site, the outer layer of the clothing in use should be impermeable to water. With more severe work under such conditions, the outer layer should be water repellent, and the outer wear should be changed as it becomes wetted. The outer garments should include provisions for easy ventilation in order to prevent wetting of the inner layer by sweat.

- If available clothing does not give adequate protection to prevent cold injury, work should be modified or suspended until adequate clothing is made available, or until weather conditions improve.
- Implement a buddy system in which site personnel are responsible for observing fellow workers for early signs and symptoms of cold stress.

11.2.3.1 Signs, Symptoms, and Treatment

Cold stress can range from frostbite to hypothermia. The signs and symptoms of cold stress are listed below. The appropriate guidelines should be followed if any personnel exhibit these symptoms:

Frostbite. Frostbite is characterized by pain in the extremities and loss of manual dexterity. "Frostnip," or reddening of the tissue, is accompanied by a tingling or loss of sensation in the extremities and continuous shivering.

Hypothermia. Hypothermia is characterized by pain in the extremities and loss of manual dexterity, with severe, uncontrollable shivering, and an inability to maintain the level of activity. Symptoms include excessive fatigue, drowsiness, irritability, or euphoria. Severe hypothermia includes clouded consciousness, low blood pressure, pupil dilation, cessation of shivering, unconsciousness, and possible death.

Move the patient to a warm, dry place. If the patient's clothing is wet, remove it and replace it with dry clothing. Keep the patient warm. Re-warming of the patient should be gradual to avoid stroke symptoms. Dehydration, or the loss of body fluids, may result in a cold injury due to a significant change in blood flow to the extremities. If the patient is conscious and alert, warm sweet liquids should be provided. Coffee and other caffeinated liquids should be avoided because of diuretic and circulatory effects. Extremities affected by frostbite should be gradually warmed up and returned to normal temperature. Moist compresses should be applied; begin with lukewarm compresses and slowly increase the temperature as changes in skin temperature are detected. Keep the patient warm and calm and move them to a medical facility as soon as possible.

11.2.4 Sunlight and Ultraviolet Exposure

Observe the following procedures and practices regarding ultraviolet (UV) exposure:

- Protect against extended exposure to sunlight with shade, long clothing, sunscreen, and high-SPF, broad-spectrum sunscreen applied frequently.
- Plan work to avoid unnecessary UV exposure.
- During peak daylight months, plan work for early morning or evening.
- Many factors affect the hazards associated with UV exposure, including the following:
  - **Time of day:** UV rays are strongest between 10 am and 4 pm.

  - **Season of the year:** UV rays are stronger during spring and summer months. This is less of a factor near the equator.
  - **Distance from the equator (latitude):** UV exposure goes down as you get farther from the equator.
  - **Altitude:** More UV rays reach the ground at higher elevations.
  - **Cloud cover:** The effect of clouds can vary. Sometimes cloud cover blocks some UV from the sun and lowers UV exposure, while some types of clouds can reflect UV and increase UV exposure. What is important to know is that UV rays can get through, even on a cloudy day.
  - **Reflection off surfaces:** UV rays can bounce off surfaces like water, sand, snow, pavement, or grass, leading to an increase in UV exposure.
- Cloud cover does not necessarily protect from UV exposure. Consider monitoring the UV index for your work area: http://www2.epa.gov/sunwise/uv-index.
- Evaluate site-specific factors affecting UV exposure and address work practices as appropriate.

11.2.4.1 Signs, Symptoms, and Treatment

The best way to treat sunburn is to prevent it using the guidelines listed in the bullets above. Signs of sunburn include the following:

- Pinkness or redness
- Skin that feels warm or hot to the touch
- Pain, tenderness, or itching
- Swelling
- Small, fluid-filled blisters, which may break
- Headache, fever, chills, and fatigue if the sunburn is severe

If signs of sunburn are noticed, avoid further exposure and immediately implement treatment. If the sunburn is blistering *and* covers 15% or more of the body, seek medical attention.

11.2.4.2 Prevention

UV exposure hazards and their impacts on each worksite should be evaluated to determine the best practices for risk mitigation. The most effective way to prevent skin damage from UV exposure is to protect bare skin from the exposure. This can be accomplished with shade, clothing (e.g., pants, long sleeves, or hats), sunscreen, and sunglasses. Plan work to either create shade or take advantage of natural shade and avoid peak UV times during the day when possible.

11.2.5 Inclement Weather

Observe the following procedures and practices regarding inclement weather:

- Evaluate the worksite for hazards that may be amplified during inclement weather, such as traction issues, ingress and egress, slope stability, or wind-driven hazards (e.g., dust, debris, or falling trees).
- Stop outdoor work during electrical storms (lightning strikes), hailstorms, high winds, and other extreme weather conditions such as extreme heat or cold.
- Take cover indoors or in a vehicle that will provide adequate protection. In some cases, this may require exiting the worksite, such as during windstorms in areas with overhead hazards (e.g., trees or power lines).
- Listen to local forecasts for warnings about specific weather hazards such as tornadoes, hurricanes, and flash floods.
- Verify that on-site equipment and resources are adequately protected from inclement weather.
- If working in an unfamiliar geographic location, consult with local resources for unique weather hazards.

11.2.6 Insects/Spiders

Observe the following general procedures and practices regarding insects/spiders:

- Tuck pants into socks.
- Wear long sleeves.
- Use insect repellent.
- Avoid contact by always looking ahead to where you will be walking, standing, sitting, leaning, grabbing, lifting, or reaching.
- Check for signs of insect/spider bites, such as redness, swelling, and flu-like symptoms.

The most dangerous spiders to humans in North America are black widows and brown spiders (also known as brown recluse or fiddleback spiders). A guide to identifying these spiders is presented in **Table 11-4**.

Table 11-4
North American Hazardous Spider Identification Guide

Hazardous Spider Identification Guide	
Black Widow Spider • Abdomen usually shows hourglass marking • Female is 3 to 4 centimeters in diameter • Have been found in well casings and flush-mount covers • Not aggressive, but more likely to bite if guarding eggs • Light, local swelling and reddening are early signs of a bite, followed by intense muscular pain, rigidity of the abdomen and legs, difficulty breathing, and nausea • If bitten, see a physician as soon as possible	
Brown Spiders (aka Brown Recluse or Fiddleback) • Found in the central and southern United States, although in some other areas, as well • 1/4-to-1/2-inch-long body, and size of a silver dollar • Hide in baseboards, ceiling cracks, and undisturbed piles of material • Bite may either go unnoticed or may be followed by a severe localized reaction, including scabbing, necrosis of the affected tissue, and very slow healing • If bitten, see a physician as soon as possible	

11.2.7 Bees and Wasps

Many encounters with bees and wasps occur when nests built in well casings or excavation areas are disturbed. Before opening a well casing, take a few moments to observe whether or not insects are entering or exiting. If they are flying to and from the casing, avoid it if possible. If you must be in an area where disturbing a nest is likely, be sure to wear long pants and a long-sleeved shirt. Stinging insects fly around the top of their target, so if you get into trouble, pull a portion of your shirt over your head and run away.

If you get stung, look for a stinger and, if present, remove it as soon as possible. Several over-the-counter products or a simple cold compress can be used to alleviate the pain of the sting. If the sting is followed by severe symptoms, or if it occurs in the neck or the mouth, seek medical attention immediately because swelling could cause suffocation.

If you need to destroy a nest, consult with the Key Foreman first. Commercially available stinging insect control aerosols are very effective but could potentially contaminate the well. Once the nest is destroyed, fine mesh may be applied over the exit and entry points of a well casing to prevent re-infestation.

11.2.8 Ticks

Ticks in North America can be carriers of several diseases, including Lyme's Disease, Rocky Mountain Spotted Fever, and ehrlichiosis.

Limiting exposure to ticks reduces the likelihood of infection when exposed to tick-infested habitats. Measures to prevent tick exposure include the following:

- Remove leaf litter and brush in areas where you will be working prior to tick season.
- Wear light-colored clothing so that ticks are visible.
- Tuck your pant legs into your socks.
- Apply repellents to discourage tick attachment.
- Promptly inspect your body and remove crawling or attached ticks when you leave a tick-infested area.
- Conduct tick checks on buddies upon exiting any suspect area (may be needed multiple times per work day).
- Be aware of seasonal activity; ticks are often most active in the spring.

Observe the following procedures and practices if you are bitten by a tick:

- Use fine-tipped tweezers or shield your fingers with tissue, paper towel, or rubber gloves.
- Grasp the tick as close to the skin surface as possible and pull upward with steady, even pressure. Do not twist or jerk the tick; this may cause mouthparts to break off and remain in the skin.
- Do not squeeze, crush, or puncture the body of the tick because its fluids may contain infectious organisms.
- Do not handle the tick with bare hands because infectious agents may enter through mucous membranes or breaks in the skin.
- After removing the tick, thoroughly disinfect the bite site and wash your hands with soap and water.
- You may wish to save the tick for identification in case you become ill within 2 to 3 weeks. Place the tick in a sealed plastic bag in the freezer and mark the bag with the date of the bite.

11.2.9 Mosquitoes

Mosquitoes in the United States have been known to carry West Nile virus, Zika virus, St. Louis encephalitis, and Dengue fever. Avoid mosquito bites by doing the following:

- Apply insect repellent containing DEET (N,N-diethyl-meta-toluamide) when outdoors. DEET is very effective but could potentially contaminate samples.
- Read and follow the product directions whenever you use insect repellent.

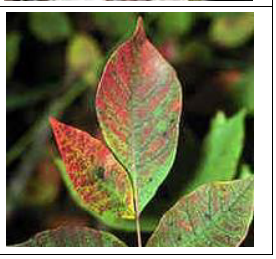
- Wear long-sleeved clothes and long pants treated with repellent to further reduce your risk or stay indoors during peak mosquito feeding hours (dusk until dawn).
- Limit the number of places available for mosquitoes to lay their eggs by eliminating standing water sources from around the work area.
- If you need to destroy a mosquito nest, consult with the PM and project FL first.
- Check to see if there is an organized mosquito control program near the project site. If no program exists, work with the local government officials to establish a program.

11.2.10 Poisonous Plants

Poisonous plants include poison ivy, poison oak, and poison sumac as shown in **Table 11-5**. Observe the following procedures and practices regarding poisonous plants:

- Avoid entering areas infested with poisonous plants.
- Immediately wash any areas that come into contact with poisonous plants.
- Use PPE when there is a possibility of contact with poisonous plants.

Table 11-5
North American Hazardous Plant Identification Guide

Hazardous Plant Identification Guide		
Poison Ivy • Grows in the West, Midwest, Texas, and the East Coast • Several forms—vine, trailing shrub, or shrub • Three leaflets (can vary from three to nine) • Leaves are green in summer and red in fall • Yellow or green flowers • White berries		
Poison Oak • Grows in the East (New Jersey to Texas) and Pacific Coast • 6-foot tall shrubs or long vines • Oak-like leaves in clusters of three • Yellow berries		
Poison Sumac • Grows in boggy areas, especially in the Southwest and Northern United States • Shrub up to 15 feet tall • Seven to 13 smooth-edged leaflets • Glossy pale yellow or cream-colored berries		

If you have been exposed to poison ivy, oak, or sumac, act quickly because the toxin in the plants penetrates the skin within minutes. If possible, stay outdoors until you complete the first two steps:

1. Cleanse the exposed skin with generous amounts of isopropyl alcohol.
2. Wash the skin with water.
3. Take a regular shower with soap and warm water. Do not use soap until this point because it will pick up the toxin from the surface and move it around.
4. Wash clothes, tools, and anything else that may have been in contact with the toxin with alcohol and water. Be sure to wear hand protection during that process.

Signs and symptoms of exposure include redness and swelling that appears 12 to 48 hours after exposure. Blistering and itching will follow. If you have had a severe reaction in the past, you should see a physician right away. Over-the-counter products that are available to alleviate symptoms include Cortaid®, Lanacort®, baking soda, Aveeno® oatmeal baths, and calamine lotion.

11.2.11 The Public at Large

The community residents around worksites may pose their own specific hazards. These conditions may include the following:

- Unintentional disruption of work
- Benign or malicious trespass
- Criminal intent

Scenarios may include the following:

- Pedestrians, cyclists, or motorists disregarding site boundaries due to distraction or willful disobedience.
- Public use of private site facilities for shelter, relief, and other reasons with no ill-intention.
- Public use of private site facilities for mischievous or criminal activity, such as loitering, vandalism, or theft.
- Encounters with community members who are disgruntled with the project activity.
- Encounters with criminal activities on or near a project site.

If any of the above are anticipated to be likely, take the following precautions as appropriate:

- Verify that the site is adequately marked and barricaded to limit unintentional disruptions of the work by the public.
- Review the site for attractive nuisances (e.g., hazards or conditions that are likely to attract children) and mitigate those.
- Secure all equipment and site facilities to prevent unauthorized access or use.
- Remove valuable items from the site or adequately secure them on site to limit the temptation for potential criminals.

- Have contact information for the client's or owner's public relations office while on site, and direct disgruntled community members to that office. If necessary, vacate the site to relieve the situation and notify the PM/Superintendent.
- Work in pairs when uncertain of the public safety situation at a site. In questionable situations, postpone work as necessary until a plan of action can be developed to verify a safe working environment.

11.2.12 Personal Health and Safety

In addition to hazards associated with chemicals of concern, equipment, operations, or site conditions discussed above, there may be additional personal safety issues to consider at a site, including those related to one or multiple protected classes, such as race, gender, religion, ability, sexual orientation, or gender identity. These conditions may involve the following, perpetrated by the public or those associated with the work:

- Malicious disruption of work
- Harassment, including unwanted comments, gestures, or actions
- Threats of violence, either implied (using derogatory language) or explicit
- Assault

Specifically, if any of the above are anticipated, take the following precautions as appropriate:

- Alert the PM, Key Foreman, and/or Human Resources Department of potential issue(s).
- Formulate a plan of action to verify and maintain a safe working environment prior to field work, which may include the following:
  - Working in pairs and/or within a certain physical distance of other work groups.
  - Coordinated check-ins (calls to or from the office or visual check-ins with other field members).
- Whenever possible, schedule work only within daylight hours (which fluctuate seasonally) or on weekends when questionable scenarios may be more minimal.
  - If night work is required, maintain a minimum of two field personnel at all times, and potentially increase the total number of personnel.
  - If working in high-risk areas, discuss the possibility of hiring security if work needs to be performed at night, in low light, or near potentially dangerous areas (e.g., abandoned buildings, public displays of hostility, discrimination, or gang-related activity).
- Maintain a field phone with active GPS and non-locking 911 capability at all times while out in the field.
- If a need arises for a change in field work (e.g., additional sampling or moving to an area that was not planned) or travel plans (e.g., dead battery or flat tire), immediately alert the FL and PM as to the event.

In addition, practice active awareness of your environment. Discuss personal health and safety concerns at the daily tailgate meeting. If you feel unsafe based on the potential behavior of others, immediately bring it up to field team coworkers. If the issue is not resolved to your satisfaction, alert the PM, Key Foreman, and/or Human Resources Department to assist in resolving any potential issue(s).

12 Decontamination Procedures and Practices

12.1 Minimization of Contamination

The following measures will be observed to prevent or minimize exposure to potentially contaminated materials:

Personnel

- Do not walk through spilled materials.
- Do not handle, touch, or smell sample media directly.
- Make sure PPE has no cuts or tears prior to use.
- Protect and cover any skin injuries.
- Stay upwind of airborne dusts and vapors.
- Do not eat, drink, chew tobacco, or smoke in the work zones.

12.2 Decontamination of Equipment

All vehicles and equipment that have entered or contacted potentially contaminated areas will be visually inspected and, if necessary, decontaminated prior to leaving the area. If the level of vehicle contamination is low, decontamination may be limited to rinsing tires and wheel wells with an appropriate detergent and water. If the vehicle is significantly contaminated, steam cleaning or pressure washing may be required. Tools will be cleaned in the same manner. Rinsate from all decontamination activities will be collected for proper disposal. Decontamination of equipment and tools will take place within the CRZ.

The following supplies will be available to perform decontamination activities:

- Wash and rinse buckets
- Tap water and phosphate-free detergent
- Scrub brushes
- Distilled/deionized water
- Pressure washer/steam cleaner, if appropriate
- Paper towels and plastic garbage bags

Site-specific work plans for the planned intrusive work activities may include additional requirements for equipment decontamination, including minimum requirements for post decontamination verification testing.

12.3 Personnel Decontamination

The Key Foreperson will ensure that all site personnel are familiar with personnel decontamination procedures as listed below. All personnel wearing PPE in a work area EZ must undergo

decontamination prior to entering the SZ. Personnel will perform the following decontamination procedures:

- Wash and rinse outer gloves and boots in portable buckets to remove gross contamination.
- If suit is heavily soiled, rinse it off.
- Remove outer gloves; inspect and discard if damaged. Leave inner gloves on. Personnel will remove their outer garment and gloves, dispose of them, and properly label container or drum. Personnel will then decontaminate their hard hats and boots with an aqueous solution of detergent or other appropriate cleaning solution. These items then will be hand-carried to the next station. At the next station workers will remove their respirator (if applicable) and decontaminate with appropriate cleaning solution and place in a clean plastic bag. Finally, workers will remove and dispose of inner gloves.
- Thoroughly wash hands and face before leaving CRZ.
- Sanitize respirators and place in a clean plastic bag.

12.3.1 Disposable PPE

Disposable PPE may include inner latex gloves and respirator cartridges. Dispose of PPE according to the requirements of the client and state and federal agencies.

12.3.2 Non-Disposable PPE

Non-disposable PPE may include respirators and boots and gloves. When decontaminating respirators, observe the following practices and procedures:

- Wipe out the respirator with a disinfecting pad prior to donning.
- Decontaminate the respirator on site at the close of each day with an approved sanitizing solution.

When decontaminating boots and gloves, observe the following practices and procedures:

- Decontaminate the boots or gloves outside with a solution of detergent and water; rinse with water prior to leaving the site.
- Protect the boots or gloves from exposure by covering with disposable covers such as plastic to minimize required decontamination activities.

12.4 Sanitizing of Personal Protective Equipment

Respirators, reusable protective clothing, and other personal articles must not only be decontaminated before being reused, but also sanitized. The insides of masks and clothing become soiled due to exhalation, body oils, and perspiration. Manufacturer's instructions should be used to sanitize respirator masks. If practical, reusable protective clothing should be machine-washed after a thorough decontamination; otherwise, it must be cleaned by hand.

12.5 Emergency Personnel Decontamination

Personnel with medical problems or injuries may also require decontamination. There is the possibility that the decontamination may aggravate or cause more serious health effects. If prompt life-saving, first aid, and medical treatment are required, decontamination procedures will be omitted. In either case, a member of the site management team will accompany contaminated personnel to the medical facility to advise on matters involving decontamination.

12.6 Containment of Decontamination Fluids

As necessary, spill control measures will be used to contain contaminated runoff that may enter into clean areas. Use plastic sheeting, hay bales, or install a spill control system to prevent spills and contain contaminated water.

13 Emergency Procedures

13.1 General

The PM/Superintendent will ensure that comprehensive site-specific emergency procedures and appropriate action plans have been established prior to any work at the Site. The purpose of these procedures and plans are to ensure that immediate mitigative and corrective emergency response actions are in place to minimize the consequences of an emergency, protect worker and public health and safety, provide security, and ensure the continuance of such actions until the emergency is terminated. Development and implementation of an Emergency Action Plan is required for prompt, efficient, and effective response to emergencies in accordance with applicable local, staff, and federal regulations.

This section presents basic components of the Site-specific emergency action plan in addition to the information presented under Site Emergency Procedures in the beginning of this HASP (see page v). that will be developed and implemented Anchor QEA.

Prior to the start of work activities, the work area will be evaluated for the potential for fire, contaminant release, or other catastrophic event. Unusual conditions or events, activities, chemicals, and conditions will be reported to the PM/Superintendent, Key Foreperson, and Health and Safety Representative immediately for appropriate action. Emergency muster locations will be identified and communicated to all Site personnel.

13.2 Emergency Equipment/General Procedures

The following emergency equipment will be available at the Site at all times:

- First Aid Kit
- Fire Extinguishers (appropriate for the type of materials expected to be encountered)
- Portable Eyewash Kit

Evacuation drills will be conducted at the start of the project and periodically to practice emergency procedures. The Health and Safety Representative will conduct and critique (if necessary) the emergency response exercises.

14 Periodic Safety Inspections/Audits

The PM/Superintendent, or their designee, will implement an audit and inspection program including monthly safety inspections (at a minimum). The site inspection is a protocol designed to identify and correct unsafe acts and conditions, as well as recognize safe work practices and accomplishments in the party performing the work or their subcontractors' Scope of Work. The PM/Superintendent should develop standard safety checklists appropriate to the work being performed. **Exhibit 14-1** is an example of a simple checklist to evaluate a project's status, and should be modified to address potential unsafe acts and conditions specific to work activities occurring at the Site.

Inspections involve a daily or weekly site walk of a project site that focuses on safety. Daily site walks do not have to be documented, but once a week the PM, or designee, prepares an inspection report and retains in the project file. Items found to be out of compliance must be assigned to the responsible party for corrective action and the corrective action tracked to completion.

Exhibit 14-1
Example Site Safety and Health Inspection Checklist

Project: _____ Date: _____
Name: _____ Time: _____

Any items that have been found deficient must be corrected before work or use.

This checklist includes, but is not limited to, the following:

Safe Access and Workspace		Yes	No
Are safe access and adequate space for movement available for:			
Emergencies			
Work area			
Walkways and passageways			
Are ladders, stairways, and elevators properly located and functioning?			
Is protection provided for floor and roof openings?			
Is overhead protection provided for all areas of exposure?			
Is lighting adequate?			
Planning Work for Safety			
Are employees provided with all required protective equipment?			
Have other contractors and trades been coordinated with to prevent congestion and avoid hazards?			
Is all temporary flooring, safety nets, and scaffolding provided where required?			
Utilities and Services Identification			
High voltage lines			
Have all been identified by signs?			
Have high voltage lines been moved or de-energized, or barriers erected to prevent employee contact?			
Sanitary Facilities			
Drinking water			
Are toilet facilities adequate?			
Work Procedures – Materials Handling			
Is material handling space adequate?			
Is material handling equipment adequate and proper?			
Is material handling equipment in good condition?			
Marine Safety			
Slip, trip, fall hazards	Muscle strain from improper lifting		
Heat or cold stress	Pinch points		
Insect bites	Inhaling, touching, ingesting contaminants		
Waves, surges, currents			
Noise exposure	Drowning		
Other (e.g., tunnels, excavations, shafts			

Comments:

_____

_____

_____

15 Con Edison Written Progressive Disciplinary Program

As directed by Con Edison, items found to be out of compliance must be assigned to the responsible party for corrective action and the corrective action tracked to completion. The project shall have a formal notice of subcontractor violation of health and safety regulations program to ensure that violations are issued in an IDLH situation or when the subcontractor repeatedly fails to comply with health and safety requirements. Any noncompliance items must be advised to the responsible party using a Notice of Violation, an example is included as **Exhibit 15-1**. The notice (**Exhibit 15-1**) documents poor performance and requires a response from subcontractor senior management. The notice contains five distinct levels of discipline, from submission of a recovery plan to contract termination.

Exhibit 15-1
Example Notice of Violation of Safety and Health Regulations

Date _____

Contractor Name _____

Address _____

_____

_____

Attention _____

This letter officially notifies you that you have been found to be in violation(s) of the following Safety Regulations:

_____

on (date): _____ by, _____

Confined Space Entry ____ Lockout/Tagout ____ Hot Work _____ Personal Protective Equipment ____

Knowledge of the Environment ____ Awareness of Wanring Alarms ____ Evaculation Routes _____ Back-up Alarms ____

Assembly Locations ____ Fall Protection ____ Scaffolding _____ Environmental/Hazardous Material Storage ____

SafeWrok Practices ____ Security Practices ____

Other: _____

_____

This/These violation(s) occurred at the following location(s): _____

_____

at the following time(s): _____ and date(s): _____

The name(s) of the employee(s) was/were: _____

under the supervision of: _____

16 Recordkeeping Policy

The following steps must be taken to document implementation of the site-specific HASP:

- Records of hazard assessment inspections, including the persons conducting the inspection, the unsafe conditions and work practices that have been identified and the action taken to correct the identified unsafe conditions and work practices, are recorded on a hazard assessment and correction form.
- Documentation of health and safety training for each worker, including the worker's name or other identifier, training dates, types of training, and training providers are recorded on a worker training and instruction form.
- Other records are retained as required by contract specifications or by local, state, or federal (OSHA regulations). Where regulations do not specify the length of records retention, a period of 3 years after project completion will be used.

17 Investigation-Derived Waste

Investigation-derived waste (IDW) will be generated as part of fieldwork completed under this HASP. IDW will include PPE and solid waste such as gloves, plastic sheeting, and tubing used for collecting groundwater samples as well as purged groundwater removed from monitoring wells prior to sample collection. Gloves and used tubing will be collected and bagged. If not visibly impacted with former MGP waste (e.g., coal tar), bagged gloves and tubing will be disposed of in a commercial dumpster as general waste at the Anchor QEA office.

Purged groundwater will be collected in a 55-gallon steel drum. The drum will be labeled and picked up by a licensed waste transporter on the same day as sampling is completed. A waste characterization sample will be collected to confirm the drums contents conform to the non-hazardous waste profile that has been prepared. HydroChem PSC is the Con Edison-approved waste hauler that Anchor QEA has subcontracted to transport the drum of groundwater. The drum will be transported to Stericycle's Hatfield PA facility, a Con Edison-approved disposal facility, for disposal pending the waste characterization analytical results.

18 References

Anchor QEA, 2017a. *East 21st Street Works Former MGP Site, Manhattan, New York. Site Management Plan*. Former Manufactured Gas Plant Site (NYSDEC VCP INDEX No. D2-003-02-08, SITE No.: V00536). Prepared for Consolidated Edison Co. of New York. October 2017.

Anchor QEA, 2017b. *East 14th Street Works former MGP Site, East 17th and 19th Street Stations, Manhattan, New York. Site Management Plan*. Former Manufactured Gas Plant Site (NYSDEC VCP INDEX No. D2-003-02-08, SITE No.: V00536). Prepared for Consolidated Edison Co. of New York. October 2017.

Anchor QEA, 2018. *NAPL Recovery Well Installation Plan*. Prepared for Consolidated Edison Co. of New York. May 2018.

Beers, F.W., A. D. Ellis & G. C. Soulle, 1868. *Atlas of New York and Vicinity*. New York: Beers, Ellis & Soule.

Con Edison (Consolidated Edison of New York), 2003. *Utility Clearance Process for Intrusive Activities*. EH&S Remediation Program. October 8, 2003.

USEPA (U.S. Environmental Protection Agency), 1988. *US Production of Manufactured Gases: Assessment of Past Disposal Practices.* EPA/600/2-88/012. February 1988.

Attachment A
Health and Safety Plan Forms

Daily Air Monitoring Record

Project Name: _____ **Date:** _____

Project Number: _____ **Location:** _____

Temperature: _____

Conditions: _____

_____

_____

_____

COC	Instrument	S/N	Calibration Date	Calibration Gas/Method	Calibration by
Organic vapors					
Particulates					
O_2					
Other:					
Other:					
Other:					

Time	Location/Description	Organic Vapor (ppm)	O2%	CG %LEL	Other	Other

Notes:

Completed by:

Printed Name _____ Signature _____ Date _____

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Daily Safety Briefing Form

Date: _____

Project No: _____

Project Name: _____

Person Conducting Meeting: _____ **Health & Safety Officer:** _____ **Project Manager:** _____

TOPICS COVERED: *Highlighted topics are required*

- ☐ Emergency Procedures and Evacuation Route
- ☐ Directions to Hospital
- ☐ HASP Review and Location
- ☐ Safety Equipment Location
- ☐ Proper Safety Equipment Use
- ☐ Employee Right-to-Know/ SDS Location
- ☐ Fire Extinguisher Location
- ☐ Eye Wash Station Location
- ☐ Buddy System
- ☐ Self and Coworker Monitoring
- ☐ Lines of Authority
- ☐ Communication
- ☐ Site Security
- ☐ Vessel Safety Protocols
- ☐ Work Zones
- ☐ Vehicle Safety and Driving/ Road Conditions
- ☐ Equipment Safety and Operation
- ☐ Proper Use of PPE
- ☐ Decontamination Procedures
- ☐ Near Miss Reporting Procedures
- ☐ Lifting Techniques
- ☐ Slips, Trips, and Falls
- ☐ Hazard Exposure Routes
- ☐ Heat and Cold Stress
- ☐ Overhead and Underfoot Hazards
- ☐ Chemical Hazards
- ☐ Flammable Hazards
- ☐ Biological Hazards
- ☐ Eating/Drinking/Smoking
- ☐ Reviewed Prior Lessons Learned
- ☐ Field Team Medical Conditions for Emergency Purposes (Confidential): _____
- ☐ Other: _____

Weather Conditions: _____

Daily Work Scope: _____

Site-specific Hazards: _____

Safety Comments: _____

Attendees

Printed Name	Signature

End of Day Wellness Check

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Modification to Health and Safety Plan

Date: _____

Project No: _____

Project Name: _____

Modification: _____

_____

_____

_____

_____

Reason for Modification: _____

_____

_____

_____

_____

_____

Site Personnel Briefed

Name: _____ **Date:** _____

Name: _____ **Date:** _____

Name: _____ **Date:** _____

Name: _____ **Date:** _____

Name: _____ **Date:** _____

Name: _____ **Date:** _____

Name: _____ **Date:** _____

Name: _____ **Date:** _____

Name: _____ **Date:** _____

Name: _____ **Date:** _____

Approvals

Field Lead: _____ _____ _____
Printed Name | Signature | Date

Project Manager: _____ _____ _____
Printed Name | Signature | Date

Heat Stress Monitoring Record

Date: _____

Project No: _____

Project Name: _____

Location: _____

Employee Name	Monitoring Results												
	Initial Reading Time:	First Work Period Time:		Second Work Period Time:		Third Work Period Time:		Fourth Work Period Time:		Fifth Work Period Time:		Sixth Work Period Time:	
	WBGT (°F):	WBGT (°F):		WBGT (°F):		WBGT (°F):		WBGT (°F):		WBGT (°F):		WBGT (°F):	
	Air Temp (°F):	Air Temp (°F):		Air Temp (°F):		Air Temp (°F):		Air Temp (°F):		Air Temp (°F):		Air Temp (°F):	
	Initial Temp:	Initial Temp:	Final Temp:	Initial Temp:	Final Temp:	Initial Temp:	Final Temp:	Initial Temp:	Final Temp:	Initial Temp:	Final Temp:	Initial Temp:	Final Temp:
	Initial H.R.:	Initial H.R.:	Final H.R.:	Initial H.R.:	Final H.R.:	Initial H.R.:	Final H.R.:	Initial H.R.:	Final H.R.:	Initial H.R.:	Final H.R.:	Initial H.R.:	Final H.R.:
	Initial Temp:	Initial Temp:	Final Temp:	Initial Temp:	Final Temp:	Initial Temp:	Final Temp:	Initial Temp:	Final Temp:	Initial Temp:	Final Temp:	Initial Temp:	Final Temp:
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Notes:

Completed by:

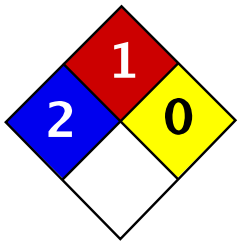
Printed Name _____ Signature _____ Date _____

PLAYING IT SAFE

Attachment B
Training Records

Attachment C
Safety Data Sheets for Chemicals of Concern





Health	2
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Acenaphthene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Acenaphthene

Catalog Codes: SLA2332

CAS#: 83-32-9

RTECS: AB1000000

TSCA: TSCA 8(b) inventory: Acenaphthene

CI#: Not applicable.

Synonym: Ethylenenaphthalene

Chemical Name: 1,8-Dehydroacenaphthalene

Chemical Formula: C10H6(CH2)2

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Acenaphthene	83-32-9	100

Toxicological Data on Ingredients: Acenaphthene LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects: Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at

least 15 minutes. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Flammable in presence of oxidizing materials.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Combustible.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Solid needles.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 154.21 g/mole

Color: White.

pH (1% soln/water): Not applicable.

Boiling Point: 277.5°C (531.5°F)

Melting Point: 93.6 (200.5°F)

Critical Temperature: Not available.

Specific Gravity: 1.02 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol.

Solubility:
Partially soluble in methanol.
Insoluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
LD50: Not available.
LC50: Not available.

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Material is irritating to mucous membranes and upper respiratory tract.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:
Pennsylvania RTK: Acenaphthene
Massachusetts RTK: Acenaphthene
New Jersey: Acenaphthene
TSCA 8(b) inventory: Acenaphthene
CERCLA: Hazardous substances.: Acenaphthene

Other Regulations: Not available.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC): R36/38- Irritating to eyes and skin.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent.
Splash goggles.

Section 16: Other Information

References:
-Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987.
-The Sigma-Aldrich Library of Chemical Safety Data, Edition II.

Other Special Considerations: Not available.

Created: 10/09/2005 03:35 PM

Last Updated: 11/06/2008 12:00 PM

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Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

Printing date: 31.12.2013 **Revision:** 31.12.2013

1 Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name: ALCONOX**

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture:** Cleaning material/ Detergent

· **1.3 Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
Alconox, Inc.
30 Glenn St., Suite 309
White Plains, NY 10603
Phone: 914-948-4040
· **Further information obtainable from:** Product Safety Department

· **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585

2 Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**


GHS05 corrosion
Eye Dam. 1; H318: Causes serious eye damage.


GHS07
Skin Irrit. 2; H315: Causes skin irritation.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**


Xi; Irritant
R38-41: Irritating to skin. Risk of serious damage to eyes.
· **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
· **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

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· **Hazard pictograms**



GHS05

· **Signal word:** Danger

· **Hazard-determining components of labelling:**
sodium dodecylbenzene sulfonate
· **Hazard statements**
H315: Causes skin irritation.
H318: Causes serious eye damage.
· **Precautionary statements**
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P264: Wash thoroughly after handling.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or doctor/physician.
P321: Specific treatment (see on this label).
P362: Take off contaminated clothing and wash before reuse.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
· **Hazard description:**
· **WHMIS-symbols:**
D2B - Toxic material causing other toxic effects



· **NFPA ratings (scale 0 - 4)**



Health = 1
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1
Fire = 0
Reactivity = 0

· **HMIS Long Term Health Hazard Substances**
None of the ingredients is listed.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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3 Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**		
CAS: 68081-81-2	sodium dodecylbenzene sulfonate Xn R22; Xi R36	10-25%
	Acute Tox. 4, H302; Eye Irrit. 2, H319	
CAS: 497-19-8 EINECS: 207-838-8 Index number: 011-005-00-2	Sodium Carbonate Xi R36	2,5-10%
	Eye Irrit. 2, H319	
CAS: 7722-88-5 EINECS: 231-767-1	tetrasodium pyrophosphate substance with a Community workplace exposure limit	2,5-10%
CAS: 151-21-3 EINECS: 205-788-1	sodium dodecyl sulphate Xn R21/22; Xi R36/38	2,5-10%
	Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2, H319	

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· **4.1 Description of first aid measures**
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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· **5.2 Special hazards arising from the substance or mixture:** No further relevant information available.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information:** No further relevant information available.

6 Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Product forms slippery surface when combined with water.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.
Clean the affected area carefully; suitable cleaners are:
Warm water
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **7.1 Precautions for safe handling**
Prevent formation of dust.
Keep receptacles tightly sealed.
· **Information about fire - and explosion protection:** No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Protect from humidity and water.
· **7.3 Specific end use(s):** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
7722-88-5 tetrasodium pyrophosphate	
REL (USA)	5 mg/m³
TLV (USA)	TLV withdrawn
EV (Canada)	5 mg/m³

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· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
Not required under normal conditions of use.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
· **Material of gloves**
Butyl rubber, BR
Nitrile rubber, NBR
Natural rubber, NR
Neoprene gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:**



Safety glasses

· **Body protection:** Protective work clothing

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9 Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Powder
Colour:	White
· **Odour:**	Odourless
· **Odour threshold:**	Not determined.
· **pH-value (10 g/l) at 20 °C:**	9,5 (- NA for Powder form)
· **Change in condition**	
Melting point/Melting range:	Not Determined.
Boiling point/Boiling range:	Undetermined.
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not determined.
· **Ignition temperature:**	
Decomposition temperature:	Not determined.
· **Self-igniting:**	Product is not self-igniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapour pressure:**	Not applicable.
· **Density at 20 °C:**	1,1 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not applicable.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with water:**	Soluble.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· **Solvent content:**	
Organic solvents:	0,0 %
Solids content:	100 %
· **9.2 Other information**	No further relevant information available.

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10 Stability and reactivity

· **10.1 Reactivity**
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions**
Reacts with acids.
Reacts with strong alkali.
Reacts with strong oxidizing agents.
· **10.4 Conditions to avoid:** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Phosphorus compounds
Sulphur oxides (SOx)

11 Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **On the skin:** Irritant to skin and mucous membranes.
· **On the eye:** Strong irritant with the danger of severe eye injury.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability:** No further relevant information available.
· **12.3 Bioaccumulative potential:** Not worth-mentioning accumulating in organisms
· **12.4 Mobility in soil:** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.

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· **vPvB:** Not applicable.
· **12.6 Other adverse effects:** No further relevant information available.

13 Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Smaller quantities can be disposed of with household waste.
Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.
The surfactant used in this product complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· **14.1 UN-Number** · **DOT, ADR, IMDG, IATA, ICAO**	Not Regulated
· **14.2 UN proper shipping name** · **DOT, ADR, IMDG, IATA, ICAO**	Not Regulated
· **14.3 Transport hazard class(es)** · **DOT, ADR, IMDG, IATA, ICAO** · **Class**	Not Regulated
· **14.4 Packing group** · **DOT, ADR, IMDG, IATA, ICAO**	Not Regulated
· **14.5 Environmental hazards:** · **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	Not Regulated

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15 Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **United States (USA)**
· **SARA**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.
· **Section 313 (Specific toxic chemical listings):**
None of the ingredients is listed.
· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**
None of the ingredients is listed.
· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.
· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.
· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.
· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.
· **TLV (Threshold Limit Value established by ACGIH)**
None of the ingredients is listed.
· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.
· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

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· **Canada**

· **Canadian Domestic Substances List (DSL)**	
All ingredients are listed.	
· **Canadian Ingredient Disclosure list (limit 0.1%)**	
None of the ingredients is listed.	
· **Canadian Ingredient Disclosure list (limit 1%)**	
497-19-8	Sodium Carbonate
7722-88-5	tetrasodium pyrophosphate
151-21-3	sodium dodecyl sulphate

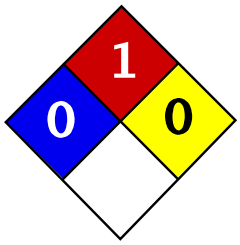
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H302: Harmful if swallowed.
H312: Harmful in contact with skin.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
R21/22: Harmful in contact with skin and if swallowed.
R22: Harmful if swallowed.
R36: Irritating to eyes.
R36/38: Irritating to eyes and skin.

· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)



Health	0
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Anthracene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Anthracene

Catalog Codes: SLA3670

CAS#: 120-12-7

RTECS: CA9350000

TSCA: TSCA 8(b) inventory: Anthracene

CI#: Not available.

Synonym:

Chemical Formula: C14H10

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Anthracene	120-12-7	100

Toxicological Data on Ingredients: Anthracene LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of skin contact (irritant, sensitizer), of eye contact (irritant), of inhalation. Hazardous in case of skin contact (permeator), of ingestion. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:
Very hazardous in case of skin contact (irritant, sensitizer), of eye contact (irritant), of inhalation.
Hazardous in case of skin contact (permeator), of ingestion.
CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH, 1 (Clear evidence.) by NTP, + (Proven.) by OSHA.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance is toxic to kidneys, lungs, mucous membranes.
Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 540°C (1004°F)

Flash Points: CLOSED CUP: 121°C (249.8°F).

Flammable Limits: LOWER: 0.6%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid.

Odor: Slight.

Taste: Not available.

Molecular Weight: 178.22 g/mole

Color: Colorless.

pH (1% soln/water): Not applicable.

Boiling Point: 342°C (647.6°F)

Melting Point: 218°C (424.4°F)

Critical Temperature: Not available.

Specific Gravity: 1.25 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: 6.15 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Not available.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
LD50: Not available.
LC50: Not available.

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH, 1 (Clear evidence.) by NTP, + (Proven.) by OSHA.
Causes damage to the following organs: kidneys, lungs, mucous membranes.

Other Toxic Effects on Humans:
Very hazardous in case of skin contact (irritant, sensitizer), of inhalation.
Hazardous in case of skin contact (permeator), of ingestion.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:
Pennsylvania RTK: Anthracene
Massachusetts RTK: Anthracene
TSCA 8(b) inventory: Anthracene
SARA 313 toxic chemical notification and release reporting: Anthracene
CERCLA: Hazardous substances.: Anthracene

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R38- Irritating to skin.
R41- Risk of serious damage to eyes.
R43- May cause sensitization by skin
contact.
R45- May cause cancer.

HMIS (U.S.A.):

Health Hazard: 0

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 0

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Splash goggles.

Section 16: Other Information

References: Not available.

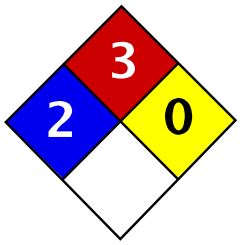
Other Special Considerations: Not available.

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Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Benzene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Benzene

Catalog Codes: SLB1564, SLB3055, SLB2881

CAS#: 71-43-2

RTECS: CY1400000

TSCA: TSCA 8(b) inventory: Benzene

CI#: Not available.

Synonym: Benzol; Benzine

Chemical Name: Benzene

Chemical Formula: C6-H6

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Benzene	71-43-2	100

Toxicological Data on Ingredients: Benzene: ORAL (LD50): Acute: 930 mg/kg [Rat]. 4700 mg/kg [Mouse]. DERMAL (LD50): Acute: >9400 mg/kg [Rabbit]. VAPOR (LC50): Acute: 10000 ppm 7 hours [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of eye contact (irritant), of inhalation. Hazardous in case of skin contact (irritant, permeator), of ingestion. Inflammation of the eye is characterized by redness, watering, and itching.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH, 1 (Proven for human.) by IARC.
MUTAGENIC EFFECTS: Classified POSSIBLE for human. Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female [POSSIBLE].
The substance is toxic to blood, bone marrow, central nervous system (CNS).
The substance may be toxic to liver, Urinary System.
Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention immediately.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 497.78°C (928°F)

Flash Points: CLOSED CUP: -11.1°C (12°F). (Setaflash)

Flammable Limits: LOWER: 1.2% UPPER: 7.8%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Highly flammable in presence of open flames and sparks, of heat.
Slightly flammable to flammable in presence of oxidizing materials.
Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.
Explosive in presence of oxidizing materials, of acids.

Fire Fighting Media and Instructions:
Flammable liquid, soluble or dispersed in water.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards:
Extremely flammable liquid and vapor. Vapor may cause flash fire.
Reacts on contact with iodine heptafluoride gas.

Dioxygenyl tetrafluoroborate is as very powferful oxidant. The addition of a small particle to small samples of benzene, at ambient temperature, causes ignition.
Contact with sodium peroxide with benzene causes ignition.
Benzene ignites in contact with powdered chromic anhydride.
Virgorous or incandescent reaction with hydrogen + Raney nickel (above 210 C) and bromine trifluoride.

Special Remarks on Explosion Hazards:
Benzene vapors + chlorine and light causes explosion.
Reacts explosively with bromine pentafluoride, chlorine, chlorine trifluoride, diborane, nitric acid, nitryl perchlorate, liquid oxygen, ozone, silver perchlorate.
Benzene + pentafluoride and methoxide (from arsenic pentafluoride and potassium methoxide) in trichlorotrifluoroethane causes explosion.
Interaction of nitryl perchlorate with benzene gave a slight explosion and flash.
The solution of permanganic acid (or its explosive anhydride, dimaganese heptoxide) produced by interaction of permanganates and sulfuric acid will explode on contact with benzene.
Peroxodisulfuric acid is a very powferful oxidant. Uncontrolled contact with benzene may cause explosion.
Mixtures of peroxomonsulfuric acid with benzene explodes.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Flammable liquid.
Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 0.5 STEL: 2.5 (ppm) from ACGIH (TLV) [United States]
TWA: 1.6 STEL: 8 (mg/m3) from ACGIH (TLV) [United States]
TWA: 0.1 STEL: 1 from NIOSH
TWA: 1 STEL: 5 (ppm) from OSHA (PEL) [United States]
TWA: 10 (ppm) from OSHA (PEL) [United States]
TWA: 3 (ppm) [United Kingdom (UK)]
TWA: 1.6 (mg/m3) [United Kingdom (UK)]
TWA: 1 (ppm) [Canada]
TWA: 3.2 (mg/m3) [Canada]
TWA: 0.5 (ppm) [Canada]Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor:
Aromatic. Gasoline-like, rather pleasant.
(Strong.)

Taste: Not available.

Molecular Weight: 78.11 g/mole

Color: Clear Colorless. Colorless to light yellow.

pH (1% soln/water): Not available.

Boiling Point: 80.1 (176.2°F)

Melting Point: 5.5°C (41.9°F)

Critical Temperature: 288.9°C (552°F)

Specific Gravity: 0.8787 @ 15 C (Water = 1)

Vapor Pressure: 10 kPa (@ 20°C)

Vapor Density: 2.8 (Air = 1)

Volatility: Not available.

Odor Threshold: 4.68 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 2.1

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether, acetone.

Solubility:
Miscible in alcohol, chloroform, carbon disulfide oils, carbon tetrachloride, glacial acetic acid, diethyl ether, acetone.
Very slightly soluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources, incompatibles.

Incompatibility with various substances: Highly reactive with oxidizing agents, acids.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Benzene vapors + chlorine and light causes explosion.
Reacts explosively with bromine pentafluoride, chlorine, chlorine trifluoride, diborane, nitric acid, nitryl perchlorate, liquid oxygen, ozone, silver perchlorate.
Benzene + pentafluoride and methoxide (from arsenic pentafluoride and potassium methoxide) in trichlorotrifluoroethane causes explosion.
Interaction of nitryl perchlorate with benzene gave a slight explosion and flash.
The solution of permanganic acid (or its explosive anhydride, dimaganese heptoxide) produced by interaction of permanganates and sulfuric acid will explode on contact with benzene.
Peroxodisulfuric acid is a very powferful oxidant. Uncontrolled contact with benzene may cause explosion.
Mixtures of peroxomonsulfuric acid with benzene explodes.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.
Acute oral toxicity (LD50): 930 mg/kg [Rat].
Acute dermal toxicity (LD50): >9400 mg/kg [Rabbit].
Acute toxicity of the vapor (LC50): 10000 7 hours [Rat].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH, 1 (Proven for human.) by IARC.
MUTAGENIC EFFECTS: Classified POSSIBLE for human. Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.
DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female [POSSIBLE].
Causes damage to the following organs: blood, bone marrow, central nervous system (CNS).
May cause damage to the following organs: liver, Urinary System.

Other Toxic Effects on Humans:
Very hazardous in case of inhalation.
Hazardous in case of skin contact (irritant, permeator), of ingestion.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
May cause adverse reproductive effects (female fertility, Embryotoxic and/or foetotoxic in animal) and birth defects.
May affect genetic material (mutagenic).
May cause cancer (tumorigenic, leukemia))
Human: passes the placental barrier, detected in maternal milk.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:
Skin: Causes skin irritation. It can be absorbed through intact skin and affect the liver, blood, metabolism,and urinary system.
Eyes: Causes eye irritation.
Inhalation: Causes respiratory tract and mucous membrane irritation. Can be absorbed through the lungs. May affect behavior/Central and Peripheral nervous systems (somnolence, muscle weakness, general anesthetic, and

other symptoms similar to ingestion), gastrointestinal tract (nausea), blood metabolism, urinary system.
Ingestion: May be harmful if swallowed. May cause gastrointestinal tract irritation including vomiting. May affect behavior/Central and Peripheral nervous systems (convulsions, seizures, tremor, irritability, initial CNS stimulation followed by depression, loss of coordination, dizziness, headache, weakness, pallor, flushing), respiration (breathlessness and chest constriction), cardiovascular system, (shallow/rapid pulse), and blood.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Benzene UNNA: 1114 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Benzene
California prop. 65 (no significant risk level): Benzene: 0.007 mg/day (value)
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Benzene
Connecticut carcinogen reporting list.: Benzene
Connecticut hazardous material survey.: Benzene
Illinois toxic substances disclosure to employee act: Benzene
Illinois chemical safety act: Benzene
New York release reporting list: Benzene
Rhode Island RTK hazardous substances: Benzene
Pennsylvania RTK: Benzene
Minnesota: Benzene
Michigan critical material: Benzene
Massachusetts RTK: Benzene
Massachusetts spill list: Benzene
New Jersey: Benzene
New Jersey spill list: Benzene
Louisiana spill reporting: Benzene
California Director's list of Hazardous Substances: Benzene

TSCA 8(b) inventory: Benzene
SARA 313 toxic chemical notification and release reporting: Benzene
CERCLA: Hazardous substances.: Benzene: 10 lbs. (4.536 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R11- Highly flammable.
R22- Harmful if swallowed.
R38- Irritating to skin.
R41- Risk of serious damage to eyes.
R45- May cause cancer.
R62- Possible risk of impaired fertility.
S2- Keep out of the reach of children.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S39- Wear eye/face protection.
S46- If swallowed, seek medical advice immediately and show this container or label.
S53- Avoid exposure - obtain special instructions before use.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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Last Updated: 11/06/2008 12:00 PM

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Material Safety Data Sheet Collection
Genium group inc.
1171 RiverFront Center, Amsterdam, NY 12010
(518) 842-4111

Benzo(a)pyrene
BEN5560

Issue Date: 2006-06

Section 1 - Chemical Product and Company Identification 61

Material Name: Benzo(a)pyrene **CAS Number:** 50-32-8
Chemical Formula: $C_{20}H_{12}$
EINECS Number: 200-028-5
ACX Number: X1002798-4
Synonyms: B(A)P; BAP; BENZO(D,E,F)CHRYSENE; 3,4-BENZOPIRENE; 1,2-BENZOPYRENE; 3,4-BENZOPYRENE; 6,7-BENZOPYRENE; BENZO(A)PYRENE; 3,4-BENZPYREN; 3,4-BENZ(A)PYRENE; 3,4-BENZPYRENE; BENZ(A)PYRENE; BENZ[A]PYRENE; 3,4-BENZYLPYRENE; 3,4-BENZYPYRENE; 3,4-BP; BP; COAL TAR PITCH VOLATILES: BENZO(A)PYRENE
Derivation: Synthesized from pyrene and succinic anhydride.
General Use: Benzo(a)pyrene is no longer used or produced commercially in the US. In its pure form, benzo(a)pyrene may be used as a research laboratory reagent. It also occurs in combustion products of coal, oil, petroleum, wood and other biological matter; in motor vehicle and other gasoline and diesel engine exhaust; in charcoal-broiled foods; in cigarette smoke and general soot and smoke of industrial, municipal, and domestic origin. It occurs naturally in crude oils, shale oils, coal tars, gases and fly ash from active volcanoes and forest fires.

Section 2 - Composition / Information on Ingredients

Name	CAS	%
Benzo(a)pyrene	50-32-8	ca 100% wt

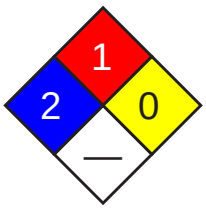
Except in laboratories, benzo(a)pyrene is usually mixed with other coal tar pitch chemicals. Consider exposure limits for coal tar pitch volatiles as a guideline. However, because benzo(a)pyrene is considered a probable carcinogen to humans, it is recommended that exposures to carcinogens be limited to the lowest feasible concentration.

OSHA PEL
TWA: 0.2 mg/m^3.

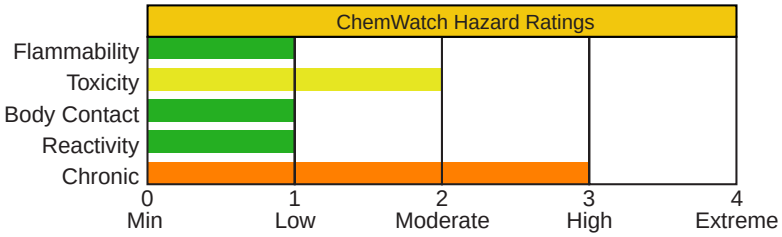
NIOSH REL

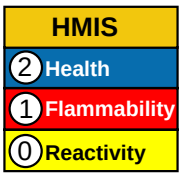
ACGIH TLV
Exposure by all routes should be carefully controlled to levels as low as possible.

Section 3 - Hazards Identification



Fire Diamond





ANSI Signal Word

Warning!

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Pale yellow, crystalline solid or powder. Irritating to skin, eyes, respiratory tract. Chronic Effects: carcinogen, mutagen. Handle with extreme caution!

Potential Health Effects

Target Organs: Respiratory system, bladder, kidneys, skin.
Primary Entry Routes: Inhalation, ingestion.

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Acute Effects

Inhalation: Respiratory tract irritation. Pregnant women may be especially susceptible to exposure effects of benzo(a)pyrene; exposure may damage the fetus. In general, polyaromatic hydrocarbons such as benzo(a)pyrene tend to localize primarily in body fat and fatty tissues (for ex. breasts) and are excreted in breast milk. Benzo(a)pyrene may also affect the male reproductive system (testes and sperm).

Eye: Irritation and/or burns on contact.

Skin: Irritation with burning sensation, rash, and redness; dermatitis on prolonged exposure. Sunlight enhances effects (photosensitization).

Ingestion: None reported.

Carcinogenicity: NTP - Class 2B, Reasonably anticipated to be a carcinogen, sufficient evidence of carcinogenicity from studies in experimental animals; IARC - Group 2A, Probably carcinogenic to humans; OSHA - Not listed; NIOSH - Listed as carcinogen; ACGIH - Class A2, Suspected human carcinogen; EPA - Class B2, Probable human carcinogen based on animal studies; MAK - Class A2, Unmistakably carcinogenic in animal experimentation only.

Medical Conditions Aggravated by Long-Term Exposure: Respiratory system, bladder, kidney, and skin disorders.

Chronic Effects: Inhalation: Cough and bronchitis. Eye: Photosensitivity and irritation. Skin: Skin changes such as thickening, darkening, pimples, loss of color, reddish areas, thinning of the skin, and warts. Sunlight enhances effects (photosensitization). Other: Gastrointestinal (GI) effects include leukoplakia (a pre-cancerous condition characterized by thickened white patches of epithelium on mucous membranes, especially of the mouth). Cancer of the lung, skin, kidneys, bladder, or GI tract is also possible. Smoking in combination with exposure to benzo(a)pyrene increases the chances of developing lung cancer. Persons with a high degree of inducibility of the enzyme aryl hydrocarbon hydroxylase may be a high risk population.

Section 4 - First Aid Measures

See DOT ERG

Inhalation: Remove exposed person to fresh air and support breathing as needed.

Eye Contact: *Do not* allow victim to rub or keep eyes tightly shut. Gently lift eyelids and flush immediately and continuously with flooding amounts of tepid water for at least 15 min. Consult an ophthalmologist if irritation or pain persist.

Skin Contact: *Quickly* remove contaminated clothing. Rinse with flooding amounts of water (less than 15 min). Wash exposed area with soap and water. For reddened or blistered skin, consult a physician.

Ingestion: Never give anything by mouth to an unconscious or convulsing person. Contact a poison control center. Unless the poison control center advises otherwise, have the *conscious and alert* person drink 1 to 2 glasses of water to dilute. Inducing vomiting is not necessary since benzo(a)pyrene has a low acute toxicity and therefore, is generally an unnecessary procedure. Consider activated charcoal/cathartic.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: Monitor CBC and arterial blood gases, conduct liver, renal, and pulmonary function tests (if respiratory tract irritation is present), and urinalysis. Biological monitoring techniques testing for metabolites in blood or urine, or DNA adducts in blood or tissues are useful for epidemiological studies that determine if exposure has occurred. Because neither normal nor toxic levels have been established, those techniques may not be useful for evaluating individual patients.

Special Precautions/Procedures: Emergency personnel should protect against exposure.

Section 5 - Fire-Fighting Measures

See DOT ERG

Flash Point: None reported. Benzo(a)pyrene may burn, but does *not* readily ignite.

Autoignition Temperature: None reported.

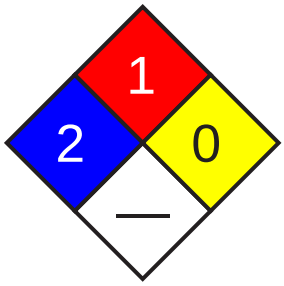
LEL: None reported.

UEL: None reported.

Extinguishing Media: For small fires, use dry chemical, sand, water spray, or foam. For large fires, use water spray, fog, or foam.

General Fire Hazards/Hazardous Combustion Products: Carbon monoxide and carbon dioxide.

Fire-Fighting Instructions: Isolate hazard and deny entry. If feasible and without undue risk, move containers from fire hazard area. Otherwise, cool fire-exposed containers with water spray until well after fire is extinguished. Do not release runoff from fire control methods to sewers or waterways. Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode and full protective clothing.



Fire Diamond

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Section 6 - Accidental Release Measures

Spill/Leak Procedures: Notify safety personnel of large spills, remove heat and ignition sources, and provide adequate ventilation. Cleanup personnel should protect against dust inhalation and skin or eye contact. Clean up spills promptly.

See DOT ERG

Small Spills: Carefully scoop up spilled material and place into appropriate containers for disposal. For liquid spills, take up with a noncombustible, inert absorbent and place into appropriate containers for disposal.

Large Spills: For large spills, dike far ahead of liquid spill or contain dry spill for later disposal. Do not release into sewers or waterways. *Do not* dry sweep! Use a vacuum with a HEPA filter or a wet method to reduce dust. After cleanup is complete, thoroughly decontaminate all surfaces. *Do not* reuse contaminated cleaning materials.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Handle with extreme caution and take all necessary measures to avoid exposure to benzo(a)pyrene because it is a carcinogen and mutagen. Follow good personal hygiene procedures and thoroughly wash hands with soap and water after handling. Use safety pipettes for all pipetting.

Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Recommended Storage Methods: Store in tightly closed and properly labeled containers in a cool, well-ventilated area.

Regulatory Requirements: Follow applicable OSHA regulations.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use a Class I, Type B, biological safety hood when working with benzo(a)pyrene in a laboratory. Decrease the rate of air extraction, so that benzo(a)pyrene can be handled without powder being blown around the hood. Keep glove boxes under negative pressure. Use vertical laminar-flow, 100% exhaust, biological safety cabinets for containment of in vitro procedures. The exhaust air flow should be sufficient to provide an inward air flow at the face opening of the cabinet. Ensure contaminated air sheaths that are under positive pressure are leak-tight. Never use horizontal laminar-flow hoods or safety cabinets where filtered air is blown across the working area towards the operator. Test cabinets before work begins to ensure they are functioning properly. Provide general or local exhaust ventilation systems to maintain airborne concentrations as low as possible. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls: Consider preplacement and periodic medical examinations with emphasis on the oral cavity, bladder, kidneys, skin, and respiratory tract. Conduct urinalysis including specific gravity, albumin, glucose, and microscopic examination of centrifuged sediment for red blood cells. Also, include 14" x 17" chest roentgenogram, FVC + FEV1, and CBC to detect any leukemia or aplastic anemia. It is recommended that this exam be repeated on an annual basis and semiannual basis for employees 45 yr of age or older or with 10 or more years of exposure to coal tar pitch volatiles. Train workers about the hazards of benzo(a)pyrene and the necessary protective measures to prevent exposure. Periodically inspect lab atmospheres, surfaces such as walls, floors, and benches, and interior of fume hoods and air ducts for contamination. Post appropriate signs and labels on doors leading into areas where benzo(a)pyrene is used.

Personal Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. In animal laboratories, wear protective suits (disposable, one-piece and close-fitting at ankles and wrists), gloves, hair covering, and overshoes. In chemical laboratories, wear gloves and gowns. Wear protective eyeglasses or chemical safety, gas-proof goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Because contact lens use in industry is controversial, establish your own policy.

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. The following respirator recommendations are for coal tar pitch volatiles. For any unknown concentration, wear any SCBA with a full facepiece and operated in a pressure- demand or other positive pressure mode, or any supplied-air respirator with a full facepiece and operated in a pressure-demand or other positive pressure mode in combination with an auxiliary SCBA operated in pressure-demand or other positive pressure mode. For escape, wear any air-purifying full facepiece respirator (gas mask) with a chin-style or front- or back-mounted organic vapor canister having a high-efficiency particulate filter, or any appropriate escape-type SCBA. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

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Other: Shower and change clothes after exposure or at the end of the workshift. Separate contaminated work clothes from street clothes. Launder before reuse. Remove benzo(a)pyrene from your shoes and clean personal protective equipment. Use procedures to ensure laundry personnel are not exposed. Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Section 9 - Physical and Chemical Properties

Appearance/General Info: Pale yellow monoclinic needles with a faint, aromatic odor.
Physical State: Solid
Vapor Pressure (kPa): >1 mm Hg at 68 °F (20 °C)
Formula Weight: 252.30
Specific Gravity (H_2O=1, at 4 °C): 1.351
Boiling Point: >680 °F (>360 °C); 590 °F (310 °C) at 10 mm Hg
Freezing/Melting Point: 354 °F (179 °C)
Water Solubility: Insoluble; 0.0038 mg (+/- 0.00031 mg) in 1 L at 77 °F (25 °C)
Other Solubilities: Ether, benzene, toluene, xylene, concentrated hydrosulfuric acid; sparingly soluble in alcohol, methanol.

Section 10 - Stability and Reactivity

Stability/Polymerization/Conditions to Avoid: Benzo(a)pyrene is stable at room temperature in closed containers under normal storage and handling conditions. It undergoes photo-oxidation when exposed to sunlight or light in organic solvents and is also oxidized by chromic acid and ozone. Hazardous polymerization cannot occur. Avoid heat and ignition sources and incompatibles.
Storage Incompatibilities: Strong oxidizers (chlorine, bromine, fluorine) and oxidizing chemicals (chlorates, perchlorates, permanganates, and nitrates).
Hazardous Decomposition Products: Thermal oxidative decomposition of benzo(a)pyrene can produce carbon monoxide and carbon dioxide.

Section 11 - Toxicological Information

Acute Oral Effects:
Rat, oral: 15 mg/kg produced gastrointestinal and musculoskeletal tumors.
Irritation Effects:
Mouse: 14 µg caused mild irritation.
Other Effects:
Rat, oral: 40 mg/kg on the 14th day of pregnancy caused changes in the extra embryonic structures.
Rat, oral: 2 g/kg administered 28 days prior to mating and 1-22 days of pregnancy produced a stillbirth.
Tumorgenicity, mouse, oral: 75 mg/kg administered to the female during the 12- 14 day of pregnancy produced biochemical and metabolic effects on the newborn.
Mouse, inhalation: 200 ng/m^3/6 hr administered intermittently over 13 weeks produced tumors of the lungs.
Human, HeLa cell: 1500 nmol/L caused DNA inhibition.
Human, lung cell: 1 µmol/L caused DNA damage.
Human, liver cell: 100 nmol/L caused DNA damage.
Rabbit, skin: 17 mg/kg administered intermittently over 57 weeks produced tumors of the skin and appendages.

See *RTECS* DJ3675000, for additional data.

Section 12 - Ecological Information

Environmental Fate: If released to water, benzo(a)pyrene adsorbs very strongly to particulate matter and sediments, bioconcentrates in aquatic organisms which cannot metabolize it, but does not hydrolyze. Direct photolysis at the water surface, evaporation, or biodegradation may be important, but adsorption may significantly retard these processes. Adsorption to particulates may also retard direct photolysis when benzo(a)pyrene is released to air. Benzo(a)pyrene may be removed from air by reaction with nitrogen dioxide (half-life, 7 days) or ozone (half-life, 37 min), or photochemically produced hydroxyl radicals (estimated half-life, 21.49 hr). It will adsorb very strongly to the soil. Although it is not expected to appreciably leach to the groundwater, groundwater samples indicate that it can be transported there. It is not expected to significantly evaporate or hydrolyze from soils and surfaces. However, it may be subject to appreciable biodegradation in soils. It will adsorb very strongly to the soil. Although it is not expected to appreciably leach to the groundwater, groundwater samples indicate that it can be transported there. It is not expected to significantly evaporate or hydrolyze from soils and surfaces. However, it may be subject to appreciable biodegradation in soils.
Ecotoxicity: Oysters, BCF (bioconcentration factor): 3000; rainbow trout, BCF: 920; *Daphnia pulex*, BCF: 13,000.
BCF: Some marine organisms such as phytoplankton, certain zooplankton, scallops (*Placopecten sp*), snails (*Litternia littorea*), and mussels (*Mytilus edulis*) lack a metabolic detoxification enzyme system to metabolize benzo(a)pyrene and therefore, tend to accumulate benzo(a)pyrene. Humic acid in solution may decrease bioconcentration.
Octanol/Water Partition Coefficient: log K_{ow} = 6.04

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Section 13 - Disposal Considerations

Disposal: Small quantities: 10 mL of a solution containing 0.3 mol/L of potassium permanganate and 3 mol/L of sulfuric acid will degrade 5 mg of benzo(a)pyrene. Also, can treat with sodium dichromate in strong sulfuric acid (1-2 days). Benzo(a)pyrene is also a good candidate for fluidized bed incineration at a temperature range of 842 to 1796 °F (450 to 980 °C) or rotary kiln incineration at 820 to 1600°C. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

Section 14 - Transport Information

DOT Hazardous Materials Table Data (49 CFR 172.101):



Shipping Name and Description: Environmentally hazardous substances, solid, n.o.s.
ID: UN3077
Hazard Class: 9 - Miscellaneous hazardous material
Packing Group: III - Minor Danger
Symbols: G - Technical Name Required
Label Codes: 9 - Class 9
Special Provisions: 8, 146, B54, IB8, N20
Packaging: **Exceptions:** 155 **Non-bulk:** 213 **Bulk:** 240
Quantity Limitations: **Passenger aircraft/rail:** No limit **Cargo aircraft only:** No limit
Vessel Stowage: **Location:** A **Other:**

Section 15 - Regulatory Information

EPA Regulations:

RCRA 40 CFR: Listed U022 Toxic Waste
CERCLA 40 CFR 302.4: Listed per RCRA Section 3001, per CWA Section 307(a) 1 lb (0.454 kg)
SARA 40 CFR 372.65: Listed
SARA EHS 40 CFR 355: Not listed
TSCA: Listed

Section 16 - Other Information

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Material Safety Data Sheet Collection
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(518) 842-4111

Calcium Cyanide
CAL4040

Issue Date: 2006-06

Section 1 - Chemical Product and Company Identification 61

Material Name: Calcium Cyanide
CAS Number: 592-01-8
Chemical Formula: C_2CaN_2
Structural Chemical Formula: $Ca(CN)_2$
EINECS Number: 209-740-0
ACX Number: X1005026-5
Synonyms: CALCID; CALCIUM CYANIDE; CALCIUM CYANIDE MIXTURE,SOLID; CALCIUM CYANIDE,SOLID; CALCYAN; CALCYANIDE; CYANIDE OF CALCIUM; CYANOGAS; CYANURE DE CALCIUM; CYMAG; DEGESCH CALCIUM CYANIDE A-DUST; EPA PESTICIDE CHEMICAL CODE 074001
Derivation: Produced by fusing calcium cyanamide with sodium chloride to give a crude mixture of calcium cyanide and sodium cyanide or by treating powdered calcium oxide with boiling anhydrous hydrocyanic acid in the presence of an accelerator such as ammonia or water.
General Use: Used as a rodenticide; fumigant for greenhouses, grain, seed, and citrus fruits; for leaching gold and silver ores; as a stabilizer for cements; and in the manufacture of other cyanides and steel.

Section 2 - Composition / Information on Ingredients

Name	CAS	%
Calcium Cyanide	592-01-8	ca 40-58% wt (commercial preparation)

Trace Impurities: May contain up to 3% calcium carbide.

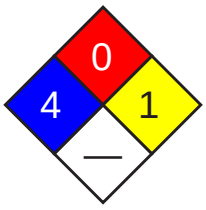
OSHA PEL
TWA: 5 mg/m^3; skin, as CN.

ACGIH TLV
Ceiling: 5 mg/m^3; skin.

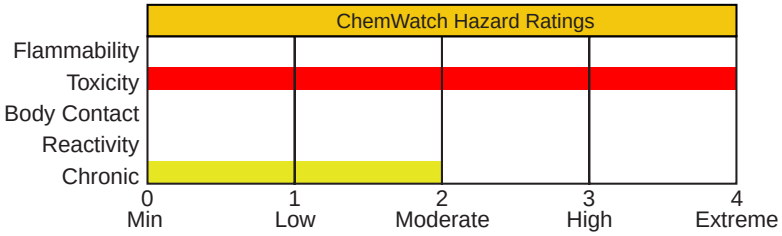
NIOSH REL
Ceiling: 4.7 ppm, 5 mg/m^3; 10 min.

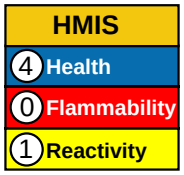
DFG (Germany) MAK
TWA: 2 mg/m^3; PEAK: 2 mg/m^3; skin; measured as inhalable fraction of the aerosol.

Section 3 - Hazards Identification



Fire Diamond





ANSI Signal Word
Danger!


Poison

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Colorless crystals or white powder; slight almond odor. Poison. Other Acute Effects: chemical asphyxiant, bright-pink skin coloration of the skin, death due to respiratory arrest.

Potential Health Effects

Target Organs: Eyes, skin, blood, thyroid, cardiovascular system, central nervous system.
Primary Entry Routes: Inhalation, eye contact, skin contact/absorption, ingestion.
Acute Effects
Inhalation: Irritation of the respiratory tract, flushing, weakness, headache, confusion, dizziness. Heavy exposures can lead to difficulty breathing, convulsions and cardiac difficulties (hypertension, arrythmias, etc.). Death may occur due to respiratory arrest. Inhalation of 200 to 300 ppm can be rapidly fatal. The maximum exposure with documented survival was 500 mg/m^3.
Eye: Irritation.
Skin: Itching, redness, and irritation. Calcium cyanide can be absorbed through the skin in toxic amounts.

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Ingestion: Irritation of the gastrointestinal tract, nausea and vomiting, salivation, anxiety, confusion, and dizziness. In severe cases, symptoms may progress to convulsions, paralysis, coma, cardiac arrythmias, and death due to respiratory arrest.

Carcinogenicity: NTP - Not listed; IARC - Not listed; OSHA - Not listed; NIOSH - Not listed; ACGIH - Not listed; EPA - Not listed; MAK - Not listed.

Medical Conditions Aggravated by Long-Term Exposure: Thyroid disorders.

Chronic Effects: There are reports of enlarged thyroids in workers exposed to cyanide salts. It is thought that the cyanide is metabolized to thiocyanate, which competes with iodine in the body resulting in goiter. Other chronic effects include appetite loss, headache, weakness, vitamin B12 and folate abnormalities, and insomnia.

Section 4 - First Aid Measures

See DOT ERG

Inhalation: Remove exposed person to fresh air and support breathing as needed.

Eye Contact: *Do not* allow victim to rub or keep eyes tightly shut. Gently lift eyelids and flush immediately and continuously with flooding amounts of water for at least 15 min. Consult a physician or ophthalmologist if pain or irritation persist.

Skin Contact: *Quickly* remove contaminated clothing. Rinse with flooding amounts of water for at least 15 min. Wash exposed area with soap and water. For reddened or blistered skin, consult a physician.

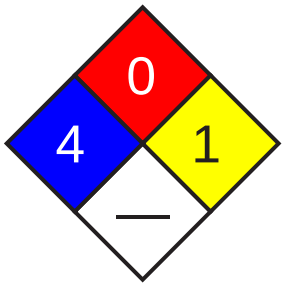
Ingestion: Never give anything by mouth to an unconscious or convulsing person. Contact a poison control center. Unless the poison control center advises otherwise, have the *conscious and alert* person drink 1 to 2 glasses of water. *Do not* induce vomiting. If available, obtain and prepare the Lilly cyanide antidote kit [Eli Lilly Co. (stock No. M76)] for use. Alternately, break an amyl nitrite ampule in a cloth and hold under nose for 15 seconds.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: If the victim is conscious, bradycardia and absence of cyanosis may be key diagnostic signs. Consider administration of amyl nitrite followed by sodium nitrite and sodium thiosulfate. Obtain blood cyanide levels.

Section 5 - Fire-Fighting Measures

See DOT ERG



Fire Diamond

Flash Point: Calcium cyanide is nonflammable itself but releases flammable hydrogen cyanide gas upon exposure to heat, water, or acids. Calcium carbide (an impurity in calcium cyanide) also releases flammable acetylene gas on contact with water.

Autoignition Temperature: None reported.

LEL: None reported.

UEL: None reported.

Flammability Classification: Nonflammable solid.

Extinguishing Media: Use agents suitable for surrounding fire, except water. Water should not be used due to formation of flammable hydrogen cyanide gas.

General Fire Hazards/Hazardous Combustion Products: Carbon and nitrogen oxide(s). Release of flammable hydrogen cyanide gas on contact with heat, water, or acids.

Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways. Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode. Sructural firefighters' protective clothing is *not* effective protection against calcium cyanide exposure.

Section 6 - Accidental Release Measures

See DOT ERG

Spill/Leak Procedures: Notify safety personnel, isolate and ventilate area, deny entry, and stay upwind. Shut off all heat and water sources. Cleanup personnel should protect against exposure.

Small Spills: Carefully scoop up or vacuum (with appropriate filter). *Do not* sweep!

Large Spills: For large spills, dike far ahead of liquid spill for later disposal. *Do not* release into sewers or waterways. Damp mop with calcium or sodium hypochlorite solution.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Use only with sufficient ventilation to prevent hazardous air levels and wear appropriate PPE. Never eat, drink, or smoke in work areas. Practice good personal hygiene after using calcium cyanide, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Recommended Storage Methods: Store in a cool, dry, well-ventilated area away from heat and water sources and incompatibles (Sec. 10).

Regulatory Requirements: Follow applicable OSHA regulations.

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Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Where possible, enclose processes to prevent dispersion of dusts into work area. Provide general or local exhaust ventilation systems to maintain airborne concentrations below the OSHA PEL (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls: Consider preplacement and periodic medical exams of exposed workers with emphasis on the central nervous system and thyroid. Educate workers about the hazards of calcium cyanide exposure and train in safe work practices.

Personal Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. One study has shown butyl rubber or polycarbonate to be suitable materials for PPE. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. For <= 25 mg/m^3, wear any supplied-air respirator or any SCBA with a full facepiece. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Other: Separate contaminated work clothes from street clothes. Launder before reuse. Remove calcium cyanide from your shoes and clean personal protective equipment. Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Section 9 - Physical and Chemical Properties

Appearance/General Info: Colorless crystals or white powder with a slight bitter almond odor (genetically undetectable by 20 to 60% of the population).

Physical State: Solid

Vapor Pressure (kPa): ~ 0 mm Hg

Formula Weight: 92.12

Specific Gravity (H_2O=1, at 4 °C): 1.853 at 68 °F (20 °C)

Freezing/Melting Point: > 350 °C (decomposes). An estimated M.P. of 640 °C was calculated (extrapolated because of decomposition).

Water Solubility: Soluble (liberates hydrogen cyanide gas).

Other Solubilities: Soluble in alcohol and very weak acids.

Section 10 - Stability and Reactivity

Stability/Polymerization/Conditions to Avoid: Calcium cyanide is stable at room temperature in closed containers under normal storage and handling conditions. Hazardous polymerization does not occur. Exposure to heat, water, and incompatibles.

Storage Incompatibilities: Acids and water (releases flammable hydrogen cyanide gas), magnesium, fluorine, nitrates, nitrites, nitric acid; violent explosion when heated with chlorate or nitrite to 842 °F (450 °C).

Hazardous Decomposition Products: Thermal oxidative decomposition of calcium cyanide can produce carbon and nitrogen oxide(s).

Section 11 - Toxicological Information

Acute Oral Effects:

Rat, oral, LD_{50}: 39 mg/kg.

See *RTECS* EW0700000, for additional data.

Section 12 - Ecological Information

Environmental Fate: No data found.

Ecotoxicity: Sunfish, TL_m = 0.12 ppm/96 hr; Cockle, LC_{50} = > 25 ppm/48 hr.

Section 13 - Disposal Considerations

Disposal: Calcium cyanide is *not* a good candidate for incineration. Never treat with acid (hydrogen cyanide gas release). Treat with calcium or sodium hypochlorite to pH 10 to 11.5 and let stand for 24 hr. Dilute with water and await disposal. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

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Section 14 - Transport Information

DOT Hazardous Materials Table Data (49 CFR 172.101):



Shipping Name and Description: Calcium cyanide
ID: UN1575
Hazard Class: 6.1 - Poisonous materials
Packing Group: I - Great Danger
Symbols:
Label Codes: 6.1 - Poison *or* Poison Inhalation Hazard *if inhalation hazard, Zone A or B*
Special Provisions: IB7, IP1, N79, N80
Packaging: **Exceptions:** None **Non-bulk:** 211 **Bulk:** 242
Quantity Limitations: **Passenger aircraft/rail:** 5 kg **Cargo aircraft only:** 50 kg
Vessel Stowage: **Location:** A **Other:** 26, 40

Section 15 - Regulatory Information

EPA Regulations:

RCRA 40 CFR: Listed P021
CERCLA 40 CFR 302.4: Listed per CWA Section 311(b)(4), per RCRA Section 3001 10 lb (4.535 kg)
SARA 40 CFR 372.65: Not listed
SARA EHS 40 CFR 355: Not listed
TSCA: Listed

Section 16 - Other Information

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SAFETY DATA SHEET

Based on Directive 2001/58/EC of the Commission of the European Communities

CHRYSENE

1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation:

Synonyms: none

CAS No.	: 218-01-9	**BCR number**	: BCR-269
EC index No.	: 601-048-00-0	**NFPA code**	: N.D.
EINECS No.	: 205-923-4	**Molecular weight**	: 228.30
RTECS No.	: GC0700000	**Formula**	: C18H12

1.2 Use of the substance or the preparation:
Certified reference material for laboratory use only

1.3 Company/undertaking identification:
Institute for Reference Materials and Measurements
Retieseweg
B-2440 Geel
Tel. : +32 14 57 12 11
Fax : +32 14 58 42 73

1.4 Telephone number for emergency:
+32 70 245 245
Antigifcentrum
p/a Militair Hospitaal Koningin Astrid, Bruynstraat, B-1120 Brussel

2. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS No.	Conc. in %	Hazard symbol	Risks (R-phrases)
chrysene	218-01-9 205-923-4	100	T;N	45-50/53 (1)

(1) For R-phrases in full: see heading 16

3. Hazards identification

- May cause cancer
- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

4. First aid measures

4.1 Eye contact:
- Consult a doctor/medical service if irritation persists
- Rinse immediately with water

4.2 Skin contact:
- Consult a doctor/medical service if irritation persists
- Wash with water and soap
- Wipe off dry product from skin
- Remove clothing before washing

4.3 After inhalation:
- Consult a doctor/medical service if breathing problems develop
- Remove the victim into fresh air
- Unconscious: maintain adequate airway and respiration

4.4 After ingestion:
- Consult a doctor/medical service if you feel unwell
- Immediately give lots of water to drink
- Never give water to an unconscious person

- Do not induce vomiting

5. Fire-fighting measures

5.1 Suitable extinguishing media:
- Water spray
- Alcohol foam
- Polymer foam
- ABC powder
- Carbon dioxide

5.2 Unsuitable extinguishing media:
- Solid water jet ineffective as extinguishing medium

5.3 Special exposure hazards:
- Not easily combustible
- Upon combustion CO and CO2 are formed

5.4 Instructions:
- Take account of toxic firefighting water
- Use firefighting water moderately and contain it

5.5 Special protective equipment for firefighters:
- Heat/fire exposure: compressed air/oxygen apparatus
- Dust cloud production: compressed air/oxygen apparatus

6. Accidental release measures

6.1 Personal protection/precautions: see heading 8.1/8.3/10.3

6.2 Environmental precautions:
- Prevent soil and water pollution
- Substance must not be discharged into the sewer
- Dam up the solid spill

6.3 Methods for cleaning up:
- Stop dust cloud by covering with sand/earth
- Carefully collect the spill/leftovers
- Scoop solid spill into closing containers
- Spill must not return in its original container
- Take collected spill to manufacturer/competent authority
- Clean contaminated surfaces with an excess of water
- Wash clothing and equipment after handling

7. Handling and storage

7.1 Handling:
- Observe strict hygiene
- Avoid prolonged and repeated contact with skin
- Avoid raising dust
- Do not discharge the waste into the drain
- Remove contaminated clothing immediately

7.2 Storage:
- Keep container tightly closed. Store only in a limited quantity. Store in a dry area. Store in a dark area.
- Keep away from: heat sources, ignition sources, oxidizing agents, acids

Storage temperature	:	N.D.	**°C**
Quantity limits	:	N.D.	**kg**
Storage life	:	N.D.	
Materials for packaging	:		

- suitable : no data available
- to avoid : no data available

7.3 Specific uses:
- See information supplied by the manufacturer

8. Exposure controls/Personal protection

8.1 Exposure limit values:

TLV-TWA	:	not listed
TLV-STEL	:	not listed
TLV-Ceiling	:	not listed
OES-LTEL	:	not listed
OES-STEL	:	not listed
MEL-LTEL	:	not listed
MEL-STEL	:	not listed
MAK	:	not listed
TRK	:	not listed
MAC-TGG 8 h	:	not listed
MAC-TGG 15 min.	:	not listed
MAC-Ceiling	:	not listed
VME-8 h	:	not listed
VLE-15 min.	:	not listed
GWBB-8 h	:	not listed
GWK-15 min.	:	not listed
Momentary value	:	not listed
EC	:	not listed
EC-STEL	:	not listed

Sampling methods:

- Chrysene (Polynuclear aromatic Hydrocarbons) NIOSH 5515
- Chrysene OSHA 58
- Chrysene (Polynuclear aromatic Hydrocarbons) NIOSH 5506

8.2 Exposure controls:

8.2.1 Occupational exposure controls:
- Measure the concentration in the air regularly
- Work under local exhaust/ventilation

8.2.2 Environmental exposure controls: see heading 13

8.3 Personal protection:

8.3.1 respiratory protection:
- Dust production: dust mask with filter type P3
- High dust production: compressed air/oxygen apparatus

8.3.2 hand protection:
- Gloves
  Suitable materials: No data available
- Breakthrough time: N.D.

8.3.3 eye protection:
- Safety glasses
- In case of dust production: protective goggles

8.3.4 skin protection:
- Protective clothing
- In case of dust production: head/neck protection
  Suitable materials: No data available

9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C)	:	Crystalline solid / Flakes
Odour	:	Odourless
Colour	:	White

9.2 Important health, safety and environmental information:

pH value	:	N.D.	
Boiling point/boiling range	:	448	**°C**
Flashpoint	:	N.D.	**°C**
Explosion limits	:	N.D.	**vol%** (**°C**)
Vapour pressure (at 20°C)	:	N.D.	**hPa**
Vapour pressure (at 50°C)	:	N.D.	**hPa**
Relative density (at 20°C)	:	1.27	
Water solubility	:	< 0.001	**g/100 ml**
Soluble in	:	N.D.	
Relative vapour density	:	N.D.	
Viscosity	:	N.D.	**Pa.s**
Partition coëfficient n-octanol/water	:	5.61/5.73	
Evaporation rate			
ratio to butyl acetate	:	N.D.	
ratio to ether	:	N.D.	

9.3 Other information:

Melting point/melting range	:	256	**°C**
Auto-ignition point	:	N.D.	**°C**
Saturation concentration	:	N.D.	**g/m³**

10. Stability and reactivity

10.1 Conditions to avoid/reactivity:
- Stable under normal conditions

10.2 Materials to avoid:
- Keep away from: heat sources, ignition sources, oxidizing agents, acids

10.3 Hazardous decomposition products:
- Upon combustion CO and CO2 are formed
- Reacts violently with (strong) oxidizers
- Decomposes on exposure to (strong) acids

11. Toxicological information

11.1 Acute toxicity:

LD50 oral rat	:	N.D.	**mg/kg**
LD50 dermal rat	:	N.D.	**mg/kg**
LD50 dermal rabbit	:	N.D.	**mg/kg**
LC50 inhalation rat	:	N.D.	**mg/l/4 h**
LC50 inhalation rat	:	N.D.	**ppm/4 h**

11.2 Chronic toxicity:

EC carc. cat.	:	2
EC muta. cat.	:	3
EC repr. cat.	:	not listed
Carcinogenicity (TLV)	:	A3
Carcinogenicity (MAC)	:	K
Carcinogenicity (VME)	:	not listed
Carcinogenicity (GWBB)	:	not listed
Carcinogenicity (MAK)	:	2
Mutagenicity (MAK)	:	not listed
Teratogenicity (MAK)	:	-
IARC classification	:	3

11.3 Routes of exposure: ingestion, inhalation, eyes and skin
Caution! Substance is absorbed through the skin

11.4 Acute effects/symptoms:

AFTER SKIN CONTACT
- Slight irritation

11.5 Chronic effects:

- Probably human carcinogenic
- No certainty about human mutagenic properties

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT:
- No specific information available

SIMILAR PRODUCTS CAUSE FOLLOWING SYMPTOMS:
- Feeling of weakness
- Photoallergy
- Cracking of the skin
- Skin rash/inflammation
- Skin cancer
- Lung tissue affection/degeneration
- Enlargement/affection of the liver
- Affection of the renal tissue

12. Ecological information

12.1 Ecotoxicity:

- LC50 (24 h) : 0.0007 mg/l (DAPHNIA MAGNA)
- LC50 (24 h) : >6.7 mg/l (RANA SP.)

12.2 Mobility:

- **Volatile organic compounds (VOC):** N.D.%

- Forming sediments in water
- Adsorbs into the soil
- Insoluble in water

For other physicochemical properties see heading 9.

12.3 Persistence and degradability:

- **biodegradation BOD_5** : N.D. **% ThOD**
- **water** : - Not readily biodegradable in water
- **soil** : **T ½:** > 77 **days**

12.4 Bioaccumulative potential:
- **log P_{ow}** : 5.61/5.73
- **BCF** : 4440 (LAMELLIBRANCHIATA)
- Highly bioaccumulative

12.5 Other adverse effects:

- **WGK** : 3 (Classification based on the R-phrases in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
- **Effect on the ozone layer** : Not dangerous for the ozone layer (Council Regulation (EC) 3093/94)
- **Greenhouse effect** : no data available
- **Effect on waste water purification** : no data available

13. Disposal considerations

13.1 Provisions relating to waste:

- Waste material code (91/689/EEC, Council Decision
- 2001/118/EC, O.J. L47 of 16/2/2001): 16 05 06 (laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory)
- Waste material code (Flanders): 001, 045, 691
- Waste code (Germany): 59302
- Hazardous waste (91/689/EEC)

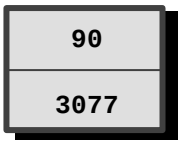
13.2 Disposal methods:

- Dissolve or mix with a combustible solvent
- Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber
- Do not discharge into surface water (2000/60/EEC, Council

13.3 Packaging/Container:

- Waste material code packaging (91/689/EEC, Council Decision
- 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 10 (packaging containing residues of or contaminated by dangerous substances)

14. Transport information



14.1 Classification of the substance in compliance with UN Recommendations

UN number	: 3077
CLASS	: 9
SUB RISKS	: -
PACKING	: III
PROPER SHIPPING NAME	: UN 3077, Environmentally hazardous substance, solid, n.o.s. (chrysene)

14.2 ADR (transport by road)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.3 RID (transport by rail)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.4 ADNR (transport by inland waterways)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.5 IMDG (maritime transport)

CLASS	: 9
SUB RISKS	: -
PACKING	: III
MFAG	: -
EMS	: -
MARINE POLLUTANT	: P

14.6 ICAO (air transport)

CLASS	: 9
SUB RISKS	: -
PACKING	: III
PACKING INSTRUCTIONS PASSENGER AIRCRAFT	:
PACKING INSTRUCTIONS CARGO AIRCRAFT	:

14.7 Special precautions in connection with transport : none

14.8 Limited quantities (LQ) :

When substances and their packaging meet the conditions established by ADR/RID/ADNR in chapter 3.4, **only** the following prescriptions shall be complied with:
each package shall display a diamond-shaped figure with the following inscription:
- 'UN 3077'
or, in the case of different goods with different identification numbers within a single package:
- the letters 'LQ'

15. Regulatory information

Enumerated in substance list Annex I of directive 67/548/EEC et sequens



Toxic



Dangerous for the environment

R45 : May cause cancer
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S53 : Avoid exposure - obtain special instructions before use
S45 : In case of accident or if you feel unwell, seek medical advice (show the label where possible)
S60 : This material and/or its container must be disposed of as hazardous waste
S61 : Avoid release to the environment. Refer to special instructions/safety data sheets.

16. Other information

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

N.A. = NOT APPLICABLE
N.D. = NOT DETERMINED
***** = INTERNAL CLASSIFICATION

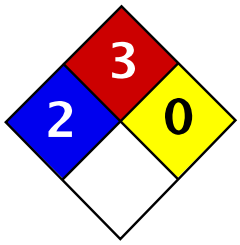
Full text of any R-phrases referred to under heading 2:

R45 : May cause cancer
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Exposure limits:
TLV : Threshold Limit Value - ACGIH USA 2000
OES : Occupational Exposure Standards - United Kingdom 1999
MEL : Maximum Exposure Limits - United Kingdom 1999
MAK : Maximale Arbeitsplatzkonzentrationen - Germany 2001
TRK : Technische Richtkonzentrationen - Germany 2001
MAC : Maximale aanvaarde concentratie - The Netherlands 2002
VME : Valeurs limites de Moyenne d'Exposition - France 1999
VLE : Valeurs limites d'Exposition à court terme - France 1999
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium 1998
GWK : Grenswaarde kortstondige blootstelling - Belgium 1998
EC : Indicative occupational exposure limit values - directive 2000/39/EC

Chronic toxicity:
K : List of the carcinogenic substances and processes - The Netherlands 2002





Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Ethylbenzene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Ethylbenzene

Catalog Codes: SLE2044

CAS#: 100-41-4

RTECS: DA0700000

TSCA: TSCA 8(b) inventory: Ethylbenzene

CI#: Not available.

Synonym: Ethyl Benzene; Ethylbenzol; Phenylethane

Chemical Name: Ethylbenzene

Chemical Formula: C8H10

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Ethylbenzene	100-41-4	100

Toxicological Data on Ingredients: Ethylbenzene: ORAL (LD50): Acute: 3500 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, permeator).

Potential Chronic Health Effects:
Slightly hazardous in case of skin contact (irritant, sensitizer).
CARCINOGENIC EFFECTS: Classified 2B (Possible for human.) by IARC.
MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance may be toxic to central nervous system (CNS).
Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 432°C (809.6°F)

Flash Points:
CLOSED CUP: 15°C (59°F). (Tagliabue.) OPEN CUP: 26.667°C (80°F) (Cleveland) (CHRIS, 2001)
CLOSED CUP: 12.8 C (55 F) (Bingham et al, 2001; NIOSH, 2001)
CLOSED CUP: 21 C (70 F) (NFPA)

Flammable Limits: LOWER: 0.8% - 1.6%UPPER: 6.7% - 7%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Highly flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.
Slightly explosive in presence of heat.

Fire Fighting Media and Instructions:
Flammable liquid, soluble or dispersed in water.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards:
Vapor may travel considerable distance to source of ignition and flash back. Vapors may form explosive mixtures with air. When heated to decomposition it emits acrid smoke and irritating fumes.

Special Remarks on Explosion Hazards: Vapors may form explosive mixtures in air.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Flammable liquid.
Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Sensitive to light. Store in light-resistant containers.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 100 STEL: 125 (ppm) from OSHA (PEL) [United States]
TWA: 435 STEL: 545 from OSHA (PEL) [United States]
TWA: 435 STEL: 545 (mg/m3) from NIOSH [United States]
TWA: 100 STEL: 125 (ppm) from NIOSH [United States]
TWA: 100 STEL: 125 (ppm) from ACGIH (TLV) [United States]
TWA: 100 STEL: 125 (ppm) [United Kingdom (UK)]
TWA: 100 STEL: 125 (ppm) [Belgium]
TWA: 100 STEL: 125 (ppm) [Finland]
TWA: 50 (ppm) [Norway]
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Sweetish. Gasoline-like. Aromatic.

Taste: Not available.

Molecular Weight: 106.16 g/mole

Color: Colorless.

pH (1% soln/water): Not available.

Boiling Point: 136°C (276.8°F)

Melting Point: -94.9 (-138.8°F)

Critical Temperature: 617.15°C (1142.9°F)

Specific Gravity: 0.867 (Water = 1)

Vapor Pressure: 0.9 kPa (@ 20°C)

Vapor Density: 3.66 (Air = 1)

Volatility: 100% (v/v).

Odor Threshold: 140 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 3.1

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether.

Solubility:
Easily soluble in diethyl ether.
Very slightly soluble in cold water or practically insoluble in water.
Soluble in all proportions in Ethyl alcohol.
Soluble in Carbon tetrachloride, Benzene.
Insoluble in Ammonia.
Slightly soluble in Chloroform.
Solubility in Water: 169 mg/l @ 25 deg. C.; 0.014 g/100 ml @ 15 deg. C.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ingnition sources (flames, sparks, static), incompatible materials, light

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Not considered to be corrosive for metals and glass.

Special Remarks on Reactivity:
Can react vigorously with oxidizing materials.
Sensitive to light.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Inhalation.

Toxicity to Animals: Acute oral toxicity (LD50): 3500 mg/kg [Rat].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified 2B (Possible for human.) by IARC.
MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.
May cause damage to the following organs: central nervous system (CNS).

Other Toxic Effects on Humans:
Hazardous in case of ingestion, of inhalation.
Slightly hazardous in case of skin contact (irritant, permeator).

Special Remarks on Toxicity to Animals:
Lethal Dose/Conc 50% Kill:
LD50 [Rabbit] - Route: Skin; Dose: 17800 ul/kg
Lowest Published Lethal Dose/Conc:
LDL[Rat] - Route: Inhalation (vapor); Dose: 4000 ppm/4 H

Special Remarks on Chronic Effects on Humans:
May cause adverse reproductive effects and birth defects (teratogenic) based on animal test data.
May cause cancer based on animals data. IARC evidence for carcinogenicity in animals is sufficient. IARC evidence of carcinogenicity in humans inadequate.
May affect genetic material (mutagenic).

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:
Skin: Can cause mild skin irritation. It can be absorbed through intact skin.
Eyes: Contact with vapor or liquid can cause severe eye irritation depending on concentration. It may also cause conjunctivitis. At a vapor exposure level of 85 - 200 ppm , it is mildly and transiently irritating to the eyes; 1000 ppm causes further irritation and tearing; 2000 ppm results in immediate and severe irritation and tearing; 5,000 ppm is intolerable (ACGIH, 1991; Clayton and Clayton, 1994). Standard draize test for eye irritation using 500 mg resulted in severe irritation (RTECS)
Inhalation: Exposure to high concentrations can cause nasal, mucous membrane and respiratory tract irritation and can also result in chest constriction and, trouble breathing, respiratory failure, and even death. It can also affect behavior/Central Nervous System. The effective dose for CNS depression in experimental animals was 10,000 ppm (ACGIH, 1991). Symptoms of CNS depression include headache, nausea, weakness, dizziness, vertigo, irritability, fatigue, lightheadedness, sleepiness, tremor, loss of coordination, judgement and conciousness, coma, and death. It can also cause pulmonary edema. Inhalation of 85 ppm can produce fatigue, insomnia, headache, and mild irritation of the respiratory tract (Haley & Berndt, 1987).
Ingestion: Do not drink, pipet or siphon by mouth. May cause gastroinestinal/digestive tract irritation with Abdominal pain, nausea, vomiting. Ethylbenzene is a pulmonary aspiration hazard. Pulmonary aspiration of even small amounts of the liquid may cause fatal pneumonitis. It may also affect behavior/central nervous system with

Section 12: Ecological Information

Ecotoxicity:
Ecotoxicity in water (LC50): 14 mg/l 96 hours [Fish (Trout)] (static). 12.1 mg/l 96 hours [Fish (Fathead Minnow)] (flow-through)]. 150 mg/l 96 hours [Fish (Blue Gill/Sunfish)] (static). 275 mg/l 96 hours [Fish (Sheepshead Minnow)]. 42.3 mg/l 96 hours [Fish (Fathead Minnow)](soft water). 87.6mg/l 96 hours [Shrimp].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Ethylbenzene UNNA: 1175 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut hazardous material survey.: Ethylbenzene
Illinois toxic substances disclosure to employee act: Ethylbenzene
Illinois chemical safety act: Ethylbenzene
New York release reporting list: Ethylbenzene
Rhode Island RTK hazardous substances: Ethylbenzene
Pennsylvania RTK: Ethylbenzene
Minnesota: Ethylbenzene
Massachusetts RTK: Ethylbenzene
Massachusetts spill list: Ethylbenzene
New Jersey: Ethylbenzene
New Jersey spill list: Ethylbenzene
Louisiana spill reporting: Ethylbenzene
California Director's List of Hazardous Substances: Ethylbenzene
TSCA 8(b) inventory: Ethylbenzene
TSCA 4(a) proposed test rules: Ethylbenzene
TSCA 8(d) H and S data reporting: Ethylbenzene: Effective Date: 6/19/87; Sunset Date: 6/19/97
SARA 313 toxic chemical notification and release reporting: Ethylbenzene

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).
CLASSE D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R11- Highly flammable.
R20- Harmful by inhalation.
S16- Keep away from sources of ignition - No smoking.
S24/25- Avoid contact with skin and eyes.
S29- Do not empty into drains.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Splash goggles.

Section 16: Other Information

References:
-Manufacturer's Material Safety Data Sheet.
-Fire Protection Guide to Hazardous Materials, 13th ed., National Fire Protection Association (NFPA)
-Registry of Toxic Effects of Chemical Substances (RTECS)
-Chemical Hazard Response Information System (CHRIS)
-Hazardous Substance Data Bank (HSDB)
-New Jersey Hazardous Substance Fact Sheet
-Ariel Global View
-Reprotext System

Other Special Considerations: Not available.

Created: 10/09/2005 05:28 PM

Last Updated: 11/06/2008 12:00 PM

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Material Safety Data Sheet Collection
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Issue Date: 2006-06

Section 1 - Chemical Product and Company Identification 61

Material Name: Fluorene **CAS Number:** 86-73-7
Chemical Formula: $C_{13}H_{10}$
EINECS Number: 201-695-5
ACX Number: X1003048-3
Synonyms: 2,3-BENZINDENE; O-BIPHENYLENEMETHANE; O-BIPHENYLMETHANE; ALPHA-DIPHENYLENEMETHANE; DIPHENYLENEMETHANE; ALPHA-DIPHENYLENEMETHANE-9H-FLUORENE; 9H-FLUORENE; FLUORENE; METHANE,DIPHENYLENE-; 2,2'-METHYLENEBIPHENYL
Derivation: Fluorene is derived from coal tar; from acetylene and hydrogen in a red-hot tube; from charcoal by boiling and fuming with HNO_3; from 2,2'-dibromodiphenylmethane on boiling with hydrazine hydrate in the presence of palladium; or by reduction of diphenylene ketone with zinc.
General Use: Fluorene is used in the formation of polyradicals for resins, and in resinous products and dyestuffs. Derivatives of fluorene show activity as herbicides and growth regulators.

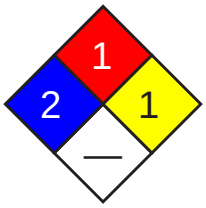
Section 2 - Composition / Information on Ingredients

Name	CAS	%
Fluorene	86-73-7	ca 98% wt

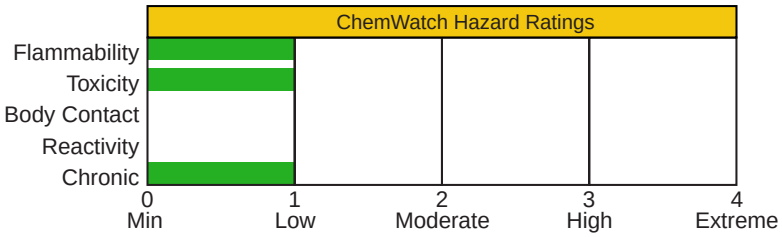
OSHA PEL **NIOSH REL**

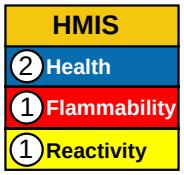
ACGIH TLV

Section 3 - Hazards Identification



Fire Diamond





ANSI Signal Word

Caution

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Dazzling white leaflets or flakes, fluorescent when impure. Irritating to eyes/skin/respiratory tract. Chronic effects: mutation effects. Combustible.

Potential Health Effects

Target Organs: Skin, eyes, respiratory system
Primary Entry Routes: Inhalation and skin/eye contact
Acute Effects The toxicological properties of fluorene have not been thoroughly investigated. The following effects are for those of polycyclic aromatic hydrocarbons (PAHs) in general.
Inhalation: Causes irritation to the respiratory system.
Eye: Contact causes irritation.
Skin: Contact causes irritation.
Ingestion: Causes irritation.
Carcinogenicity: NTP - Not listed; IARC - Group 3, Not classifiable as to carcinogenicity to humans; OSHA - Not listed; NIOSH - Not listed; ACGIH - Not listed; EPA - Class D, Not classifiable as to human carcinogenicity; MAK - Not listed.
Medical Conditions Aggravated by Long-Term Exposure: None reported.

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Chronic Effects: Include photosensitivity and irritation of the eyes; irritation of the respiratory system with cough, bronchitis, and chance of bronchogenic cancer; leukoplakia and cancers of the lip and oral cavity; dermal burns, "coal tar warts" (precancerous lesions enhanced by UV light exposure), erythema, acneiform lesions, and irritation; mild hepatoxicity; hematuria; and an increased chance of cancer of the skin, kidney, bladder, lung and gastrointestinal tract. Fluorinated PAHs may cross the placenta.

Section 4 - First Aid Measures

Inhalation: Remove exposed person to fresh air and support breathing as needed. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for respiratory tract irritation, bronchitis, or pneumonitis. Administer 100% humidified supplemental oxygen with assisted ventilation as required. If bronchospasm and wheezing occur, consider treatment with inhaled sympathomimetic agents.

Eye Contact: *Do not* allow victim to rub or keep eyes tightly shut. Gently lift eyelids and flush immediately and continuously with flooding amounts of water for at least 15 min. Consult a physician or ophthalmologist if pain, irritation, swelling, lacrimation or photophobia persist.

Skin Contact: Quickly remove contaminated clothing. Rinse with flooding amounts of water. Wash exposed area with soap and water. For reddened or blistered skin, consult a physician. Treat dermal irritation or burns with a standard topical therapy. Patients developing dermal hypersensitivity reactions may require treatment with systemic or topical corticosteroids or antihistamines. Avoid direct exposure of affected skin to sunlight and UV sources.

Ingestion: Never give anything by mouth to an unconscious or convulsing person. Contact a poison control center. Unless the poison control center advises otherwise, have the *conscious and alert* person drink 1 to 2 glasses of water. *Do not* induce vomiting. Gastric lavage and routine use of cathartics are not recommended.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: Chronic effects, particularly cancer, are more common than acute toxicity. Acute respiratory effects in persons are typically due to other toxic agents at the worksite. Carefully observe patients with inhalation exposure for the development of any systemic signs or symptoms and administer symptomatic treatment as necessary. Monitor arterial blood gases, pulmonary function, and chest x-ray for patients with significant exposure.

Section 5 - Fire-Fighting Measures

Flash Point: Data not found; combustible

Autoignition Temperature: Data not found.

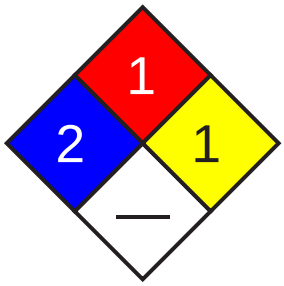
LEL: Data not found.

UEL: Data not found.

Extinguishing Media: Extinguish with water spray, carbon dioxide, dry chemical or appropriate foam.

General Fire Hazards/Hazardous Combustion Products: When heated to decomposition it emits acrid smoke and toxic fumes of carbon monoxide and carbon dioxide.

Fire-Fighting Instructions: *Do not* breathe the dust. *Do not* release runoff from fire control methods to sewers or waterways. Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode. Wear protective clothing including rubber boots and heavy rubber gloves to prevent contact with skin and eyes.



Fire Diamond

Section 6 - Accidental Release Measures

Spill/Leak Procedures: Notify safety personnel, evacuate all unnecessary personnel, remove heat and ignition sources. Isolate and ventilate area, deny entry, stay upwind. Cleanup personnel should protect against exposure (Sec. 8).

Small Spills: If in solid form, *do not* sweep! Avoid raising dust. Carefully scoop up or vacuum (with a HEPA filter). Absorb liquid spill with an inert, noncombustible absorbent such as sand or vermiculite. Wash spill site after material pickup is complete.

Large Spills: For large spills, dike far ahead of liquid spill for later disposal. *Do not* release into sewers or waterways.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Wear personal protective clothing and equipment to prevent dust inhalation and contact of solid or liquid with skin or eyes (Sec. 8).

Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Recommended Storage Methods: Store in tightly closed containers in a cool, well-ventilated area away from heat, light, ignition sources, and incompatibles.

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Regulatory Requirements: Follow applicable OSHA regulations.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Where feasible, enclose operations to avoid dust dispersion into the work area. Provide local exhaust ventilation systems to maintain airborne concentrations as low as possible. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls: Educate workers about the health and safety hazards associated with this material. Train in work practices which minimize exposure. Consider preplacement and periodic medical exams including a complete blood count, hepatic and renal function test, dermal assessments, chest x-ray and pulmonary function tests.

Personal Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not protective eye devices. Appropriate eye protection must be worn instead of, or in conjunction with, contact lenses.

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a NIOSH-approved respirator. For 'normal' uses an air-purifying toxic dust* mask for particulates, and an organic vapor with toxic dust* pre-filters for vapors, dusts, and mists (* = purple or magenta color cartridge). Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Other: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment. Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Section 9 - Physical and Chemical Properties

Appearance/General Info: White. Fluorescent when impure.

Physical State: Solid; crystalline powder or small crystalline plates; leaflets or flakes from alcohol. Sublimes easily in high vacuum.

Vapor Pressure (kPa): 0.013 mm Hg at 68 °F (20 °C)

Formula Weight: 166.21

Density: 1.202 g/mL

Specific Gravity (H_2O=1, at 4 °C): 1.203 at 0 °C/4 °C

Boiling Point: 563 °F (295 °C) (decomposes)

Freezing/Melting Point: 237 to 241 °F (114 to 116 °C)

Ionization Potential (eV): 7.89 +/-0.2 eV

Water Solubility: Insoluble; 1.98 mg/kg

Other Solubilities: Freely soluble in glacial acetic acid; soluble in hot 95% ethanol, acetone, benzene, carbon disulfide, carbon tetrachloride, ether, pyridine, and toluene.

Section 10 - Stability and Reactivity

Stability/Polymerization/Conditions to Avoid: Fluorene is stable at room temperature in closed containers under normal storage and handling conditions. Hazardous polymerization cannot occur. Avoid contact with chemical incompatibles, heat, and sources of ignition. Avoid heating to decomposition.

Storage Incompatibilities: Include strong oxidizing agents.

Hazardous Decomposition Products: Thermal oxidative decomposition of fluorene can produce acrid smoke and toxic fumes of carbon monoxide and carbon dioxide.

Section 11 - Toxicological Information

Other Effects:

Genetic Effects: Mouse, lymphocyte, 150 µmol/L induced DNA damage.
Mouse, lymphocyte, 19500 nmol/L (+S9) induced mutations in microorganisms.
Mouse, lymphocyte, 584 µmol/L induced mutations in mammalian somatic cells.
Hamster, lung, 25 mg/L induced cytogenetic analysis.
Mouse, mammary gland, 1 µg/L induced morphological transformation.
Mouse, intraperitoneal, LD_{50}: >2 g/kg.

See *RTECS* LL5670000, for additional data.

Section 12 - Ecological Information

Environmental Fate: If released to the atmosphere, fluorene will exist primarily in the vapor phase where it will degrade readily by photochemically produced hydroxyl radicals (estimated half-life of 29 hr). If released to soil or water, fluorene will biodegrade readily (aerobically) in the presence of acclimated microbes; microbial adaptation is an important fate process. Biodegradation can be slow in pristine soils or waters (or under conditions of limited oxygen). Strong adsorption to soil and water sediment is an important transport process. Log K_{ow}: 4.18 to 4.38

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Ecotoxicity: TL_m *Neanthes arenaceodentata* LC_{50}/1.0 ppm/96 hr at 72 °F (22 °C) in a static bioassay, seawater
Henry's Law Constant: 0.0001
BCF: 1288 (fathead minnow)
Soil Sorption Partition Coefficient: K_{oc} = log 3.70 to 4.21

Section 13 - Disposal Considerations

Disposal: Dissolve or mix fluorene with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. The particle-bound portion of polycyclic aromatic hydrocarbons (PAH) can be removed by sedimentation, flocculation, and filtration processes. The remaining dissolved polynuclear aromatic hydrocarbons usually require oxidation for partial removal/transformation. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable federal, state, and local regulations. Handle empty containers carefully as hazardous residues may still remain. Triple rinse containers and dispose of wash wastewater appropriately.

Section 14 - Transport Information

DOT Hazardous Materials Table Data (49 CFR 172.101):

Shipping Name and Description: Not specifically listed.

Section 15 - Regulatory Information

EPA Regulations:

RCRA 40 CFR: Not listed
CERCLA 40 CFR 302.4: Listed per CWA Section 307(a) 5000 lb (2268 kg)
SARA 40 CFR 372.65: Not listed
SARA EHS 40 CFR 355: Not listed
TSCA: Listed

Section 16 - Other Information

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SAFETY DATA SHEET

Based on Directive 2001/58/EC et seq. of the Commission of the European Communities

FLUORANTHENE

1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation:

Synonyms: 1,2-benzacenaphthene, benzo(jk)fluorene

CAS No.	: 206-44-0	**BCR number**	: BCR-160R
EC index No.	: N.A.	**NFPA code**	: N.D.
EINECS No.	: 205-912-4	**Molecular weight**	: 202.26
RTECS No.	: LL4025000	**Formula**	: $C_{16}H_{10}$

1.2 Use of the substance or the preparation:
Certified reference material for laboratory use only

1.3 Company/undertaking identification:
Institute for Reference Materials and Measurements
Retieseweg
B-2440 Geel
Tel. : +32 14 57 12 11
Fax : +32 14 58 42 73

1.4 Telephone number for emergency:
+32 70 245 245
Antigifcentrum
p/a Militair Hospitaal Koningin Astrid, Bruynstraat, B-1120 Brussel

2. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS No.	Conc. in %	Hazard symbol	Risks (R-phrases)
fluoranthene	206-44-0 205-912-4	100	Xn;N	22-36-51/53-68 (1)

(1) For R-phrases in full: see heading 16

3. Hazards identification

- Harmful if swallowed
- Irritating to eyes
- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- Possible risk of irreversible effects

4. First aid measures

4.1 Eye contact:
- Consult a doctor/medical service
- Rinse immediately with plenty of water
- Do not apply neutralizing agents

4.2 Skin contact:
- Consult a doctor/medical service
- Wash immediately with lots of water
- -Do not apply (chemical) neutralizing agents

4.3 After inhalation:
- Consult a doctor/medical service
- Remove the victim into fresh air
- Unconscious: maintain adequate airway and respiration

4.4 After ingestion:
- Consult a doctor/medical service

- Never give water to an unconscious person

5. Fire-fighting measures

5.1 Suitable extinguishing media:
- Water spray
- Alcohol foam
- Polymer foam
- ABC powder
- Carbon dioxide

5.2 Unsuitable extinguishing media:
- No data available

5.3 Special exposure hazards:
- Combustible
- It's dust is explosive with air
- Upon combustion CO and CO2 are formed

5.4 Instructions:
- Take account of toxic firefighting water
- Use firefighting water moderately and contain it

5.5 Special protective equipment for firefighters:
- Heat/fire exposure: compressed air/oxygen apparatus
- Dust cloud production: compressed air/oxygen apparatus

6. Accidental release measures

6.1 Personal protection/precautions: see heading 8.1/8.3/10.3

6.2 Environmental precautions:
- Prevent soil and water pollution
- Substance must not be discharged into the sewer
- Dam up the solid spill
- Knock down/dilute dust cloud with water spray

6.3 Methods for cleaning up:
- Stop dust cloud by covering with sand/earth
- Carefully collect the spill/leftovers
- Scoop solid spill into closing containers
- Clean contaminated surfaces with an excess of water
- Wash clothing and equipment after handling

7. Handling and storage

7.1 Handling:
- Observe strict hygiene
- Avoid prolonged and repeated contact with skin
- Avoid raising dust
- Do not discharge the waste into the drain
- Clean contaminated clothing

7.2 Storage:
- Keep container tightly closed
- Store in a dry area
- Store in a dark area
- Meet the legal requirements.
- Keep away from: heat sources, oxidizing agents

Storage temperature : < 4 **°C**
Quantity limits : N.D. **kg**
Storage life : N.D.
Materials for packaging :
- suitable : glass
- to avoid : no data available

7.3 Specific uses: N.D.

8. Exposure controls/Personal protection

8.1 Exposure limit values:

TLV-TWA	:	not listed
TLV-STEL	:	not listed
TLV-Ceiling	:	not listed
OES-LTEL	:	not listed
OES-STEL	:	not listed
MEL-LTEL	:	not listed
MEL-STEL	:	not listed
MAK	:	not listed
TRK	:	not listed
MAC-TGG 8 h	:	not listed
MAC-TGG 15 min.	:	not listed
MAC-Ceiling	:	not listed
VME-8 h	:	not listed
VLE-15 min.	:	not listed
GWBB-8 h	:	not listed
GWK-15 min.	:	not listed
Momentary value	:	not listed

Sampling methods:

- Fluoranthene (Polynuclear aromatic hydrocarbon)	NIOSH 5506
- Fluoranthene	OSHA CSI
- Fluoranthene (Polynuclear aromatic hydrocarbon)	NIOSH 5515

8.2 Exposure controls:

8.2.1 Occupational exposure controls:
- Measure the concentration in the air regularly
- Work under local exhaust/ventilation

8.2.2 Environmental exposure controls: see heading 13

8.3 Personal protection:

8.3.1 respiratory protection:
- Dust production: dust mask with filter type P3
- High dust production: compressed air/oxygen apparatus

8.3.2 hand protection:
- Gloves
  Suitable materials: Rubber

- Breakthrough time: N.D.

8.3.3 eye protection:
- Safety glasses
- In case of dust production: protective goggles

8.3.4 skin protection:
- Protective clothing
- In case of dust production: head/neck protection
  Suitable materials: Rubber

9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C)	:	Crystalline solid / Needles
Odour	:	N.D.
Colour	:	Colourless to light-yellow

9.2 Important health, safety and environmental information:

pH value	:	N.D.	
Boiling point/boiling range	:	384	**°C**
Flashpoint	:	198	**°C**
Explosion limits	:	N.D.	**vol%** (**°C**)
Vapour pressure (at 20°C)	:	< 0.01	**hPa**
Vapour pressure (at 50°C)	:	N.D.	**hPa**
Relative density (at 20°C)	:	1.30	
Water solubility	:	0.00002	**g/100 ml**
Soluble in	:	Ethanol, ether, chloroform, acetic acid, carbondisulfide	
Relative vapour density	:	N.D.	
Viscosity	:	N.D.	**Pa.s**
Partition coëfficient n-octanol/water	:	5.33	
Evaporation rate			
ratio butyl acetate	:	N.D.	
ratio ether	:	N.D.	

9.3 Other information:

Melting point/melting range	:	110	**°C**
Auto-ignition point	:	N.D.	**°C**
Saturation concentration	:	N.D.	**g/m³**

10. Stability and reactivity

10.1 Conditions to avoid/reactivity:
- No data available

10.2 Materials to avoid:
- Keep away from: heat sources, oxidizing agents

10.3 Hazardous decomposition products:
- Upon combustion CO and CO2 are formed

11. Toxicological information

11.1 Acute toxicity:

LD50 oral rat	:	2000	**mg/kg**
LD50 dermal rat	:	N.D.	**mg/kg**
LD50 dermal rabbit	:	3180	**mg/kg**
LC50 inhalation rat	:	N.D.	**mg/l/4 h**
LC50 inhalation rat	:	N.D.	**ppm/4 h**

11.2 Chronic toxicity:

EC carc. cat.	:	not listed
EC muta. cat.	:	not listed
EC repr. cat.	:	not listed
Carcinogenicity (TLV)	:	not listed
Carcinogenicity (MAC)	:	not listed
Carcinogenicity (VME)	:	not listed
Carcinogenicity (GWBB)	:	not listed
Carcinogenicity (MAK)	:	not listed
Mutagenicity (MAK)	:	not listed
Teratogenicity (MAK)	:	not listed
IARC classification	:	3

11.3 Routes of exposure: ingestion, inhalation, eyes and skin

11.4 Acute effects/symptoms:

- **AFTER EYE CONTACT**
- Irritation of the eye tissue

11.5 Chronic effects:

- Possible risks of irreversible effects
- Not classified as toxic to reproduction (EC)

- **SIMILAR PRODUCTS CAUSE FOLLOWING SYMPTOMS:**
- Tingling/irritation of the skin
- Nausea
- Accelerated heart action
- Disturbances of heart rate
- Enlargement/affection of the liver
- Risk of lung oedema

12. Ecological information

12.1 Ecotoxicity:

fluoranthene:
- LC50 (96 h) : 4 mg/l (LEPOMIS MACROCHIRUS)
- LC50 (48 h) : 320 mg/l (DAPHNIA MAGNA)
- EC50 (96 h) : 54 mg/l (SELENASTRUM CAPRICORNUTUM)

12.2 Mobility:

- **Volatile organic compounds (VOC):** 0%

- Forming sediments in water
- Insoluble in water
- Substance sinks in water

For other physicochemical properties see heading 9.

12.3 Persistence and degradability:

- biodegradation BOD_5 : N.D. **% ThOD**

- water : - N.D.

- soil : **T ½:** N.D. **days**

12.4 Bioaccumulative potential:
- **log P_{ow}** : 5.33
- **BCF** : h : 3981 (PIMEPHALES PROMELAS)
- Highly bioaccumulative

12.5 Other adverse effects:

- **WGK** : 3 (Classification based on the R-phrases in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
- **Effect on the ozone layer** : Not dangerous for the ozone layer (Council Regulation (EC) No 3093/94, O.J. L333 of 22/12/94)
- **Greenhouse effect** : no data available
- **Effect on waste water purification** : no data available

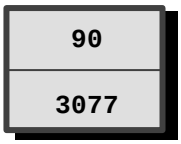
13. Disposal considerations

13.1 Provisions relating to waste:
- Waste material code (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 16 05 06 (laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory)
- Waste material code (Flanders): 001, 045, 691
- Waste code (Germany): 59302
- Hazardous waste (91/689/EEC)

13.2 Disposal methods:
- Do not discharge into surface water (2000/60/EEC, Council Decision 2455/2001/EC, O.J. L331 of 15/12/2001)
- Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber

13.3 Packaging/Container:
- Waste material code packaging (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 10 (packaging containing residues of or contaminated by dangerous substances)

14. Transport information



14.1 Classification of the substance in compliance with UN Recommendations

UN number	: 3077
CLASS	: 9
SUB RISKS	: -
PACKING	: III
PROPER SHIPPING NAME	: UN 3077, Environmentally hazardous substance, solid, n.o.s. (fluoranthene)

14.2 ADR (transport by road)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.3 RID (transport by rail)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.4 ADNR (transport by inland waterways)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.5 IMDG (maritime transport)

CLASS	: 9
SUB RISKS	: -
PACKING	: III
MFAG	: -
EMS	: -
MARINE POLLUTANT	: P

14.6 ICAO (air transport)

CLASS	: 9
SUB RISKS	: -
PACKING	: III
PACKING INSTRUCTIONS PASSENGER AIRCRAFT	:
PACKING INSTRUCTIONS CARGO AIRCRAFT	:

14.7 Special precautions in connection with transport : none

When substances and their packaging meet the conditions established by ADR/RID/ADNR in chapter 3.4, **only** the following prescriptions shall be complied with:
each package shall display a diamond-shaped figure with the following inscription:
- 'UN 3077'
or, in the case of different goods with different identification numbers within a single package:
- the letters 'LQ'

15. Regulatory information

Not listed in Annex I of directive 67/548/EEC et sequens. Labelling established on the basis of the available data.



Harmful



Dangerous for the environment

R22 : Harmful if swallowed
R36 : Irritating to eyes
R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R68 : Possible risk of irreversible effects

S(02) : (Keep out of reach of children)
S22 : Do not breathe dust
S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S36/37 : Wear suitable protective clothing and gloves
S46 : If swallowed, seek medical advice immediately and show this container or label
S61 : Avoid release to the environment. Refer to special instructions/safety data sheets.

16. Other information

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

N.A. = NOT APPLICABLE
N.D. = NOT DETERMINED
***** = INTERNAL CLASSIFICATION

Full text of any R-phrases referred to under heading 2:

R22 : Harmful if swallowed
R36 : Irritating to eyes
R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R68 : Possible risk of irreversible effects

Exposure limits:
TLV : Threshold Limit Value - ACGIH USA 2000
OES : Occupational Exposure Standards - United Kingdom 1999
MEL : Maximum Exposure Limits - United Kingdom 1999
MAK : Maximale Arbeitsplatzkonzentrationen - Germany 2001
TRK : Technische Richtkonzentrationen - Germany 2001
MAC : Maximale aanvaarde concentratie - The Netherlands 2002
VME : Valeurs limites de Moyenne d'Exposition - France 1999
VLE : Valeurs limites d'Exposition à court terme - France 1999
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium 1998
GWK : Grenswaarde kortstondige blootstelling - Belgium 1998
EC : Indicative occupational exposure limit values - directive 2000/39/EC

BOC GASES

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: HYDROGEN SULFIDE

1. Chemical Product and Company Identification

BOC Gases,
Division of
The BOC Group, Inc.
575 Mountain Avenue
Murray Hill, NJ 07974

TELEPHONE NUMBER: (908) 464-8100
24-HOUR EMERGENCY TELEPHONE NUMBER:
CHEMTREC (800) 424-9300

BOC Gases
Division of
BOC Canada Limited
5975 Falbourne Street, Unit 2
Mississauga, Ontario L5R 3W6

TELEPHONE NUMBER: (905) 501-1700
24-HOUR EMERGENCY TELEPHONE NUMBER:
(905) 501-0802
EMERGENCY RESPONSE PLAN NO: 20101

PRODUCT NAME: HYDROGEN SULFIDE
CHEMICAL NAME: Hydrogen Sulfide
COMMON NAMES/SYNONYMS: Dihydrogen Sulfide, Sulfur Hydride
TDG (Canada) CLASSIFICATION: 2.3 (2.1)
WHMIS CLASSIFICATION: A, B1, D1A, D2A, D2B

PREPARED BY: Loss Control (908)464-8100/(905)501-1700
PREPARATION DATE: 6/1/95
REVIEW DATES: 6/7/96

2. Composition, Information on Ingredients

INGREDIENT	% VOLUME	PEL-OSHA[1]	TLV-ACGIH[2]	LD_{50} or LC_{50} Route/Species
Hydrogen Sulfide FORMULA: H_2S CAS: 7783-06-4 RTECS #: MX1225000	> 99.0	20 ppm Ceiling	10 ppm TWA 15 ppm STEL	LC_{50} 444 ppm (rat)

[1] As stated in 29 CFR 1910, Subpart Z (revised July 1, 1993)

[2] As stated in the ACGIH 1994-95 Threshold Limit Values for Chemical Substances and Physical Agents

3. Hazards Identification

EMERGENCY OVERVIEW

Irritating to the eyes, mucous membranes and respiratory system. Inhaled gas inhibits cellular respiration resulting in pulmonary paralysis, sudden collapse and death. Extremely flammable.

ROUTE OF ENTRY:

Skin Contact	Skin Absorption	Eye Contact	Inhalation	Ingestion
Yes	No	Yes	Yes	Yes

HEALTH EFFECTS:

Exposure Limits	Irritant	Sensitization
Yes	Yes	No
Teratogen	Reproductive Hazard	Mutagen
Yes	Yes	No
Synergistic Effects None Reported		

Carcinogenicity: -- NTP: No IARC: No OSHA: No

EYE EFFECTS:
Low concentrations will generally cause irritation to the conjunctiva. Repeated exposure to low concentrations is reported to cause conjunctivitis, photo phobia, corneal bullae, tearing, pain and blurred vision.

SKIN EFFECTS:
May irritate the skin upon contact.

INGESTION EFFECTS:
Ingestion is unlikely. Hydrogen sulfide will irritate the mucous membranes causing a burning feeling with excess salivation likely. Irritation of the gastrointestinal tract may also occur.

INHALATION EFFECTS:
Hydrogen sulfide reacts with enzymes in the bloodstream and inhibits cellular respiration resulting in pulmonary paralysis, sudden collapse and death. Continuous exposure to low (15-50 ppm) concentrations will generally cause irritation to mucous membranes, and may also cause headache, dizziness or nausea. Higher concentrations (200-300 ppm) may result in respiratory arrest leading to coma or unconsciousness. Exposures for more than 30 minutes at concentrations greater than 700 ppm have been fatal.

Continuous inhalation of low concentrations may cause olfactory fatigue or paralysis of the sense of smell. Thus, detection of hydrogen sulfide by its odor is not effective.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:
Blood disorders.

NFPA HAZARD CODES	HMIS HAZARD CODES	RATINGS SYSTEM
Health: 4	Health: 4	0 = No Hazard
Flammability: 4	Flammability: 4	1 = Slight Hazard
Reactivity: 0	Reactivity: 0	2 = Moderate Hazard
		3 = Serious Hazard
		4 = Severe Hazard

4. First Aid Measures

EYES:
PERSONS WITH POTENTIAL EXPOSURE TO HYDROGEN SULFIDE SHOULD NOT WEAR CONTACT LENSES. Flush contaminated eyes with large amounts of water for at least 15 minutes. Part eyelids with fingers to ensure complete flushing. If irritation persists, seek medical attention immediately.

SKIN:
Flush affected area with water. If irritation persists, consult a physician.

INGESTION:
Treat in a manner similar to inhalation exposure. Seek medical attention as soon as possible.

INHALATION:
PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS AND SHOULD RECOGNIZE THE HAZARDS OF OVEREXPOSURE DUE TO OLFACTORY FATIGUE. An extreme fire hazard exists when rescuing semiconscious or unconscious persons due to the flammability hazard. Avoid use of rescue equipment which may contain ignition sources or cause static discharge. Victims should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. If breathing has stopped administer artificial resuscitation and supplemental oxygen or a mixture of 5% carbon dioxide in oxygen. Keep victim calm and warm. Further treatment should be symptomatic and supportive. Seek medical assistance immediately.

5. Fire Fighting Measures

Conditions of Flammability: Flammable		
Flash point: Not Available	Method: Not Applicable	Autoignition Temperature: 554°F (290°C)
LEL(%): 4.0	UEL(%): 44.0	
Hazardous combustion products: Sulfur Compounds		
Sensitivity to mechanical shock: None		
Sensitivity to static discharge: None		

FIRE AND EXPLOSION HAZARDS:
Hydrogen sulfide is heavier than air and may accumulate in low areas and may travel a considerable distance to a source of ignition. Should flame be extinguished and flow of gas continue, increase ventilation to prevent flammable mixture formation in low areas or pockets. Product may explode or burn over a wide range of mixtures in air.

EXTINGUISHING MEDIA:
Water, carbon dioxide, dry chemicals.

FIRE FIGHTING INSTRUCTIONS:
If possible, stop the flow of hydrogen sulfide. Use water spray to cool surrounding containers. Fire fighters should use self-contained breathing apparatus.

6. Accidental Release Measures

Evacuate all personnel from affected area. Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with inert gas prior to attempting repairs. If leak is in container or container valve, contact the appropriate emergency telephone number listed in Section 1 or call your closest BOC location.

7. Handling and Storage

Earth-ground and bond all lines and equipment associated with the Hydrogen Sulfide system. All electrical equipment should be non-sparking or explosion proof.

Do not rely on the olfactory sense to detect the presence of hydrogen sulfide. Analytical devices and instrumentation are readily available for this purpose. Perform frequent analytical tests to be certain that the TWA is not exceeded. Many metals corrode rapidly with wet hydrogen sulfide. Anhydrous hydrogen sulfide can be handled in carbon steel, aluminum Inconel ®, Stellite ® and 304 and 316 stainless steels. Avoid hard steels which are highly stressed since they may be susceptible to hydrogen embrittlement from hydrogen sulfide.

Use only in well-ventilated areas. Valve protection caps must remain in place unless container is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to lower pressure (<750 psig) piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the system.

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 130°F (54°C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in-first out" inventory system to prevent full cylinders being stored for excessive periods of time. Post "NO SMOKING OR OPEN FLAMES" signs in the storage area or use area. There should be no sources of ignition in the storage or use area.

For additional storage recommendations, consult Compressed Gas Association Pamphlets P-1 and G-12.

Never carry a compressed gas cylinder or a container of a gas in cryogenic liquid form in an enclosed space such as a car trunk, van or station wagon. A leak can result in a fire, explosion, asphyxiation or a toxic exposure.

8. Exposure Controls, Personal Protection

EXPOSURE LIMITS[1]:

INGREDIENT	% VOLUME	PEL-OSHA[2]	TLV-ACGIH[3]	LD_{50} or LC_{50} Route/Species
Hydrogen Sulfide FORMULA: H_2S CAS: 7783-06-4 RTECS #: MX1225000	> 99.0	20 ppm Ceiling	10 ppm TWA 15 ppm STEL	LC_{50} 444 ppm (rat)

[1] Refer to individual state of provincial regulations, as applicable, for limits which may be more stringent than those listed here.
[2] As stated in 29 CFR 1910, Subpart Z (revised July 1, 1993)
[3] As stated in the ACGIH 1994-1995 Threshold Limit Values for Chemical Substances and Physical Agents.

ENGINEERING CONTROLS:
Hood with forced ventilation. Use local exhaust to prevent accumulation above exposure limit.

EYE/FACE PROTECTION:

Gas tight chemical goggles or full-face piece respirator.

SKIN PROTECTION:
Protective gloves: Neoprene, butyl rubber, PVC, polyethylene.

RESPIRATORY PROTECTION:
Positive pressure air line with full-face mask and escape bottle or self-contained breathing apparatus should be available for emergency use.

OTHER/GENERAL PROTECTION:
Safety shoes, safety shower, eyewash "fountain".

9. Physical and Chemical Properties

PARAMETER	VALUE	UNITS
Physical state (gas, liquid, solid)	: Vapor	
Vapor pressure	: 267 (1840 kPa)	psia
Vapor density at STP (Air = 1)	: 1.21	
Evaporation point	: Not Available	
Boiling point	: -76	^{o}F
	: -60	^{o}C
Freezing point	: -117.8	^{o}F
	: -82.2	^{o}C
pH	: Not Available	
Specific gravity	: Not Available	
Oil/water partition coefficient	: Not Available	
Solubility (H20)	: Soluble	
Odor threshold	: Not Available	
Odor and appearance	: Colorless vapor with rotten egg odor.	

10. Stability and Reactivity

STABILITY:
Stable

INCOMPATIBLE MATERIALS:
Dangerously reactive when mixed with concentrated nitric acid or other strong oxidizing agents. Vapors will ignite spontaneously when mixed with vapors of chlorine, oxygen difluoride or nitrogen trifluoride.

HAZARDOUS DECOMPOSITION PRODUCTS:
Oxides of sulfur.

HAZARDOUS POLYMERIZATION:
Will not occur.

11. Toxicological Information

REPRODUCTIVE:
Toxic effects observed in newborn rats after exposure of pregnant female to 20 ppm Hydrogen Sulfide.

12. Ecological Information

No data given.

13. Disposal Considerations

Do not attempt to dispose of residual waste or unused quantities. Return in the shipping container PROPERLY LABELED, WITH ANY VALVE OUTLET PLUGS OR CAPS SECURED AND VALVE PROTECTION CAP IN PLACE to BOC Gases or authorized distributor for proper disposal.

14. Transport Information

PARAMETER	United States DOT	Canada TDG
PROPER SHIPPING NAME:	Hydrogen Sulfide, liquefied	Hydrogen Sulfide, liquefied
HAZARD CLASS:	2.3	2.3 (2.1)
IDENTIFICATION NUMBER:	UN 1053	UN 1053
SHIPPING LABEL:	POISON GAS, FLAMMABLE GAS	POISON GAS, FLAMMABLE GAS

Additional Marking Requirement: "Inhalation Hazard"
If net weight of product ≥ 100 pounds, the container must be also marked with the letters "RQ".

Additional Shipping Paper Description Requirement: "Poison-Inhalation Hazard, Zone B"
If net weight of product ≥ 100 pounds, the shipping papers must be also marked with the letters "RQ".

15. Regulatory Information

Hydrogen sulfide is listed under the accident prevention provisions of section 112(r) of the Clean Air Act (CAA) with a threshold quantity (TQ) of 10,000 pounds.

SARA TITLE III NOTIFICATIONS AND INFORMATION
Hydrogen sulfide is listed as an extremely hazardous substance (EHS) subject to state and local reporting under Section 304 of SARA Title III (EPCRA).

The presence of hydrogen sulfide in quantities in excess of the threshold planning quantity (TPQ) of 100 pounds requires certain emergency planning activities to be conducted.

Releases of hydrogen sulfide in quantities equal to or greater than the reportable quantity (RQ) of 100 pounds are subject to reporting to the National Response Center under CERCLA, Section 304 SARA Title III.

SARA TITLE III - HAZARD CLASSES:
Acute Health Hazard
Chronic Health Hazard
Fire Hazard
Sudden Release of Pressure Hazard

SARA TITLE III - SECTION 313 SUPPLIER NOTIFICATION:
This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

CAS NUMBER	INGREDIENT NAME	PERCENT BY VOLUME
7783-06-4	Hydrogen sulfide	> 99.0

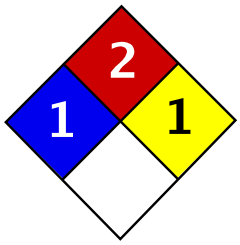
This information must be included on all MSDSs that are copied and distributed for this material.

16. Other Information

Compressed gas cylinders shall not be refilled without the express written permission of the owner. Shipment of a compressed gas cylinder which has not been filled by the owner or with his/her (written) consent is a violation of transportation regulations.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES:
Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).





Health	1
Fire	2
Reactivity	1
Personal Protection	E

Material Safety Data Sheet
Iron Metal MSDS

Section 1: Chemical Product and Company Identification

Product Name: Iron Metal

Catalog Codes: SLI2047, SLI1996

CAS#: 7439-89-6

RTECS: NO4565500

TSCA: TSCA 8(b) inventory: Iron Metal

CI#: Not applicable.

Synonym:

Chemical Name: Iron

Chemical Formula: Fe

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Iron Metal, powder	7439-89-6	100

Toxicological Data on Ingredients: Not applicable.

Section 3: Hazards Identification

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance may be toxic to liver, cardiovascular system, upper respiratory tract, pancreas.
Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Flammable in presence of heat.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Explosive in presence of open flames and sparks, of heat.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:
Chlorine Trifluoride reacts with iron with incandescence.
Powdered iron reacts with fluorine below redness with incandescence.
Reduced iron decomposes with nitrogen dioxide @ ordinary temperature with incandescence.
Reacting mass formed by mixture of phosphorus and iron can become incandescent when heated. This material is flammable in powder form only.

Special Remarks on Explosion Hazards: Material in powdered form can explode when exposed to heat or flame

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water

on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions:
Do not ingest. Do not breathe dust. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Moisture sensitive.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Solid metallic powder.)

Odor: Odorless.

Taste: Tasteless.

Molecular Weight: 55.85 g/mole

Color: Black to Grey.

pH (1% soln/water): Not applicable.

Boiling Point: 3000°C (5432°F)

Melting Point: 1535°C (2795°F)

Critical Temperature: Not available.

Specific Gravity: Density: 7.86 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water, hot water, diethyl ether.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, ignition sources, incompatible materials, water/moisture, air, dust generation.

Incompatibility with various substances:
Reactive with oxidizing agents, acids.
Slightly reactive to reactive with moisture.

Corrosivity: Not considered to be corrosive for metals and glass.

Special Remarks on Reactivity:
Hot iron(wire) burns in Chlorine gas.
Violent decompositon of hydrogen peroxide (53% by weight or greater) may be caused by contact with iron.
Readily oxidizes in moist air forming rust.
Reactive with halogens.
Incompatible with acetaldehyde, ammonium peroxodisulfate, chloroformamidinum, chloric acid, ammonium nitrate, dinitorgen tetroxide, nitryl fluoride, polystyrene, sodium acetylide, potassium dichromate, peroxyformic acid, sulfuric acid, sodium carbide.
Readily attacked by dilute mineral acids and or attacked or dissolved by organic acids.
Not appreciably attacked by cold sulfuric acid, or nitric acid, but is attacked by hot acids.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 30000 mg/kg [Rat].

Chronic Effects on Humans: May cause damage to the following organs: liver, cardiovascular system, upper respiratory tract, pancreas.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:
Skin:
Iron metal filings or dust: May cause skin irritation by mechanical action.
Iron metal wire: Not likely to cause skin irritation
Eyes:
Iron metal filings or dust: Can irritate eyes by mechanical action.
Iron metal wire: No hazard. Will not cause eye irritation.
Inhalation:

Iron dust: Can irritate the respiratory tract by mechanical action.
Iron metal wire or filings: Not an inhalation hazard unless metal is heated. If metal is heated, fumes will be released. Inhalation of these fumes may cause "fume metal fever", which is characterized by flu-like symptoms. Symptoms may include metallic taste, fever, nausea, vomiting, chills, cough, weakness, chest pain, generalized muscle pain/aches, and increased white blood cell count.
Ingestion:
Iron metal wire: Not an ingestion hazard:
Iron metal filings or dust: The amount of ingested iron which constitutes a toxic dose is not well defined. Proposed toxic doses of elemental iron are 20 mg/kg for gastrointestinal irritation to greater than 60 mg/kg for systemic toxicity. Gastrointestinal effects are the first signs to appear, with hemorrhagic vomiting and diarrhea, hematochezia, abdominal pain, lethargy, metabolic acidosis, coagulaopathy, shock, coma and convulsions developing from 0 to 6 hours after ingestion. Leukocytosis may also occur. An asymptomatic phase may ensue at 6 to 12 hours postingestion, followed by hypoglycemia or hyperglycemia, hepatic and renal failure, severe acidosis, cyanosis, fever, CNS depression (lethargy, restlessness and/or confusion seizures), hypotension, and cardiovascular collapse/cardiac failure in 12 to 48 hours. Hepatic cirrhosis, gastrointestinal scarring and/or strictures may arise in 2 to 6 weeks. It may also cause an anaphylactoid reaction. Non-cardiogenic pulmonary edema also develop in severe cases of iron intoxication.
Chronic Potential Health Effects:
Inhalation: Chronic inhalation of iron dust can lead to accumulation in the lungs and a characteristic stippled appearance on X-rays. This condition, called SIDEROSIS, is considered benign in that it does not interfere with lung function and does not predispose to other disease. Chronic inhalation of iron dust may also cause fibrosis in the lungs.
Ingestion: Clinical signs of iron overload appear when the total body iron is 5 to 10 times higher than normal. Neurobehavioral defects including depression, decreased activity, habituation, reflex startle, and conditioned avoidance response performance may occur. However, similiar effects were also seen in iron defficiency. It is therefore likely that these behavioral effects are secondary to general toxicity. High serum iron levels may be associated with an increased risk of fatal acute myocardial infarction (MI).
Skin: Prolonged or repeated contact may cause hypersensivity.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 4.1: Flammable solid.

Identification: : Metal powder, flammable, n.o.s. (Iron metal powder) UNNA: 3089 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California Director's List of Hazardous Substances: Iron Metal
TSCA 8(b) inventory: Iron Metal

Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): CLASS B-4: Flammable solid.

DSCL (EEC):
R11- Highly flammable.
S16- Keep away from sources of ignition - No smoking.
S22- Do not breathe dust.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 2

Reactivity: 1

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 2

Reactivity: 1

Specific hazard:

Protective Equipment:
Gloves
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/09/2005 05:52 PM

Last Updated: 11/06/2008 12:00 PM

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LIQUINOX MSDS

Section 1 : PRODUCT AND COMPANY IDENTIFICATION

Chemical family: Detergent.

Manufacturer: Alconox, Inc.
30 Glenn St.
Suite 309
White Plains, NY 10603.

Manufacturer emergency phone number: 800-255-3924.
813-248-0585 (outside of the United States).

Supplier: Same as manufacturer.

Product name: Liquinox

Section 2 : INGREDIENT INFORMATION

C.A.S.	CONCENTRATION %	Ingredient Name	T.L.V.	LD/50	LC/50
25155-30-0	10-30	SODIUM DODECYLBENZENESULFONATE	NOT AVAILABLE	438 MG/KG RAT ORAL 1330 MG/KG MOUSE ORAL	NOT AVAILABLE

Section 3 : HAZARD IDENTIFICATION

Route of entry: Skin contact, eye contact, inhalation and ingestion.

Effects of acute exposure

Eye contact: May cause irritation.

Skin contact: Prolonged and repeated contact may cause irritation.

Inhalation: May cause headache and nausea.

Ingestion: May cause vomiting and diarrhea.
May cause gastric distress.

Effects of chronic exposure: See effects of acute exposure.

Section 4 : FIRST AID MEASURES

Skin contact: Remove contaminated clothing.
Wash thoroughly with soap and water.
Seek medical attention if irritation persists.

Wear personal protective equipment appropriate to task.
Wash thoroughly after handling.
Keep out of reach of children.
Avoid contact with skin, eyes and clothing.
Avoid extreme temperatures.
Launder contaminated clothing prior to reuse.

Storage requirements: Store away from incompatible materials.
Keep containers closed when not in use.

Section 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

Precautionary Measures

Gloves/Type:



Wear appropriate gloves.

Respiratory/Type: None required under normal use.

Eye/Type:



Safety glasses recommended.

Footwear/Type: Safety shoes per local regulations.

Clothing/Type: As required to prevent skin contact.

Other/Type: Eye wash facility should be in close proximity.
Emergency shower should be in close proximity.

Ventilation requirements: Local exhaust at points of emission.

Exposure limit of material: Not available.

Section 9 : PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.

Appearance & odor: Odourless.
Pale yellow.

Odor threshold (ppm): Not available.

Vapour pressure (mmHg): @ 20°C (68°F).
17

Vapour density (air=1): >1

Volatiles (%)

By volume: Not available.

Evaporation rate (butyl acetate = 1): < 1.

Boiling point (°C): 100 (212F)

Freezing point (°C): Not available.

pH: 8.5

Specific gravity @ 20 °C: (water = 1).
1.083

WHMIS classification: Not controlled.

DSL status: Not available.

USA Regulatory Information

SARA hazard catagories sections 311/312: Immediate (Acute) Health Hazard: No.
Delayed (Chronic) Health Hazard: No.
Fire Hazard: No.
Sudden Release of Pressure: No.
Reactive: No.

SARA Section 313: None

TSCA inventory: All components of this product are listed on the TSCA inventory.

NFPA

Health Hazard: 1

Flammability: 0

Physical hazard: 0

Section 16 : OTHER INFORMATION

Supplier MSDS date: 2005/02/24

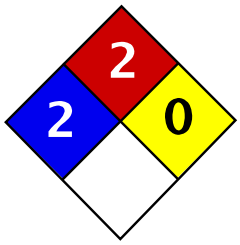
Data prepared by: Global Safety Management
3340 Peachtree Road, #1800
Atlanta, GA 30326

Phone: 877-683-7460
Fax: (877) 683-7462

Web: www.globalsafetynet.com
Email: info@globalsafetynet.com.

General note: This material safety data sheet was prepared from information obtained from various sources, including product suppliers and the Canadian Center for Occupational Health and Safety.





Health	2
Fire	2
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
1-Methylnaphthalene MSDS

Section 1: Chemical Product and Company Identification

Product Name: 1-Methylnaphthalene

Catalog Codes: SLM3592

CAS#: 90-12-0

RTECS: QJ9630000

TSCA: TSCA 8(b) inventory: 1-Methylnaphthalene

CI#: Not available.

Synonym: alpha-Methylnaphthalene

Chemical Name: 1-Methylnaphthalene

Chemical Formula: C10-H7-C-H3

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
{1-}Methylnaphthalene	90-12-0	100

Toxicological Data on Ingredients: 1-Methylnaphthalene: ORAL (LD50): Acute: 1840 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung irritant, lung sensitizer). Slightly hazardous in case of skin contact (sensitizer, permeator).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Combustible.

Auto-Ignition Temperature: 529°C (984.2°F)

Flash Points: CLOSED CUP: 82°C (179.6°F).

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Flammable in presence of open flames and sparks, of heat.
Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Combustible material.
Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Finish cleaning by spreading

water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

Storage:
Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Not available.

Taste: Not available.

Molecular Weight: 142.2 g/mole

Color: Colorless. Clear

pH (1% soln/water): Not applicable.

Boiling Point:
244.6°C (472.3°F)
range: 240 - 245 °C

Melting Point: -22°C (-7.6°F)

Critical Temperature: Not available.

Specific Gravity: 1.0202 (Water = 1)

Vapor Pressure: 0 kPa (@ 25°C)

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: 0.02 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 3.9

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether.

Solubility:
Soluble in diethyl ether.
Insoluble in cold water, hot water.
Soluble in alcohol, benzene.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources (sparks, flames), incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Not available.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 1840 mg/kg [Rat].

Chronic Effects on Humans: MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast.

Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant, lung sensitizer).
Slightly hazardous in case of skin contact (sensitizer, permeator).

Special Remarks on Toxicity to Animals:
Lowest Published Lethal Dose:
LDL [Rabbit] - Route: Skin; Dose: 7500 mg/kg

Special Remarks on Chronic Effects on Humans: May affect genetic material (mutagenic)

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:
Skin: Causes Skin irritation. May cause photosensitization.
Eyes: Causes eye irritation.
Inhalation: Cause respiratory tract irritaiton.
Ingestion: May be harmful if swallowed. Causes digestive tract irritation.

Chronic Potential Health Effects:
Ingestion: Prolonged or repeated ingestion may affect metabolism.
The toxicological properties of this substance have not been fully investigated.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:
Pennsylvania RTK: 1-Methylnaphthalene
Massachusetts RTK: 1-Methylnaphthalene
TSCA 8(b) inventory: 1-Methylnaphthalene

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):
R22- Harmful if swallowed.
R36/37/38- Irritating to eyes, respiratory system and skin.
R42/43- May cause sensitization by inhalation and skin contact.
S7- Keep container tightly closed.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.

S60- This material and its container must be disposed of as hazardous waste.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 2

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 2

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Vapor respirator. Be sure to use an approved/certified respirator or equivalent.
Splash goggles.

Section 16: Other Information

References: Not available.

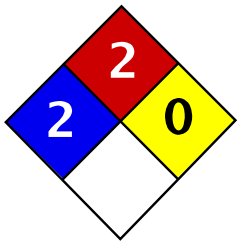
Other Special Considerations: Not available.

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Last Updated: 11/06/2008 12:00 PM

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Health	2
Fire	2
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Naphthalene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Naphthalene

Catalog Codes: SLN1789, SLN2401

CAS#: 91-20-3

RTECS: QJ0525000

TSCA: TSCA 8(b) inventory: Naphthalene

CI#: Not available.

Synonym:

Chemical Name: Not available.

Chemical Formula: C10H8

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Naphthalene	91-20-3	100

Toxicological Data on Ingredients: Naphthalene: ORAL (LD50): Acute: 490 mg/kg [Rat]. 533 mg/kg [Mouse]. 1200 mg/kg [Guinea pig]. DERMAL (LD50): Acute: 20001 mg/kg [Rabbit]. VAPOR (LC50): Acute: 170 ppm 4 hour(s) [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of ingestion. Hazardous in case of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (irritant, permeator). Severe over-exposure can result in death.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Classified Development toxin [POSSIBLE].
The substance is toxic to blood, kidneys, the nervous system, the reproductive system, liver, mucous membranes, gastrointestinal tract, upper respiratory tract, central nervous system (CNS).
Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:
After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:
Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 567°C (1052.6°F)

Flash Points: CLOSED CUP: 88°C (190.4°F). OPEN CUP: 79°C (174.2°F).

Flammable Limits: LOWER: 0.9% UPPER: 5.9%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable solid.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Flammable solid.
Stop leak if without risk. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with eyes Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage:
Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. Keep container dry. Keep in a cool place.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
Israel: TWA: 10 (ppm)
TWA: 10 STEL: 15 (ppm) from ACGIH (TLV) [1995]
TWA: 52 STEL: 79 (mg/m3) from ACGIH [1995]
Australia: STEL: 15 (ppm)
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Crystalline solid.)

Odor: Aromatic.

Taste: Not available.

Molecular Weight: 128.19 g/mole

Color: White.

pH (1% soln/water): Not available.

Boiling Point: 218°C (424.4°F)

Melting Point: 80.2°C (176.4°F)

Critical Temperature: Not available.

Specific Gravity: 1.162 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: 4.4 (Air = 1)

Volatility: Not available.

Odor Threshold: 0.038 ppm

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties:
Partially dispersed in hot water, methanol, n-octanol.
Very slightly dispersed in cold water.
See solubility in methanol, n-octanol.

Solubility:
Partially soluble in methanol, n-octanol.
Very slightly soluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Highly reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: May attack some forms of rubber and plastic

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.
Acute oral toxicity (LD50): 490 mg/kg [Rat].
Acute dermal toxicity (LD50): 20001 mg/kg [Rabbit].
Acute toxicity of the vapor (LC50): 170 ppm 4 hour(s) [Rat].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH.

DEVELOPMENTAL TOXICITY: Classified Development toxin [POSSIBLE].
The substance is toxic to blood, kidneys, the nervous system, the reproductive system, liver, mucous membranes, gastrointestinal tract, upper respiratory tract, central nervous system (CNS).

Other Toxic Effects on Humans:
Very hazardous in case of ingestion.
Hazardous in case of inhalation.
Slightly hazardous in case of skin contact (irritant, permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Ecotoxicity in water (LC50): 305.2 ppm 96 hour(s) [Trout].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 4.1: Flammable solid.

Identification: : Naphthalene, refined : UN1334 PG: III

Special Provisions for Transport: Marine Pollutant

Section 15: Other Regulatory Information

Federal and State Regulations:
Rhode Island RTK hazardous substances: Naphthalene
Pennsylvania RTK: Naphthalene
Florida: Naphthalene
Minnesota: Naphthalene
Massachusetts RTK: Naphthalene
TSCA 8(b) inventory: Naphthalene
TSCA 8(a) PAIR: Naphthalene
TSCA 8(d) H and S data reporting: Naphthalene: 06/01/87
SARA 313 toxic chemical notification and release reporting: Naphthalene: 1%
CERCLA: Hazardous substances.: Naphthalene: 100 lbs. (45.36 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-4: Flammable solid.
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).
CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R36- Irritating to eyes.
R40- Possible risks of irreversible effects.
R48/22- Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R48/23- Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R63- Possible risk of harm to the unborn child.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 2

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 2

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Splash goggles.

Section 16: Other Information

References: Not available.

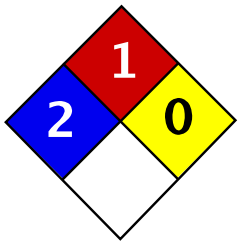
Other Special Considerations: Not available.

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Last Updated: 10/11/2005 01:30 PM

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Health	2
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Phenanthrene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Phenanthrene

Catalog Codes: SLP1318

CAS#: 85-01-8

RTECS: SF7175000

TSCA: TSCA 8(b) inventory: Phenanthrene

CI#: Not available.

Synonym:

Chemical Name: Not available.

Chemical Formula: C14H10

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Phenanthrene	85-01-8	100

Toxicological Data on Ingredients: Phenanthrene: ORAL (LD50): Acute: 700 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant, sensitizer), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:
After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation: Not available.

Ingestion:
Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: OPEN CUP: 171°C (339.8°F).

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water

on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes

Storage:
Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid.

Odor: Not available.

Taste: Not available.

Molecular Weight: 178.22 g/mole

Color: Not available.

pH (1% soln/water): Not available.

Boiling Point: 340°C (644°F)

Melting Point: 101°C (213.8°F)

Critical Temperature: Not available.

Specific Gravity: 1.179 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: 6.14 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Very slightly soluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 700 mg/kg [Mouse].

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant, sensitizer), of ingestion, of inhalation.
Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: Phenanthrene

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):
R36/38- Irritating to eyes and skin.
R43- May cause sensitization by skin contact.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent.
Splash goggles.

Section 16: Other Information

References: Not available.

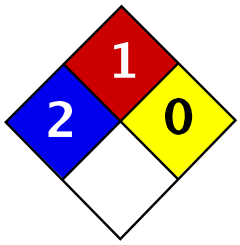
Other Special Considerations: Not available.

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Health	2
Fire	1
Reactivity	0
Personal Protection	C

Material Safety Data Sheet
Pyrene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Pyrene

Catalog Codes: SLP3868

CAS#: 129-00-00

RTECS: UR2450000

TSCA: TSCA 8(b) inventory: Pyrene

CI#: Not available.

Synonym: Benzo(D,E,F)phenanthrene

Chemical Name: Pyrene

Chemical Formula: C16-H10

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Pyrene	129-00-00	100

Toxicological Data on Ingredients: Pyrene: ORAL (LD50): Acute: 2700 mg/kg [Rat]. 800 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, permeator).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.
MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Slightly flammable to flammable in presence of heat, of combustible materials.
Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Slightly explosive in presence of heat.
Non-explosive in presence of open flames and sparks.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage:
Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 24°C (75.2°F). Preferably refrigerate.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Synthetic apron. Gloves (impervious).

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Crystalline solid. Powdered solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 202.26 g/mole

Color: Yellow.

pH (1% soln/water): Not applicable.

Boiling Point: 404°C (759.2°F)

Melting Point: 151.2°C (304.2°F)

Critical Temperature: Not available.

Specific Gravity: 1.271 @ 23 C (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 4.9

Ionicity (in Water): Not available.

Dispersion Properties:
Is not dispersed in cold water, hot water.
See solubility in diethyl ether.

Solubility:
Soluble in diethyl ether.
Insoluble in cold water, hot water.
Pyrene is fairly soluble in organic solvents.
It is soluble in alcohol, benzene, carbon disulfide, ether, petroleum ether, and toluene

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Not available.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 800 mg/kg [Mouse].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.
MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.

Other Toxic Effects on Humans:
Hazardous in case of ingestion, of inhalation.
Slightly hazardous in case of skin contact (irritant, permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
May affect genetic material (mutagenic).
May cause cancer (tumorigenic) according to animal data.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:
Skin: May cause skin irritation. May be absorbed through skin.
Eyes: May cause eye irritation. Conjunctival irritation may be noted.
Inhalation: May cause respiratory tract irritaiton.

Ingestion: May cause gastrointestinal tract irritation. May affect behavior/Central Nervous System (excitation and muscel spasicity), liver and urinary system, and immune system, and blood.

Section 12: Ecological Information

Ecotoxicity: Ecotoxicity in water (LC50): 1.8 mg/l 48 hours [Water flea].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut carcinogen reporting list.: Pyrene
Illinois chemical safety act: Pyrene
New York release reporting list: Pyrene
Pennsylvania RTK: Pyrene
Massachusetts RTK: Pyrene
Massachusetts spill list: Pyrene
New Jersey: Pyrene
New Jersey spill list: Pyrene
Louisiana RTK reporting list: Pyrene
Louisiana spill reporting: Pyrene
California Director's list of Hazardous Substances: Pyrene
TSCA 8(b) inventory: Pyrene
TSCA 8(a) CAIR: Pyrene
TSCA 8(d) H and S data reporting: Pyrene: June 1, 1987-June1, 1997
SARA 302/304/311/312 extremely hazardous substances: Pyrene
CERCLA: Hazardous substances.: Pyrene: 5000 lbs. (2268 kg)

Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):
R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.
S2- Keep out of the reach of children.
S36/37- Wear suitable protective clothing and gloves.
S46- If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: C

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves (impervious).
Synthetic apron.
Not applicable.
Safety glasses.

Section 16: Other Information

References: Not available.

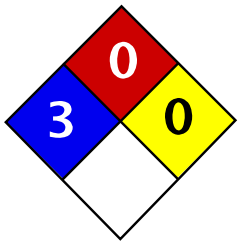
Other Special Considerations: Not available.

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Health	3
Fire	1
Reactivity	0
Personal Protection	J

Material Safety Data Sheet
Sodium Cyanide MSDS

Section 1: Chemical Product and Company Identification

Product Name: Sodium Cyanide

Catalog Codes: SLS2314, SLS3736

CAS#: 143-33-9

RTECS: VZ7525000

TSCA: TSCA 8(b) inventory: Sodium Cyanide

CI#: Not available.

Synonym:

Chemical Name: Sodium Cyanide

Chemical Formula: NaCN

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Sodium Cyanide	143-33-9	100

Toxicological Data on Ingredients: Sodium Cyanide: ORAL (LD50): Acute: 6.44 mg/kg [Rat]. DERMAL (LD50): Acute: 10.4 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (permeator). Corrosive to eyes and skin. The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.

The substance may be toxic to skin, eyes, central nervous system (CNS).
Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:
If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Slightly flammable to flammable in presence of acids, of moisture.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:
Dangerous on contact with acids, acid fumes, water or stream. It will produce toxic and flammable vapors of CN-H and sodium oxide.
Contact with acids and acid salts causes immediate formation of toxic and flammable hydrogen cyanide gas.
When heated to decomposition it emits toxic fumes hydgrogen cyanide and oxides of nitrogen

Special Remarks on Explosion Hazards: Fusion mixtures of metal cyanides with metal chlorates, perchlorated or nitrates causes a violent explosion

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Corrosive solid. Poisonous solid.
Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep container dry. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids, moisture.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 24°C (75.2°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
STEL: 5 (mg/m3) from ACGIH (TLV) [United States] SKIN
CEIL: 4.7 from NIOSH
CEIL: 5 (mg/m3) from NIOSHConsult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Granular solid. Flakes solid.)

Odor:
Faint almond-like odor.
Odorless when perfectly dry. Emits odor of hydrogen cyanide when damp.

Taste: Not available.

Molecular Weight: 49.01 g/mole

Color: White.

pH (1% soln/water): Not available.

Boiling Point: 1496°C (2724.8°F)

Melting Point: 563°C (1045.4°F)

Critical Temperature: Not available.

Specific Gravity: 1.595 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Vapor Density of Hydrogen Cyanide gas: 0.941

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility:
Soluble in cold water.
Slightly soluble in Ethanol

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, moisture, incompatibles.

Incompatibility with various substances: Reactive with oxidizing agents, acids, moisture.

Corrosivity:
Corrosive in presence of aluminum.
Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Violent reaction with fluorine gas, magnesium, nitrates, nitric acid.
Dangerous on contact with acids, acid fumes, water or stream. It wil produce toxic and flammable vapors of CN-H and sodium oxide.
Cyanide may react with CO2 in ordinary air to form toxic hydrogen cyanide gas.
Strong oxidizers such as acids, acid salts, chlorates, and nitrates.
Contact with acids and acid salts causes immediate formation of toxic and flammable hydrogen cyanide gas.

Special Remarks on Corrosivity: Corrosive to aluminum

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
Acute oral toxicity (LD50): 6.44 mg/kg [Rat].
Acute dermal toxicity (LD50): 10.4 mg/kg [Rabbit].

Chronic Effects on Humans: May cause damage to the following organs: skin, eyes, central nervous system (CNS).

Other Toxic Effects on Humans:
Very hazardous in case of skin contact (irritant), of ingestion, of inhalation.
Hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: May cause adverse reproductive effects (maternal and paternal fertility) based on animal data.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health effects:
Skin: May cause itching and irritation. May be fatal if absorbed through injured skin with symtpoms similar to those noted for inhalation and ingestion.
Eyes: May cause eye irritation and eye damage.
Inhalation: May cause respiratory tract irritation. May be fatal if inhaled. The substance inhibits cellular respiration causing metabolic asphyxiation. May cause headache, weakness, dizziness, labored breathing, nausea, vomiting. May be followed by cardiovascular effects, unconciousness, convulsions, coma, and death
Ingestion: May be fatal if swallowed. May cause gastrointestinal tract irritation with nausea, vomiting. May affect behavior and nervous systems(seizures, convulsions, change in motor activity, headache, dizziness, confusion, weakness stupor, aniexity, agitation, tremors), cardiovascular system, respiration (hyperventilation, pulmonary edema, breathing difficulty, respiratory failure), cardiovascular system (palpitations, rapid heart beat, hypertension, hypotension). Massive doses by produce sudden loss of conciousness and prompt death from respiratory arrest. Smaller but still lethal doses
on the breath or vomitus.
Chronic Potential Health Effects:
Central Nervous system effects (headaches, vertigo, insomnia, memory loss, tremors, fatigue), fatigue, metabolic effects (poor appetite), cardiovascular effects (chest discomfort, palpitations), nerve damage to the eyes, or dermatitis, respiratory tract irritation, eye irritation, or death can occur.
may prolong the illness for 1 or more hours. A bitter almond odor may be noted

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Sodium cyanide UNNA: 1689 PG: I

Special Provisions for Transport: Marine Pollutant

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut carcinogen reporting list.: Sodium Cyanide
Illinois chemical safety act: Sodium Cyanide
New York release reporting list: Sodium Cyanide
Rhode Island RTK hazardous substances: Sodium Cyanide
Pennsylvania RTK: Sodium Cyanide
Minnesota: Sodium Cyanide
Massachusetts RTK: Sodium Cyanide
Massachusetts spill list: Sodium Cyanide
New Jersey: Sodium Cyanide
New Jersey spill list: Sodium Cyanide
Louisiana RTK reporting list: Sodium Cyanide
Louisiana spill reporting: Sodium Cyanide
California Director's List of Hazardous Substances: Sodium Cyanide
TSCA 8(b) inventory: Sodium Cyanide
TSCA 4(a) final test rules: Sodium Cyanide
TSCA 8(a) PAIR: Sodium Cyanide
TSCA 8(d) H and S data reporting: Sodium Cyanide
TSCA 12(b) one time export: Sodium Cyanide
SARA 302/304/311/312 extremely hazardous substances: Sodium Cyanide
CERCLA: Hazardous substances.: Sodium Cyanide: 10 lbs. (4.536 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-6: Reactive and very flammable material.
CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).
CLASS E: Corrosive solid.

DSCL (EEC):
R27/28- Very toxic in contact with skin and if swallowed.
R41- Risk of serious damage to eyes.
S1/2- Keep locked up and out of the reach of children.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28- After contact with skin, wash immediately

with plenty of water
S36/37- Wear suitable protective clothing and gloves.
S39- Wear eye/face protection.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S46- If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 1

Reactivity: 0

Personal Protection: j

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Synthetic apron.
Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Splash goggles.

Section 16: Other Information

References: Not available.

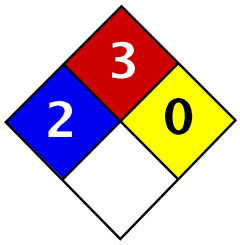
Other Special Considerations: Not available.

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Last Updated: 11/06/2008 12:00 PM

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Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Toluene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Toluene

Catalog Codes: SLT2857, SLT3277

CAS#: 108-88-3

RTECS: XS5250000

TSCA: TSCA 8(b) inventory: Toluene

CI#: Not available.

Synonym: Toluol, Tolu-Sol; Methylbenzene; Methacide; Phenylmethane; Methylbenzol

Chemical Name: Toluene

Chemical Formula: C6-H5-CH3 or C7-H8

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Toluene	108-88-3	100

Toxicological Data on Ingredients: Toluene: ORAL (LD50): Acute: 636 mg/kg [Rat]. DERMAL (LD50): Acute: 14100 mg/kg [Rabbit]. VAPOR (LC50): Acute: 49000 mg/m 4 hours [Rat]. 440 ppm 24 hours [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance may be toxic to blood, kidneys, the nervous system, liver, brain, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 480°C (896°F)

Flash Points: CLOSED CUP: 4.4444°C (40°F). (Setaflash) OPEN CUP: 16°C (60.8°F).

Flammable Limits: LOWER: 1.1% UPPER: 7.1%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Flammable in presence of open flames and sparks, of heat.
Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable liquid, insoluble in water.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray or fog.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards:
Toluene forms explosive reaction with 1,3-dichloro-5,5-dimethyl-2,4-imidazolididione; dinitrogen tetraoxide;

concentrated nitric acid, sulfuric acid + nitric acid; N_2O_4; $AgClO_4$; BrF_3; Uranium hexafluoride; sulfur dichloride. Also forms an explosive mixture with tetranitromethane.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Toxic flammable liquid, insoluble or very slightly soluble in water.
Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 200 STEL: 500 CEIL: 300 (ppm) from OSHA (PEL) [United States]
TWA: 50 (ppm) from ACGIH (TLV) [United States] SKIN
TWA: 100 STEL: 150 from NIOSH [United States]
TWA: 375 STEL: 560 (mg/m^3) from NIOSH [United States]
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Sweet, pungent, Benzene-like.

Taste: Not available.

Molecular Weight: 92.14 g/mole

Color: Colorless.

pH (1% soln/water): Not applicable.

Boiling Point: 110.6°C (231.1°F)

Melting Point: -95°C (-139°F)

Critical Temperature: 318.6°C (605.5°F)

Specific Gravity: 0.8636 (Water = 1)

Vapor Pressure: 3.8 kPa (@ 25°C)

Vapor Density: 3.1 (Air = 1)

Volatility: Not available.

Odor Threshold: 1.6 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 2.7

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether, acetone.

Solubility:
Soluble in diethyl ether, acetone.
Practically insoluble in cold water.
Soluble in ethanol, benzene, chloroform, glacial acetic acid, carbon disulfide.
Solubility in water: 0.561 g/l @ 25 deg. C.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources (flames, sparks, static), incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Incompatible with strong oxidizers, silver perchlorate, sodium difluoride, Tetranitromethane, Uranium Hexafluoride.
Frozen Bromine Trifluoride reacts violently with Toluene at -80 deg. C.
Reacts chemically with nitrogen oxides, or halogens to form nitrotoluene, nitrobenzene, and nitrophenol and halogenated products, respectively.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.
Acute oral toxicity (LD50): 636 mg/kg [Rat].
Acute dermal toxicity (LD50): 14100 mg/kg [Rabbit].
Acute toxicity of the vapor (LC50): 440 24 hours [Mouse].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC.
May cause damage to the following organs: blood, kidneys, the nervous system, liver, brain, central nervous system (CNS).

Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant), of ingestion, of inhalation.
Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals:
Lowest Published Lethal Dose:
LDL [Human] - Route: Oral; Dose: 50 mg/kg
LCL [Rabbit] - Route: Inhalation; Dose: 55000 ppm/40min

Special Remarks on Chronic Effects on Humans:
Detected in maternal milk in human. Passes through the placental barrier in human. Embryotoxic and/or foetotoxic in animal. May cause adverse reproductive effects and birth defects (teratogenic). May affect genetic material (mutagenic)

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:
Skin: Causes mild to moderate skin irritation. It can be absorbed to some extent through the skin.
Eyes: Cauess mild to moderate eye irritation with a burning sensation. Splash contact with eyes also causes conjunctivitis, blepharospasm, corneal edema, corneal abraisons. This usually resolves in 2 days.
Inhalation: Inhalation of vapor may cause respiratory tract irritation causing coughing and wheezing, and nasal discharge. Inhalation of high concentrations may affect behavior and cause central nervous system effects characterized by nausea, headache, dizziness, tremors, restlessness, lightheadedness, exhilaration, memory loss, insomnia, impaired reaction time, drowsiness, ataxia, hallucinations, somnolence, muscle contraction or spasticity, unconsciousness and coma. Inhalation of high concentration of vapor may also affect the cardiovascular system (rapid heart beat, heart palpitations, increased or decreased blood pressure, dysrhythmia,), respiration (acute pulmonary edema, respiratory depression, apnea, asphyxia), cause vision disturbances and dilated pupils, and cause loss of appetite.
Ingestion: Aspiration hazard. Aspiration of Toluene into the lungs may cause chemical pneumonitis. May cause irritation of the digestive tract with nausea, vomiting, pain. May have effects similar to that of acute inhalation.
Chronic Potential Health Effects:
Inhalation and Ingestion: Prolonged or repeated exposure via inhalation may cause central nervous system and cardiovascular symptoms similar to that of acute inhalation and ingestion as well liver damage/failure, kidney damage/failure (with hematuria, proteinuria, oliguria, renal tubular acidosis), brain damage, weight loss, blood (pigmented or nucleated red blood cells, changes in white blood cell count), bone marrow changes, electrolyte imbalances (Hypokalemia, Hypophostatemia), severe, muscle weakness and Rhabdomyolysis.
Skin: Repeated or prolonged skin contact may cause defatting dermatitis.

Section 12: Ecological Information

Ecotoxicity:
Ecotoxicity in water (LC50): 313 mg/l 48 hours [Daphnia (daphnia)]. 17 mg/l 24 hours [Fish (Blue Gill)]. 13 mg/l 96 hours [Fish (Blue Gill)]. 56 mg/l 24 hours [Fish (Fathead minnow)]. 34 mg/l 96 hours [Fish (Fathead minnow)]. 56.8 ppm any hours [Fish (Goldfish)].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may

arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Toluene UNNA: 1294 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Toluene
California prop. 65 (no significant risk level): Toluene: 7 mg/day (value)
California prop. 65 (acceptable daily intake level): Toluene: 7 mg/day (value)
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Toluene
Connecticut hazardous material survey.: Toluene
Illinois toxic substances disclosure to employee act: Toluene
Illinois chemical safety act: Toluene
New York release reporting list: Toluene
Rhode Island RTK hazardous substances: Toluene
Pennsylvania RTK: Toluene
Florida: Toluene
Minnesota: Toluene
Michigan critical material: Toluene
Massachusetts RTK: Toluene
Massachusetts spill list: Toluene
New Jersey: Toluene
New Jersey spill list: Toluene
Louisiana spill reporting: Toluene
California Director's List of Hazardous Substances.: Toluene
TSCA 8(b) inventory: Toluene
TSCA 8(d) H and S data reporting: Toluene: Effective date: 10/04/82; Sunset Date: 10/0/92
SARA 313 toxic chemical notification and release reporting: Toluene
CERCLA: Hazardous substances.: Toluene: 1000 lbs. (453.6 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R11- Highly flammable.
R20- Harmful by inhalation.
S16- Keep away from sources of ignition - No smoking.
S25- Avoid contact with eyes.
S29- Do not empty into drains.
S33- Take precautionary measures against static discharges.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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Material Safety Data Sheet Collection
Genium group inc.
1171 RiverFront Center, Amsterdam, NY 12010
(518) 842-4111

Issue Date: 2006-06

Section 1 - Chemical Product and Company Identification 61

Material Name: m-Xylene **CAS Number:** 108-38-3
Chemical Formula: C_8H_{10}
Structural Chemical Formula: $C_6H_4(CH_3)_2$
EINECS Number: 203-576-3
ACX Number: X1001540-4
Synonyms: BENZENE,1,3-DIMETHYL-; 1,3-DIMETHYLBENZENE; M-DIMETHYLBENZENE; M-METHYLTOLUENE; 1,3-XYLENE; M-XYLENE; M-XYLENE; META-XYLENE; M-XYLOL
General Use: Used as a general solvent in the manufacture of paints, varnishes, lacquers, thinners, inks, rubber, pesticides, herbicides and paint strippers.

Section 2 - Composition / Information on Ingredients

Name	CAS	%
m-xylene	108-38-3	>95

OSHA PEL
TWA: 100 ppm; 435 mg/m^3.

ACGIH TLV
TWA: 100 ppm; STEL: 150 ppm.

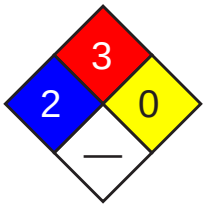
EU OEL
TWA: 50 ppm; STEL: 100 ppm.

NIOSH REL
TWA: 100 ppm (435 mg/m^3); STEL: 150 ppm (655 mg/m^3).

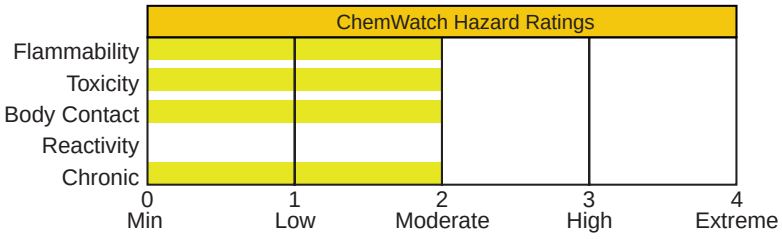
IDLH Level
900 ppm.

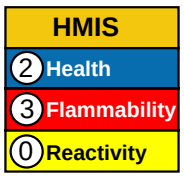
DFG (Germany) MAK
TWA: 100 ppm; PEAK: 200 ppm; skin.

Section 3 - Hazards Identification



Fire Diamond





ANSI Signal Word
Warning!


Flammable

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Clear, sweet smelling liquid. Irritating to eyes/skin/respiratory tract. Other Acute Effects: dizziness, nausea, drowsiness. Chronic Effects: dermatitis, kidney/liver/peripheral nerve damage. May cause birth defects (animal data). Flammable.

Potential Health Effects

Target Organs: central nervous system (CNS), eyes, gastrointestinal (GI) tract, liver, kidneys, skin
Primary Entry Routes: inhalation, skin absorption (slight), eye contact, ingestion
Acute Effects

Inhalation: Xylene is a central nervous system depressant. The vapor is discomforting to the upper respiratory tract and may be harmful if inhaled.
Inhalation hazard is increased at higher temperatures.
Toxic effects are increased by consumption of alcohol.
Acute effects from inhalation of high concentrations of vapor are pulmonary irritation, including coughing, with nausea; central nervous system depression - characterized by headache and dizziness, increased reaction time, fatigue and loss of coordination.
If exposure to highly concentrated solvent atmosphere is prolonged this may lead to narcosis, unconsciousness, even coma and possible death.

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Headache, fatigue, lassitude, irritability and gastrointestinal disturbances (e.g., nausea, anorexia and flatulence) are the most common symptoms of xylene overexposure. Injury to the heart, liver, kidneys and nervous system has also been noted amongst workers. Transient memory loss, renal impairment, temporary confusion and some evidence of disturbance of liver function was reported in three workers overcome by gross exposure to xylene (10000 ppm). One worker died and autopsy revealed pulmonary congestion, edema, and focal alveolar hemorrhage.
Volunteers inhaling xylene at 100 ppm for 5 to 6 hours showed changes in manual coordination, reaction time and slight ataxia. Tolerance developed during the workweek but was lost over the weekend. Physical exercise may antagonize this effect. Xylene body burden in humans exposed to 100 or 200 ppm xylene in air depends on the amount of body fat with 4% to 8% of total absorbed xylene accumulating in human adipose tissues.

Eye: The liquid is highly discomforting to the eyes and is capable of causing a mild, temporary redness of the conjunctiva (similar to wind-burn), temporary impairment of vision and/or other transient eye damage/ulceration.
The vapor is highly discomforting to the eyes.
The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
Corneal changes have been reported in furniture polishers exposed to xylene.

Skin: The liquid is highly discomforting to the skin and may cause drying of the skin, which may lead to dermatitis and it is absorbed by the skin.
Toxic effects may result from skin absorption.
Open cuts, abraded or irritated skin should not be exposed to this material.
The material may accentuate any pre-existing skin condition.
The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic).
This form of dermatitis is often characterized by skin redness (erythema) and swelling (edema) which may progress to vesiculation, scaling and thickening of the epidermis.
Histologically there may be intercellular edema of the spongy layer (spongiosis) and intracellular edema of the epidermis.
Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.

Ingestion: Considered an unlikely route of entry in commercial/industrial environments.
The liquid is highly discomforting and toxic if swallowed.
Ingestion may result in nausea, pain, vomiting. Vomit entering the lungs by aspiration may cause potentially lethal chemical pneumonitis.

Carcinogenicity: NTP - Not listed; IARC - Group 3, Not classifiable as to carcinogenicity to humans; OSHA - Not listed; NIOSH - Not listed; ACGIH - Class A4, Not classifiable as a human carcinogen; EPA - Class D, Not classifiable as to human carcinogenicity; MAK - Not listed.

Chronic Effects: Prolonged or continuous skin contact with the liquid may cause defatting with drying, cracking, irritation and dermatitis following.
Small excess risks of spontaneous abortion and congenital malformation was reported among women exposed to xylene in the first trimester of pregnancy. In all cases however the women had also been exposed to other substances.
Evaluation of workers chronically exposed to xylene has demonstrated a lack of genotoxicity. Exposure to xylene has been associated with increased risks of hemopoietic malignancies but, again simultaneous exposure to other substances (including benzene) complicate the picture. A long-term gavage study of mixed xylenes (containing 17% ethyl benzene) found no evidence of carcinogenic activity in rats and mice of either sex.

Section 4 - First Aid Measures

Inhalation: Remove to fresh air.
Lay patient down. Keep warm and rested.
If available, administer medical oxygen by trained personnel.
If breathing is shallow or has stopped, ensure clear airway and apply resuscitation. Transport to hospital or doctor, without delay.



Eye Contact: Immediately hold the eyes open and flush continuously for at least 15 minutes with fresh running water. Ensure irrigation under eyelids by occasionally lifting the upper and lower lids.
Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact: Immediately remove all contaminated clothing, including footwear (after rinsing with water).
Wash affected areas thoroughly with water (and soap if available).
Seek medical attention in event of irritation.

Ingestion: Contact a Poison Control Center.
Do NOT induce vomiting. Give a glass of water.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: For acute or short-term repeated exposures to xylene:
1. Gastrointestinal absorption is significant with ingestions.
For ingestions exceeding 1-2 mL (xylene)/kg, intubation and lavage with cuffed endotracheal tube is recommended.
The use of charcoal and cathartics is equivocal.

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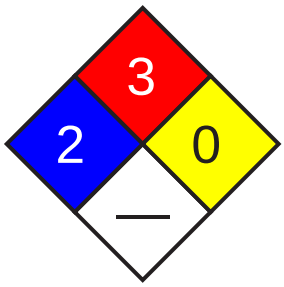
2.Pulmonary absorption is rapid with about 60-65% retained at rest.
3.Primary threat to life from ingestion and/or inhalation is respiratory failure.
4.Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO_2 <50 mm Hg or pCO_2 >50 mm Hg) should be intubated.
5.Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
6.A chest x-ray should be taken immediately after stabilization of breathing and circulation to document aspiration and detect the presence of pneumothorax.
7.Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitization to catecholamines.
Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
BIOLOGICAL EXPOSURE INDEX - BEI
These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
Methylhippuric acids in urine	1.5 gm/gm creatinine	End of shift	
	2 mg/min	Last 4 hrs of shift.	

Section 5 - Fire-Fighting Measures

Flash Point: 27 °C Closed Cup
Autoignition Temperature: 527 °C
LEL: 1.1% v/v
UEL: 7.0% v/v
Extinguishing Media: Foam, dry chemical powder, BCF (where regulations permit), carbon dioxide.
Water spray or fog - Large fires only.

See DOT ERG



Fire Diamond

General Fire Hazards/Hazardous Combustion Products: Liquid and vapor are flammable.
Moderate fire hazard when exposed to heat or flame.
Vapor forms an explosive mixture with air.
Moderate explosion hazard when exposed to heat or flame.
Vapor may travel a considerable distance to source of ignition.
Heating may cause expansion or decomposition leading to violent rupture of containers.
On combustion, may emit toxic fumes of carbon monoxide (CO).
Other combustion products include carbon dioxide (CO_2).
Fire Incompatibility: Avoid contamination with strong oxidizing agents as ignition may result.
Fire-Fighting Instructions: Contact fire department and tell them location and nature of hazard.
May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or waterways.
If safe, switch off electrical equipment until vapor fire hazard removed.
Use water delivered as a fine spray to control fire and cool adjacent area.
Avoid spraying water onto liquid pools.
Do not approach containers suspected to be hot.
Cool fire-exposed containers with water spray from a protected location.
If safe to do so, remove containers from path of fire.

Section 6 - Accidental Release Measures

Small Spills: Remove all ignition sources. Clean up all spills immediately.
Avoid breathing vapors and contact with skin and eyes.
Control personal contact by using protective equipment.
Contain and absorb small quantities with vermiculite or other absorbent material. Wipe up. Collect residues in a flammable waste container.

See DOT ERG

Large Spills: Clear area of personnel and move upwind.
Contact fire department and tell them location and nature of hazard.
May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or waterways.
No smoking, bare lights or ignition sources. Increase ventilation.
Stop leak if safe to do so. Water spray or fog may be used to disperse/absorb vapor. Contain spill with sand, earth or vermiculite.

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Use only spark-free shovels and explosion proof equipment.
Collect recoverable product into labeled containers for recycling.
Absorb remaining product with sand, earth or vermiculite.
Collect solid residues and seal in labeled drums for disposal.
Wash area and prevent runoff into drains.
If contamination of drains or waterways occurs, advise emergency services.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Avoid all personal contact, including inhalation.
Wear protective clothing when risk of overexposure occurs.
Use in a well-ventilated area. Prevent concentration in hollows and sumps.
DO NOT enter confined spaces until atmosphere has been checked.
Avoid smoking, bare lights or ignition sources.
Avoid generation of static electricity. DO NOT use plastic buckets.
Ground all lines and equipment. Use spark-free tools when handling.
Avoid contact with incompatible materials.
When handling, DO NOT eat, drink or smoke.
Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling.
Work clothes should be laundered separately.
Use good occupational work practices. Observe manufacturer's storing and handling recommendations. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.

Recommended Storage Methods: Metal can; metal drum. Packing as recommended by manufacturer.
Check all containers are clearly labeled and free from leaks.
Plastic containers may only be used if approved for flammable liquids.

Regulatory Requirements: Follow applicable OSHA regulations.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use in a well-ventilated area. Local exhaust ventilation may be required for safe working, i. e. , to keep exposures below required standards; otherwise, PPE is required.
CARE: Use of a quantity of this material in confined space or poorly ventilated area, where rapid build-up of concentrated atmosphere may occur, could require increased ventilation and/or protective gear.
General exhaust is adequate under normal operating conditions.
Local exhaust ventilation may be required in specific circumstances.
If risk of overexposure exists, wear NIOSH-approved respirator.
Correct fit is essential to obtain adequate protection.
Provide adequate ventilation in warehouse or closed storage areas.
In confined spaces where there is inadequate ventilation, wear full-face air supplied breathing apparatus.

Personal Protective Clothing/Equipment:

Eyes: Safety glasses with side shields; or as required, chemical goggles.
Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.

Hands/Feet: Barrier cream with polyethylene gloves; Butyl rubber gloves or Neoprene gloves or PVC gloves.
Safety footwear.
Do NOT use this product to clean the skin.

Respiratory Protection:
Exposure Range >100 to <900 ppm: Air Purifying, Negative Pressure, Half Mask
Exposure Range 900 to unlimited ppm: Self-contained Breathing Apparatus, Pressure Demand, Full Face
Cartridge Color: black

Other: Overalls. Impervious protective clothing.
Eyewash unit.
Ensure there is ready access to an emergency shower.

Glove Selection Index:
PVA ..... Best selection
VITON ..... Best selection

Section 9 - Physical and Chemical Properties

Appearance/General Info: Clear, colorless flammable liquid with aromatic odor. Miscible in most organic solvents. Odor threshold: 0.2 to 2 ppm. Vapor is heavier than air.

Physical State: Liquid
Odor Threshold: 4.00 x10^{13} mol/cc
Vapor Pressure (kPa): 0.5 at 15 °C
Vapor Density (Air=1): 3.66 at 15 °C
Formula Weight: 106.18
Specific Gravity (H_2O=1, at 4 °C): 0.87 at 15 °C

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Evaporation Rate: 0.7 Bu Ac=1
pH: Not applicable
pH (1% Solution): Not applicable.
Boiling Point: 139.3 °C (283 °F)
Freezing/Melting Point: -47.8 °C (-54.04 °F)
Volatile Component (% Vol): 100
Water Solubility: Slight

Section 10 - Stability and Reactivity

Stability/Polymerization/Conditions to Avoid: Product is considered stable. Hazardous polymerization will not occur.
Storage Incompatibilities: Avoid storage with oxidizers.

Section 11 - Toxicological Information

Toxicity
Oral (rat) LD_{50}: 5000 mg/kg
Intraperitoneal (mouse) LD_{50}: 1739 mg/kg
Dermal (rabbit) LD_{50}: 14100 mg/kg

Effects on fertility, specific developmental abnormalities (craniofacial) recorded.

Irritation
Skin (rabbit): 0.01 mg/24h(open)
SEVERE
Skin (rabbit): 20 mg/24h - mod
Eye (rabbit): 5 mg/24h - SEVERE

See *RTECS* ZE 2275000, for additional data.

Section 12 - Ecological Information

Environmental Fate: Most is released into the atmosphere where it may photochemically degrade by reaction with hydroxyl radicals (half-life 1-10 hr). The dominant removal process in water is volatilization. It is moderately mobile in soil and may leach into groundwater where it is known to persist for several years despite some evidence that it biodegrades in both soil and groundwater. Bioconcentration is not expected to be significant.
Ecotoxicity: LC_{50} Poecilia reticulata (guppy) 38 ppm/14 days /Conditions of bioassay not specified; LC_{100} Tetrahymena pyriformis (ciliate) 3.77 mmole/l/24 hr /Conditions of bioassay not specified; LC_{50} Crangon franciscorum (shrimp) 3.7 ppm/96 hr /Conditions of bioassay not specified; LD_{50} Goldfish 16 mg/l/24 hr /Modified ASTM D 1345 method; LC_{50} Morone saxatilis (striped bass) 9.2 ppm/96 hr /Conditions of bioassay not specified; LC_{50} Cancer magister (crab larvae-stage I) 12 ppm/96 hr /Conditions of bioassay not specified
Henry's Law Constant: 0.314
BCF: eels 1.37
Biochemical Oxygen Demand (BOD): 0 lb/lb, 5 days
Octanol/Water Partition Coefficient: log K_{ow} = 3.20

Section 13 - Disposal Considerations

Disposal: Consult manufacturer for recycling options and recycle where possible.
Follow applicable federal, state, and local regulations.
Incinerate residue at an approved site.
Recycle containers where possible, or dispose of in an authorized landfill.

Section 14 - Transport Information

DOT Hazardous Materials Table Data (49 CFR 172.101):

Note: This material has multiple possible HMT entries. Choose the appropriate one based on state and condition of specific material when shipped.

Shipping Name and Description: Xylenes
ID: UN1307
Hazard Class: 3 - Flammable and combustible liquid
Packing Group: II - Medium Danger
Symbols:
Label Codes: 3 - Flammable Liquid
Special Provisions: IB2, T4, TP1
Packaging: **Exceptions:** 150 **Non-bulk:** 202 **Bulk:** 242
Quantity Limitations: **Passenger aircraft/rail:** 5 L **Cargo aircraft only:** 60 L



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Vessel Stowage: **Location:** B **Other:**

Shipping Name and Description: Xylenes
ID: UN1307
Hazard Class: 3 - Flammable and combustible liquid
Packing Group: III - Minor Danger
Symbols:
Label Codes: 3 - Flammable Liquid
Special Provisions: B1, IB3, T2, TP1
Packaging: **Exceptions:** 150 **Non-bulk:** 203 **Bulk:** 242
Quantity Limitations: **Passenger aircraft/rail:** 60 L **Cargo aircraft only:** 220 L
Vessel Stowage: **Location:** A **Other:**



Section 15 - Regulatory Information

EPA Regulations:

RCRA 40 CFR: Not listed
CERCLA 40 CFR 302.4: Listed per CWA Section 311(b)(4), per RCRA Section 3001 1000 lb (453.5 kg)
SARA 40 CFR 372.65: Listed
SARA EHS 40 CFR 355: Not listed
TSCA: Listed

Section 16 - Other Information

Disclaimer: Judgments as to the suitability of information herein for the purchaser's purposes are necessarily the purchaser's responsibility. Although reasonable care has been taken in the preparation of such information, Genium Group, Inc. extends no warranties, makes no representations, and assumes no responsibility as to the accuracy or suitability of such information for application to the purchaser's intended purpose or for consequences of its use.

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Material Safety Data Sheet Collection
Genium group inc.
1171 RiverFront Center, Amsterdam, NY 12010
(518) 842-4111

Issue Date: 2006-06

Section 1 - Chemical Product and Company Identification 61

Material Name: o-Xylene **CAS Number:** 95-47-6
Chemical Formula: C_8H_{10}
Structural Chemical Formula: $C_6H_4(CH_3)_2$
EINECS Number: 202-422-2
ACX Number: X1001538-4
Synonyms: BENZENE,1,2-DIMETHYL-; 1,2-DIMETHYLBENZENE; O-DIMETHYLBENZENE; O-METHYLTOLUENE; 1,2-XYLENE; O-XYLENE; 2-XYLENE; O-XYLENE; ORTHO-XYLENE; O-XYLOL
General Use: Used as a general solvent in the manufacture of paints, varnishes, lacquers, thinners, inks, rubber, pesticides, herbicides and paint strippers.

Section 2 - Composition / Information on Ingredients

Name	CAS	%
o-xylene	95-47-6	>95

OSHA PEL
TWA: 100 ppm; 435 mg/m^3.

ACGIH TLV
TWA: 100 ppm; STEL: 150 ppm.

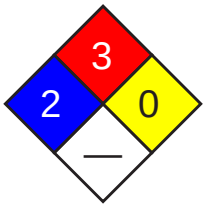
EU OEL
TWA: 50 ppm; STEL: 100 ppm.

NIOSH REL
TWA: 100 ppm (435 mg/m^3); STEL: 150 ppm (655 mg/m^3).

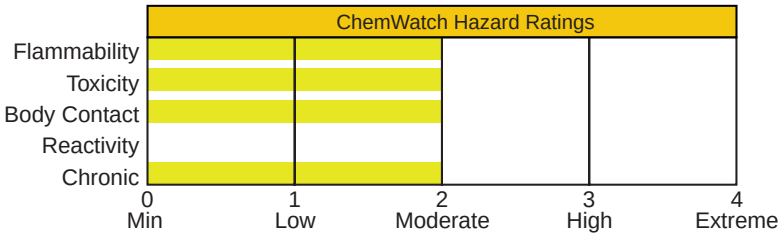
IDLH Level
900 ppm.

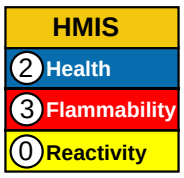
DFG (Germany) MAK
TWA: 100 ppm; PEAK: 200 ppm; skin.

Section 3 - Hazards Identification



Fire Diamond





ANSI Signal Word

Warning!


Flammable

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Clear, sweet smelling liquid. Irritating to eyes/skin/respiratory tract. Other Acute Effects: dizziness, nausea, drowsiness. Chronic Effects: dermatitis, kidney/liver/peripheral nerve damage. May cause birth defects based on animal data. Flammable.

Potential Health Effects

Target Organs: central nervous system (CNS), eyes, gastrointestinal (GI) tract, liver, kidneys, skin
Primary Entry Routes: inhalation, skin absorption (slight), eye contact, ingestion
Acute Effects

Inhalation: Xylene is a central nervous system depressant. The vapor is discomforting to the upper respiratory tract and may be harmful if inhaled.
Inhalation hazard is increased at higher temperatures.
Toxic effects are increased by consumption of alcohol.
Acute effects from inhalation of high concentrations of vapor are pulmonary irritation, including coughing, with nausea; central nervous system depression - characterized by headache and dizziness, increased reaction time, fatigue and loss of coordination.
If exposure to highly concentrated solvent atmosphere is prolonged this may lead to narcosis, unconsciousness, even coma and possible death.

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Headache, fatigue, lassitude, irritability and gastrointestinal disturbances (e.g., nausea, anorexia and flatulence) are the most common symptoms of xylene overexposure. Injury to the heart, liver, kidneys and nervous system has also been noted among workers. Transient memory loss, renal impairment, temporary confusion and some evidence of disturbance of liver function was reported in three workers overcome by gross exposure to xylene (10000 ppm). One worker died and autopsy revealed pulmonary congestion, edema, and focal alveolar hemorrhage.
Volunteers inhaling xylene at 100 ppm for 5 to 6 hours showed changes in manual coordination, reaction time and slight ataxia. Tolerance developed during the workweek but was lost over the weekend. Physical exercise may antagonize this effect. Xylene body burden in humans exposed to 100 or 200 ppm xylene in air depends on the amount of body fat with 4% to 8% of total absorbed xylene accumulating in human adipose tissues.

Eye: The liquid is highly discomforting to the eyes and is capable of causing a mild, temporary redness of the conjunctiva (similar to wind-burn), temporary impairment of vision and/or other transient eye damage/ulceration.
The vapor is highly discomforting to the eyes.
Corneal changes have been reported in furniture polishers exposed to xylene.

Skin: The liquid is highly discomforting to the skin and may cause drying of the skin, which may lead to dermatitis and it is absorbed by the skin.
Toxic effects may result from skin absorption.
Open cuts, abraded or irritated skin should not be exposed to this material.
The material may accentuate any pre-existing skin condition.

Ingestion: Considered an unlikely route of entry in commercial/industrial environments.
The liquid is highly discomforting and toxic if swallowed.
Ingestion may result in nausea, pain, vomiting. Vomit entering the lungs by aspiration may cause potentially lethal chemical pneumonitis.

Carcinogenicity: NTP - Not listed; IARC - Group 3, Not classifiable as to carcinogenicity to humans; OSHA - Not listed; NIOSH - Not listed; ACGIH - Class A4, Not classifiable as a human carcinogen; EPA - Class D, Not classifiable as to human carcinogenicity; MAK - Not listed.

Chronic Effects: Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes.
Prolonged or continuous skin contact with the liquid may cause defatting with drying, cracking, irritation and dermatitis following.
Small excess risks of spontaneous abortion and congenital malformation was reported among women exposed to xylene in the first trimester of pregnancy. In all cases however the women had also been exposed to other substances.
Evaluation of workers chronically exposed to xylene has demonstrated a lack of genotoxicity. Exposure to xylene has been associated with increased risks of hemopoietic malignancies but, again simultaneous exposure to other substances (including benzene) complicate the picture. A long-term gavage study of mixed xylenes (containing 17% ethyl benzene) found no evidence of carcinogenic activity in rats and mice of either sex.

Section 4 - First Aid Measures

Inhalation: Remove to fresh air.
Lay patient down. Keep warm and rested.
If available, administer medical oxygen by trained personnel.
If breathing is shallow or has stopped, ensure clear airway and apply resuscitation. Transport to hospital or doctor, without delay.



Eye Contact: Immediately hold the eyes open and flush continuously for at least 15 minutes with fresh running water. Ensure irrigation under eyelids by occasionally lifting the upper and lower lids.
Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact: Immediately remove all contaminated clothing, including footwear (after rinsing with water).
Wash affected areas thoroughly with water (and soap if available).
Seek medical attention in event of irritation.

Ingestion: Contact a Poison Control Center. Do NOT induce vomiting. Give a glass of water.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: For acute or short-term repeated exposures to xylene:
1.Gastrointestinal absorption is significant with ingestions.
For ingestions exceeding 1-2 mL (xylene)/kg, intubation and lavage with cuffed endotracheal tube is recommended.
The use of charcoal and cathartics is equivocal.
2. Pulmonary absorption is rapid with about 60-65% retained at rest.
3. Primary threat to life from ingestion and/or inhalation is respiratory failure.
4. Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO_2 <50 mm Hg or pCO_2 >50 mm Hg) should be intubated.
5. Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.

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6. A chest x-ray should be taken immediately after stabilization of breathing and circulation to document aspiration and detect the presence of pneumothorax.
7. Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitization to catecholamines.
Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.

BIOLOGICAL EXPOSURE INDEX - BEI

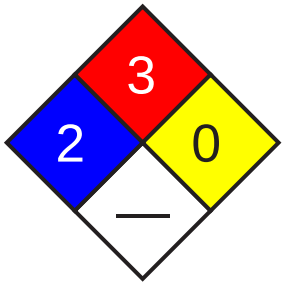
These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
Methylhippuric acids in urine	1.5 gm/gm creatinine	End of shift	
	2 mg/min	Last 4 hrs of shift.	

Section 5 - Fire-Fighting Measures

Flash Point: 32 °C Closed Cup
Autoignition Temperature: 463 °C
LEL: 1.0% v/v
UEL: 7% v/v
Extinguishing Media: Foam, dry chemical powder, BCF (where regulations permit), carbon dioxide.
Water spray or fog - Large fires only.
General Fire Hazards/Hazardous Combustion Products: Liquid and vapor are flammable.
Moderate fire hazard when exposed to heat or flame.
Vapor forms an explosive mixture with air.
Moderate explosion hazard when exposed to heat or flame.
Vapor may travel a considerable distance to source of ignition.
Heating may cause expansion or decomposition leading to violent rupture of containers.
On combustion, may emit toxic fumes of carbon monoxide (CO).
Other combustion products include carbon dioxide (CO_2).
Fire Incompatibility: Avoid contamination with strong oxidizing agents as ignition may result.
Fire-Fighting Instructions: Contact fire department and tell them location and nature of hazard.
May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or waterways.
If safe, switch off electrical equipment until vapor fire hazard removed.
Use water delivered as a fine spray to control fire and cool adjacent area.
Avoid spraying water onto liquid pools.
Do not approach containers suspected to be hot.
Cool fire-exposed containers with water spray from a protected location.
If safe to do so, remove containers from path of fire.

See DOT ERG



Fire Diamond

Section 6 - Accidental Release Measures

Small Spills: Remove all ignition sources. Clean up all spills immediately.
Avoid breathing vapors and contact with skin and eyes.
Control personal contact by using protective equipment.
Contain and absorb small quantities with vermiculite or other absorbent material. Wipe up. Collect residues in a flammable waste container.
Large Spills: Clear area of personnel and move upwind.
Contact fire department and tell them location and nature of hazard.
May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or waterways.
No smoking, bare lights or ignition sources. Increase ventilation.
Stop leak if safe to do so. Water spray or fog may be used to disperse/absorb vapor. Contain spill with sand, earth or vermiculite.
Use only spark-free shovels and explosion proof equipment.
Collect recoverable product into labeled containers for recycling.
Absorb remaining product with sand, earth or vermiculite.
Collect solid residues and seal in labeled drums for disposal.
Wash area and prevent runoff into drains.
If contamination of drains or waterways occurs, advise emergency services.
Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

See DOT ERG

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Section 7 - Handling and Storage

Handling Precautions: Avoid all personal contact, including inhalation.
Wear protective clothing when risk of overexposure occurs.
Use in a well-ventilated area. Prevent concentration in hollows and sumps.
DO NOT enter confined spaces until atmosphere has been checked.
Avoid smoking, bare lights or ignition sources.
Avoid generation of static electricity. DO NOT use plastic buckets.
Ground all lines and equipment. Use spark-free tools when handling.
Avoid contact with incompatible materials.
When handling, DO NOT eat, drink or smoke.
Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling.
Work clothes should be laundered separately.
Observe manufacturer's storing and handling recommendations. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.
Recommended Storage Methods: Metal can; metal drum. Packing as recommended by manufacturer.
Check all containers are clearly labeled and free from leaks.
Plastic containers may only be used if approved for flammable liquids.
Regulatory Requirements: Follow applicable OSHA regulations.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use in a well-ventilated area. Local exhaust ventilation may be required for safe working, i. e. , to keep exposures below required standards; otherwise, PPE is required.
CARE: Use of a quantity of this material in confined space or poorly ventilated area, where rapid build-up of concentrated atmosphere may occur, could require increased ventilation and/or protective gear.
General exhaust is adequate under normal operating conditions.
Local exhaust ventilation may be required in specific circumstances.
If risk of overexposure exists, wear NIOSH-approved respirator.
Correct fit is essential to obtain adequate protection.
Provide adequate ventilation in warehouse or closed storage areas.
In confined spaces where there is inadequate ventilation, wear full-face air supplied breathing apparatus.
Personal Protective Clothing/Equipment:
Eyes: Safety glasses with side shields; or as required, chemical goggles.
Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.
Hands/Feet: Barrier cream with polyethylene gloves; Butyl rubber gloves or Neoprene gloves or PVC gloves.
Safety footwear.
Do NOT use this product to clean the skin.
Other: Overalls. Impervious protective clothing.
Eyewash unit.
Ensure there is ready access to an emergency shower.
Glove Selection Index:
PVA ..... Best selection
VITON ..... Best selection

Section 9 - Physical and Chemical Properties

Appearance/General Info: Clear, colorless flammable liquid with aromatic odor. Miscible in most organic solvents.
Odor threshold: 0.2 to 2 ppm.

Physical State: Liquid
Odor Threshold: 0.05 ppm
Vapor Pressure (kPa): 0.5 at 15 °C
Vapor Density (Air=1): 3.66 at 15 °C
Formula Weight: 106.18
Specific Gravity (H_2O=1, at 4 °C): 0.87 at 15 °C
Evaporation Rate: 0.7 Bu Ac=1

pH: Not applicable
pH (1% Solution): Not applicable.
Boiling Point: 144.4 °C (292 °F) at 760 mm Hg
Freezing/Melting Point: -25 °C (-13 °F)
Volatile Component (% Vol): 100
Water Solubility: 0.02% by weight

Section 10 - Stability and Reactivity

Stability/Polymerization/Conditions to Avoid: Product is considered stable. Hazardous polymerization will not occur.
Storage Incompatibilities: Avoid storage with oxidizers.

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Section 11 - Toxicological Information

Toxicity
Inhalation (human) LC_{Lo}: 6125 ppm/12h
Intraperitoneal (mouse) LD_{50}: 1364 mg/kg
Paternal effects recorded.

Irritation
Nil reported

See *RTECS* ZE 2450000, for additional data.

Section 12 - Ecological Information

Environmental Fate: Most is released into the atmosphere where it may photochemically degrade by reaction with hydroxyl radicals (half-life 1.5-15 hr). The dominant removal process in water is volatilization. It is moderately mobile in soil and may leach into groundwater where it has been known to be detectable for several years, although there is some evidence that it biodegrades in both soil and groundwater. Bioconcentration is not expected to be significant.
Ecotoxicity: LC_{50} Poecilia reticulata (guppy) 35 ppm/7 days /Conditions of bioassay not specified; LC_{50} Morone saxatilis (bass) 11.0 ppm/96 hr /Conditions of bioassay not specified; LC_{50} Cancer magister (crab larvae stage I) 6 ppm/96 hr /Conditions of bioassay not specified; LC_{50} Crangon franciscorum (shrimp) 1.3 ppm/96 hr /Conditions of bioassay not specified
Henry's Law Constant: 5.1×10^{-3}
BCF: eels 1.33
Biochemical Oxygen Demand (BOD): 0 lb/lb, 5 days
Octanol/Water Partition Coefficient: log K_{ow} = 3.12
Soil Sorption Partition Coefficient: K_{oc} = soils 48 to 68

Section 13 - Disposal Considerations

Disposal: Consult manufacturer for recycling options and recycle where possible.
Follow applicable federal, state, and local regulations.
Incinerate residue at an approved site.
Recycle containers where possible, or dispose of in an authorized landfill.

Section 14 - Transport Information

DOT Hazardous Materials Table Data (49 CFR 172.101):

Note: This material has multiple possible HMT entries. Choose the appropriate one based on state and condition of specific material when shipped.

Shipping Name and Description: Xylenes
ID: UN1307
Hazard Class: 3 - Flammable and combustible liquid
Packing Group: II - Medium Danger
Symbols:
Label Codes: 3 - Flammable Liquid
Special Provisions: IB2, T4, TP1
Packaging: **Exceptions:** 150 **Non-bulk:** 202 **Bulk:** 242
Quantity Limitations: **Passenger aircraft/rail:** 5 L **Cargo aircraft only:** 60 L
Vessel Stowage: **Location:** B **Other:**



Shipping Name and Description: Xylenes
ID: UN1307
Hazard Class: 3 - Flammable and combustible liquid
Packing Group: III - Minor Danger
Symbols:
Label Codes: 3 - Flammable Liquid
Special Provisions: B1, IB3, T2, TP1
Packaging: **Exceptions:** 150 **Non-bulk:** 203 **Bulk:** 242
Quantity Limitations: **Passenger aircraft/rail:** 60 L **Cargo aircraft only:** 220 L
Vessel Stowage: **Location:** A **Other:**



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Section 15 - Regulatory Information

EPA Regulations:

RCRA 40 CFR: Not listed
CERCLA 40 CFR 302.4: Listed per CWA Section 311(b)(4), per RCRA Section 3001 1000 lb (453.5 kg)
SARA 40 CFR 372.65: Listed
SARA EHS 40 CFR 355: Not listed
TSCA: Listed

Section 16 - Other Information

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Material Safety Data Sheet Collection
Genium group inc.
1171 RiverFront Center, Amsterdam, NY 12010
(518) 842-4111

Issue Date: 2006-06

Section 1 - Chemical Product and Company Identification 61

Material Name: p-Xylene
CAS Number: 106-42-3
Chemical Formula: C_8H_{10}
Structural Chemical Formula: $C_6H_4(CH_3)_2$
EINECS Number: 203-396-5
ACX Number: X1001539-1
Synonyms: BENZENE,1,4-DIMETHYL-; CHROMAR; 1,4-DIMETHYLBENZENE; P-DIMETHYLBENZENE; P-METHYLTOLUENE; SCINTILLAR; 1,4-XYLENE; P-XYLENE; 4-XYLENE; P-XYLENE; PARA-XYLENE; P-XYLOL
General Use: Used as a general solvent.

Section 2 - Composition / Information on Ingredients

Name	CAS	%
p-xylene	106-42-3	100

OSHA PEL
TWA: 100 ppm; 435 mg/m^3.

ACGIH TLV
TWA: 100 ppm; STEL: 150 ppm.

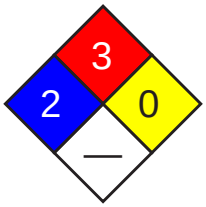
EU OEL
TWA: 50 ppm; STEL: 100 ppm.

NIOSH REL
TWA: 100 ppm (435 mg/m^3); STEL: 150 ppm (655 mg/m^3).

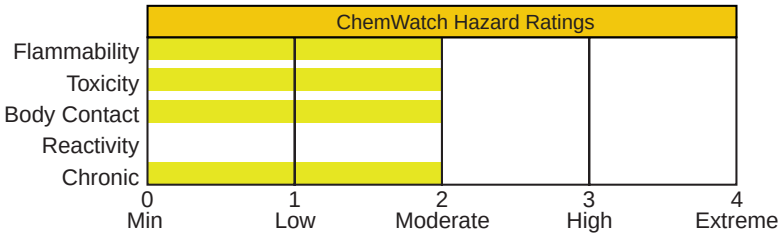
IDLH Level
900 ppm.

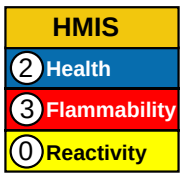
DFG (Germany) MAK
TWA: 100 ppm; PEAK: 200 ppm; skin.

Section 3 - Hazards Identification



Fire Diamond





ANSI Signal Word
Warning!


Flammable

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Clear, sweet smelling liquid. Irritating to eyes/skin/respiratory tract. Other Acute Effects: dizziness, nausea, drowsiness. Chronic Effects: dermatitis, kidney/liver/peripheral nerve damage, may cause birth defects (animal data). Flammable.

Potential Health Effects

Target Organs: central nervous system (CNS), eyes, gastrointestinal (GI) tract, liver, kidneys, skin
Primary Entry Routes: inhalation, skin absorption (slight), eye contact, ingestion
Acute Effects

Inhalation: Xylene is a central nervous system depressant. The vapor is discomforting to the upper respiratory tract and may be harmful if inhaled.
Inhalation hazard is increased at higher temperatures.
Toxic effects are increased by consumption of alcohol.
Acute effects from inhalation of high concentrations of vapor are pulmonary irritation, including coughing, with nausea; central nervous system depression - characterized by headache and dizziness, increased reaction time, fatigue and loss of coordination.
If exposure to highly concentrated solvent atmosphere is prolonged this may lead to narcosis, unconsciousness, even coma and possible death.

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Headache, fatigue, lassitude, irritability and gastrointestinal disturbances (e.g., nausea, anorexia and flatulence) are the most common symptoms of xylene overexposure. Injury to the heart, liver, kidneys and nervous system has also been noted among workers. Transient memory loss, renal impairment, temporary confusion and some evidence of disturbance of liver function was reported in three workers overcome by gross exposure to xylene (10000 ppm). One worker died and autopsy revealed pulmonary congestion, edema, and focal alveolar hemorrhage.
Volunteers inhaling xylene at 100 ppm for 5 to 6 hours showed changes in manual coordination, reaction time and slight ataxia. Tolerance developed during the workweek but was lost over the weekend. Physical exercise may antagonize this effect. Xylene body burden in humans exposed to 100 or 200 ppm xylene in air depends on the amount of body fat with 4% to 8% of total absorbed xylene accumulating in human adipose tissues.

Eye: The liquid is highly discomforting to the eyes and is capable of causing a mild, temporary redness of the conjunctiva (similar to wind-burn), temporary impairment of vision and/or other transient eye damage/ulceration.
The vapor is highly discomforting to the eyes.
Corneal changes have been reported in furniture polishers exposed to xylene.

Skin: The liquid is highly discomforting to the skin and may cause drying of the skin, which may lead to dermatitis and it is absorbed by the skin.
Toxic effects may result from skin absorption.
Open cuts, abraded or irritated skin should not be exposed to this material.
The material may accentuate any pre-existing skin condition.

Ingestion: Considered an unlikely route of entry in commercial/industrial environments.
The liquid is highly discomforting and toxic if swallowed.
Ingestion may result in nausea, pain, vomiting. Vomit entering the lungs by aspiration may cause potentially lethal chemical pneumonitis.

Carcinogenicity: NTP - Not listed; IARC - Group 3, Not classifiable as to carcinogenicity to humans; OSHA - Not listed; NIOSH - Not listed; ACGIH - Class A4, Not classifiable as a human carcinogen; EPA - Class D, Not classifiable as to human carcinogenicity; MAK - Not listed.

Chronic Effects: Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes.
Prolonged or continuous skin contact with the liquid may cause defatting with drying, cracking, irritation and dermatitis following.
Small excess risks of spontaneous abortion and congenital malformation was reported among women exposed to xylene in the first trimester of pregnancy. In all cases however the women had also been exposed to other substances.
Evaluation of workers chronically exposed to xylene has demonstrated a lack of genotoxicity. Exposure to xylene has been associated with increased risks of hemopoietic malignancies but, again simultaneous exposure to other substances (including benzene) complicate the picture. A long-term gavage study of mixed xylenes (containing 17% ethyl benzene) found no evidence of carcinogenic activity in rats and mice of either sex.

Section 4 - First Aid Measures

Inhalation: Remove to fresh air.
Lay patient down. Keep warm and rested.
If available, administer medical oxygen by trained personnel.
If breathing is shallow or has stopped, ensure clear airway and apply resuscitation. Transport to hospital or doctor, without delay.



Eye Contact: Immediately hold the eyes open and flush continuously for at least 15 minutes with fresh running water. Ensure irrigation under eyelids by occasionally lifting the upper and lower lids.
Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact: Immediately remove all contaminated clothing, including footwear (after rinsing with water).
Wash affected areas thoroughly with water (and soap if available).
Seek medical attention in event of irritation.

Ingestion: Contact a Poison Control Center. Do NOT induce vomiting. Give a glass of water.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: For acute or short-term repeated exposures to xylene:
1. Gastrointestinal absorption is significant with ingestions.
For ingestions exceeding 1-2 mL (xylene)/kg, intubation and lavage with cuffed endotracheal tube is recommended.
The use of charcoal and cathartics is equivocal.
2.Pulmonary absorption is rapid with about 60-65% retained at rest.
3.Primary threat to life from ingestion and/or inhalation is respiratory failure.
4.Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO_2 <50 mm Hg or pCO_2 >50 mm Hg) should be intubated.
5.Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.

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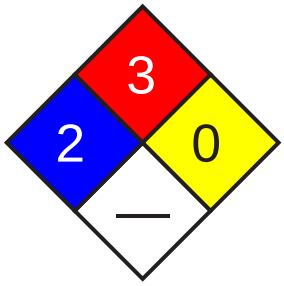
6.A chest x-ray should be taken immediately after stabilization of breathing and circulation to document aspiration and detect the presence of pneumothorax.
7.Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitization to catecholamines.
Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
BIOLOGICAL EXPOSURE INDEX - BEI
These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
Methylhippuric acids in urine	1.5 gm/gm creatinine	End of shift	
	2 mg/min	Last 4 hrs of shift.	

Section 5 - Fire-Fighting Measures

Flash Point: 27 °C Closed Cup
Autoignition Temperature: 528 °C
LEL: 1.1% v/v
UEL: 7.0% v/v
Extinguishing Media: Foam, dry chemical powder, BCF (where regulations permit), carbon dioxide.
Water spray or fog - Large fires only.
General Fire Hazards/Hazardous Combustion Products: Liquid and vapor are flammable.
Moderate fire hazard when exposed to heat or flame.
Vapor forms an explosive mixture with air.
Moderate explosion hazard when exposed to heat or flame.
Vapor may travel a considerable distance to source of ignition.
Heating may cause expansion or decomposition leading to violent rupture of containers.
On combustion, may emit toxic fumes of carbon monoxide (CO).
Other combustion products include carbon dioxide (CO_2).
Fire Incompatibility: Avoid contamination with strong oxidizing agents as ignition may result.
Fire-Fighting Instructions: Contact fire department and tell them location and nature of hazard.
May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or waterways.
If safe, switch off electrical equipment until vapor fire hazard removed.
Use water delivered as a fine spray to control fire and cool adjacent area.
Avoid spraying water onto liquid pools.
Do not approach containers suspected to be hot.
Cool fire-exposed containers with water spray from a protected location.
If safe to do so, remove containers from path of fire.

See DOT ERG



Fire Diamond

Section 6 - Accidental Release Measures

Small Spills: Remove all ignition sources. Clean up all spills immediately.
Avoid breathing vapors and contact with skin and eyes.
Control personal contact by using protective equipment.
Contain and absorb small quantities with vermiculite or other absorbent material. Wipe up. Collect residues in a flammable waste container.
Large Spills: Clear area of personnel and move upwind.
Contact fire department and tell them location and nature of hazard.
May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or waterways.
No smoking, bare lights or ignition sources. Increase ventilation.
Stop leak if safe to do so. Water spray or fog may be used to disperse/absorb vapor. Contain spill with sand, earth or vermiculite.
Use only spark-free shovels and explosion proof equipment.
Collect recoverable product into labeled containers for recycling.
Absorb remaining product with sand, earth or vermiculite.
Collect solid residues and seal in labeled drums for disposal.
Wash area and prevent runoff into drains.
If contamination of drains or waterways occurs, advise emergency services.
Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

See DOT ERG

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Section 7 - Handling and Storage

Handling Precautions: Avoid all personal contact, including inhalation.
Wear protective clothing when risk of overexposure occurs.
Use in a well-ventilated area. Prevent concentration in hollows and sumps.
DO NOT enter confined spaces until atmosphere has been checked.
Avoid smoking, bare lights or ignition sources.
Avoid generation of static electricity. DO NOT use plastic buckets.
Ground all lines and equipment. Use spark-free tools when handling.
Avoid contact with incompatible materials.
When handling, DO NOT eat, drink or smoke.
Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling.
Work clothes should be laundered separately.
Observe manufacturer's storing and handling recommendations. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.
Recommended Storage Methods: Metal can; metal drum. Packing as recommended by manufacturer.
Check all containers are clearly labeled and free from leaks.
Plastic containers may only be used if approved for flammable liquids.
Regulatory Requirements: Follow applicable OSHA regulations.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use in a well-ventilated area. Local exhaust ventilation may be required for safe working, i. e. , to keep exposures below required standards; otherwise, PPE is required.
CARE: Use of a quantity of this material in confined space or poorly ventilated area, where rapid build-up of concentrated atmosphere may occur, could require increased ventilation and/or protective gear.
General exhaust is adequate under normal operating conditions.
If risk of overexposure exists, wear NIOSH-approved respirator.
Correct fit is essential to obtain adequate protection.
Provide adequate ventilation in warehouse or closed storage areas.
In confined spaces where there is inadequate ventilation, wear full-face air supplied breathing apparatus.
Personal Protective Clothing/Equipment:
Eyes: Safety glasses with side shields; or as required, chemical goggles.
Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.
Hands/Feet: Barrier cream with polyethylene gloves; Butyl rubber gloves or Neoprene gloves or PVC gloves.
Safety footwear.
Do NOT use this product to clean the skin.
Respiratory Protection:
Exposure Range >100 to <900 ppm: Air Purifying, Negative Pressure, Half Mask
Exposure Range 900 to unlimited ppm: Self-contained Breathing Apparatus, Pressure Demand, Full Face
Cartridge Color: black
Other: Overalls. Impervious protective clothing.
Eyewash unit.
Ensure there is ready access to an emergency shower.
Glove Selection Index:
PVA ..... Best selection
VITON ..... Best selection
NITRILE ..... Poor to dangerous choice for other than short-term immersion

Section 9 - Physical and Chemical Properties

Appearance/General Info: Clear, colorless liquid with sweet, aromatic odor. Miscible in most organic solvents. Odor threshold 0.05 ppm.
Physical State: Liquid
Odor Threshold: Detection 0.05 ppm
Vapor Pressure (kPa): 0.90 at 20 °C
Vapor Density (Air=1): 3.66 at 15 °C
Formula Weight: 106.18
Specific Gravity (H_2O=1, at 4 °C): 0.86
Evaporation Rate: 9.9 Ether=1
pH: Not applicable
pH (1% Solution): Not applicable.
Boiling Point: 138.37 °C (281 °F)
Freezing/Melting Point: 13.3 °C (55.94 °F)
Volatile Component (% Vol): 100
Water Solubility: Insoluble in water

Section 10 - Stability and Reactivity

Stability/Polymerization/Conditions to Avoid: Product is considered stable. Hazardous polymerization will not occur.

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Storage Incompatibilities: Avoid storage with oxidizers.

Section 11 - Toxicological Information

Toxicity
Oral (rat) LD_{50}: 5000 mg/kg
Inhalation (rat) LC_{50}: 4550 ppm/4h

Irritation
Nil reported

See *RTECS* ZE 2625000, for additional data.

Section 12 - Ecological Information

Environmental Fate: Most is released into the atmosphere where it may photochemically degrade by reaction with hydroxyl radicals (half-life 1.7-18 hr). The dominant removal process in water is volatilization. It is moderately mobile in soil and may leach into groundwater where it is known to persist for several years despite some evidence that it biodegrades in both soil and groundwater. Bioconcentration is not expected to be significant.

Ecotoxicity: LC_{50} Poecilia reticulata (guppy) 35 ppm/7 day /Conditions of bioassay not specified; LC_{50} Morone saxatilis (bass) 2.0 ppm/96 hr /Conditions of bioassay not specified; LC_{100} Tetrahymena pyriformis (ciliate) 3.77 mmole/l/24 hr /Conditions of bioassay not specified; LD_{50} Goldfish 18 mg/l/24 hr /Modified ASTM D 1345 method; LC_{50} Crangon franciscorum (shrimp) 2.0 ppm/96 hr /Conditions of bioassay not specified

Henry's Law Constant: 0.314

BCF: eels 1.37

Biochemical Oxygen Demand (BOD): 0 lb/lb, 5 days

Octanol/Water Partition Coefficient: log K_{ow} = 3.15

Soil Sorption Partition Coefficient: K_{oc} = 3.15

Section 13 - Disposal Considerations

Disposal: Consult manufacturer for recycling options and recycle where possible.
Follow applicable federal, state, and local regulations.
Incinerate residue at an approved site.
Recycle containers where possible, or dispose of in an authorized landfill.

Section 14 - Transport Information

DOT Hazardous Materials Table Data (49 CFR 172.101):

Note: This material has multiple possible HMT entries. Choose the appropriate one based on state and condition of specific material when shipped.

Shipping Name and Description: Xylenes
ID: UN1307
Hazard Class: 3 - Flammable and combustible liquid
Packing Group: II - Medium Danger
Symbols:
Label Codes: 3 - Flammable Liquid
Special Provisions: IB2, T4, TP1
Packaging: **Exceptions:** 150 **Non-bulk:** 202 **Bulk:** 242
Quantity Limitations: **Passenger aircraft/rail:** 5 L **Cargo aircraft only:** 60 L
Vessel Stowage: **Location:** B **Other:**



Shipping Name and Description: Xylenes
ID: UN1307
Hazard Class: 3 - Flammable and combustible liquid
Packing Group: III - Minor Danger
Symbols:
Label Codes: 3 - Flammable Liquid
Special Provisions: B1, IB3, T2, TP1
Packaging: **Exceptions:** 150 **Non-bulk:** 203 **Bulk:** 242
Quantity Limitations: **Passenger aircraft/rail:** 60 L **Cargo aircraft only:** 220 L
Vessel Stowage: **Location:** A **Other:**



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Section 15 - Regulatory Information

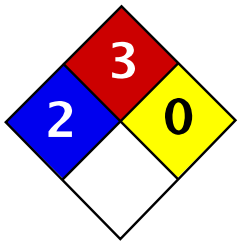
EPA Regulations:

RCRA 40 CFR: Not listed
CERCLA 40 CFR 302.4: Listed per CWA Section 311(b)(4), per RCRA Section 3001 100 lb (45.35 kg)
SARA 40 CFR 372.65: Listed
SARA EHS 40 CFR 355: Not listed
TSCA: Listed

Section 16 - Other Information

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Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Xylenes MSDS

Section 1: Chemical Product and Company Identification

Product Name: Xylenes

Catalog Codes: SLX1075, SLX1129, SLX1042, SLX1096

CAS#: 1330-20-7

RTECS: ZE2100000

TSCA: TSCA 8(b) inventory: Xylenes

CI#: Not available.

Synonym: Xylenes; Dimethylbenzene; xylol; methyltoluene

Chemical Name: Xylenes (o-, m-, p- isomers)

Chemical Formula: C6H4(CH3)2

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Xylenes	1330-20-7	100

Toxicological Data on Ingredients: Xylenes: ORAL (LD50): Acute: 4300 mg/kg [Rat]. 2119 mg/kg [Mouse]. DERMAL (LD50): Acute: >1700 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects: Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance may be toxic to blood, kidneys, liver, mucous membranes, bone marrow, central nervous system (CNS).
Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 464°C (867.2°F)

Flash Points: CLOSED CUP: 24°C (75.2°F). (Tagliabue.) OPEN CUP: 37.8°C (100°F).

Flammable Limits: LOWER: 1% UPPER: 7%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Highly flammable in presence of open flames and sparks, of heat.
Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Slightly explosive in presence of open flames and sparks, of heat.

Fire Fighting Media and Instructions:
Flammable liquid, soluble or dispersed in water.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Vapors may travel to source of ignition and flash back.

Special Remarks on Explosion Hazards:
Vapors may form explosive mixtures with air.
Containers may explode when heated.

May polymerize explosively when heated.
An attempt to chlorinate xylene with 1,3-Dichloro-5,5-dimethyl-2,4-imidazolidindione (dichlorohydrantoin) caused a violent explosion

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Flammable liquid.
Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 100 (ppm) [Canada]
TWA: 435 (mg/m3) [Canada]
TWA: 434 STEL: 651 (mg/m3) from ACGIH (TLV) [United States]
TWA: 100 STEL: 150 (ppm) from ACGIH (TLV) [United States]
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Sweetish.

Taste: Not available.

Molecular Weight: 106.17 g/mole

Color: Colorless. Clear

pH (1% soln/water): Not available.

Boiling Point: 138.5°C (281.3°F)

Melting Point: -47.4°C (-53.3°F)

Critical Temperature: Not available.

Specific Gravity: 0.864 (Water = 1)

Vapor Pressure: 0.9 kPa (@ 20°C)

Vapor Density: 3.7 (Air = 1)

Volatility: Not available.

Odor Threshold: 1 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 3.1

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility:
Insoluble in cold water, hot water.
Miscible with absolute alcohol, ether, and many other organic liquids.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources, incompatibles

Incompatibility with various substances: Reactive with oxidizing agents, acids.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Store away from acetic acid, nitric acid, chlorine, bromine, and fluorine.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.
Acute oral toxicity (LD50): 2119 mg/kg [Mouse].

Acute dermal toxicity (LD50): >1700 mg/kg [Rabbit].
Acute toxicity of the vapor (LC50): 5000 4 hours [Rat].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.
May cause damage to the following organs: blood, kidneys, liver, mucous membranes, bone marrow, central nervous system (CNS).

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals:
Lowest Lethal Dose:
LDL [Human] - Route: Oral; Dose: 50 mg/kg
LCL [Man] - Route: Oral; Dose: 10000 ppm/6H

Special Remarks on Chronic Effects on Humans:
Detected in maternal milk in human. Passes through the placental barrier in animal. Embryotoxic and/or foetotoxic in animal.
May cause adverse reproductive effects (male and femael fertility (spontaneous abortion and fetotoxicity)) and birth defects based animal data.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:
Skin: Causes skin irritation. Can be absorbed through skin.
Eyes: Causes eye irritation.
Inhalation: Vapor causes respiratory tract and mucous membrane irritation. May affect central nervous system and behavior (General anesthetic/CNS depressant with effects including headache, weakness, memory loss, irritability, dizziness, giddiness, loss of coordination and judgement, respiratory depression/arrest or difficulty breathing, loss of appetite, nausea, vomiting, shivering, and possible coma and death). May also affects blood, sense organs, liver, and peripheral nerves.
Ingestion: May cause gastrointestinal irritation including abdominal pain, vomiting, and nausea. May also affect liver and urinary system/kidneys. May cause effects similar to those of acute inhalation.
Chronic Potential Health Effects:
Chronic inhalation may affect the urinary system (kidneys) blood (anemia), bone marrow (hyperplasia of bone marrow) brain/behavior/Central Nervous system. Chronic inhalation may alsocause mucosal bleeding.
Chronic ingestion may affect the liver and metabolism (loss of appetite) and may affect urinary system (kidney damage)

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Xylenes UNNA: 1307 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut hazardous material survey.: Xylenes
Illinois chemical safety act: Xylenes
New York acutely hazardous substances: Xylenes
Rhode Island RTK hazardous substances: Xylenes
Pennsylvania RTK: Xylenes
Minnesota: Xylenes
Michigan critical material: Xylenes
Massachusetts RTK: Xylenes
Massachusetts spill list: Xylenes
New Jersey: Xylenes
New Jersey spill list: Xylenes
Louisiana spill reporting: Xylenes
California Director's List of Hazardous Substances: Xylenes
TSCA 8(b) inventory: Xylenes
SARA 302/304/311/312 hazardous chemicals: Xylenes
SARA 313 toxic chemical notification and release reporting: Xylenes
CERCLA: Hazardous substances.: Xylenes: 100 lbs. (45.36 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R10- Flammable.
R21- Harmful in contact with skin.
R36/38- Irritating to eyes and skin.
S2- Keep out of the reach of children.
S36/37- Wear suitable protective clothing and gloves.
S46- If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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Attachment D
Activity Hazard Analysis Forms

Job Safety Analysis

Field Activities

Project Name: Cedar Street Works Former Manufactured Gas Plant Site NYSDEC Site No. V00570	**Project Number:** E10921-02.05	**JSA Number:** 001	**Issue Date:** 1/28/2022
Location: New Rochelle, New York	**Contractor:** Anchor QEA, LLC	**Analysis by:** Pia Tapiawala	**Analysis Date:** 1/28/2022
Work Operation: Field activities	**Superintendent/Competent Person:** Scott Andrews	**Revised by:**	**Revised Date:**
Required Personal Protective Equipment (PPE): • Modified Level D—Long pants, long sleeves, and steel-toed footwear conforming to ASTM International (ASTM) F2412-05/ASTM F2413-05 • Depending on activity, the following PPE may also be required: safety glasses/splash goggles, hard hat, nitrile outer gloves and latex inner gloves, and, if boating, U.S. Coast Guard-approved personal flotation device (PFD; see cold stress section for cold-weather PFD information)		**Reviewed by:** Matt Cavas	**Reviewed Date:**
		Approved by:	**Approved Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
If boating		• Follow the Job Safety Analysis (JSA) for boating activities.	
Outdoor, physical activity	Slips, trips, and falls	• Avoid walking while writing or texting—maintain a heads-up posture. • Be aware of potentially slippery surfaces and tripping hazards. Use handrails where available. Wear footwear that has sufficient traction. • Maintain good housekeeping practices. Clean up all spills immediately. • Be aware of weather effects on the work area, including wet and/or frozen ground. • Jumping, running, and horseplay are prohibited. • Keep all areas clean and free of debris to prevent any trips and falls. • Be aware of and limit loose clothing or untied shoelaces that may contribute to slips, trip, and falls. • Notify the field team members of any unsafe conditions.	• Routinely inspect work area for unsafe conditions.

PLAYING IT SAFE

Job Safety Analysis

Field Activities

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Outdoor, physical activity (continued)	Heat stress	• Adjust work schedules, as necessary, to avoid the hottest part of the day. • Take rest breaks as warranted. • Provide shelter (air-conditioned, if possible) or shaded areas to protect personnel during rest periods. • Maintain body fluids at normal levels. • Train workers to recognize the symptoms of heat-related illness.	• Review weather forecast prior to field work. • Monitor workers' physical conditions. • Monitor outside temperature versus worker activity.
	Cold stress	• Provide shelter (enclosed, heated environment) to protect personnel during rest periods. • Educate workers to recognize the symptoms of frostbite and hypothermia. • Use appropriate cold-weather gear, up to and including Mustang-type bib coveralls or jacket/bib combinations. • Consider additional precautions if working near water in cold weather. • Have a dry change of clothing available. • Train workers to recognize the symptoms of cold-related illness.	• Review weather forecast prior to field work. • Monitor workers' physical conditions and PPE. • Monitor outside and water temperature versus worker activity and PPE.
	Rain or snow	• Wear appropriate PPE (rain gear). • Be aware of slip hazards, puddles, and electrical hazards when working in wet conditions. • If extremely cold conditions are forecast, consider additional precautions or postponing work activity.	• Review weather forecast prior to field work. • Inspect PPE daily prior to use. • Routinely inspect work area for deteriorating conditions.
	Sunshine	• Have sunscreen available for ultraviolet protection. • Have abundant water available to prevent dehydration. • Consider wearing wide-brimmed headwear and light-colored, lightweight, sun-blocking clothing.	• Ensure that sunscreen and water are available.
	Lightning	• Do not begin or continue work until lightning subsides for at least 30 minutes. Disconnect and do not use or touch electronic equipment. • Immediately head for shore if on the water and lightning is observed. If not able to get to shore, disconnect and do not use or touch the major electronic equipment, including the radio, throughout the duration of the storm.	• Obtain weather forecast and updates as needed.

Job Safety Analysis

Field Activities

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Outdoor, physical activity (continued)	High winds	• Wear goggles or safety glasses if dust or debris are visible.	• Review weather forecast prior to field work. • Ensure that goggles or safety glasses are available.
	Biological hazards (flora [e.g., poison ivy and poison oak] and fauna [e.g., ticks, bees, spiders, mosquitoes, and snakes])	• Be aware of likely biological hazards in the work area. • Wear appropriate clothing (i.e., hat, long-sleeve shirt, long pants, leather gloves, boots, and Tyvek coveralls, as appropriate), and apply insect repellant. • Wear hand and arm protection when clearing plants or debris from the work area. • Be aware of potential wildlife and defensive behavior (e.g., nesting birds, or animals with young).	• Ensure that insect repellent is available. • Inspect clothing and skin for insects (e.g., ticks) after working in insect-prone areas.
	Noise exposure	• Wear hearing protection in high noise environments or when working around heavy machinery or equipment (action level of 85 decibels averaged over an 8-hour day).	• Ensure that hearing protection is available.

Training Requirements:

- All personnel working on hazardous waste sites must receive appropriate training as required by 29 Code of Federal Regulations (CFR) 1910.120(e), including but not limited to initial 40-hour, 8-hour supervisor, and annual 8-hour refresher trainings.
- Medical clearance must be received on an annual basis as required by 29 CFR 1910.120(f).
- If boating is involved, and a professional captained vessel is not in use, boat operators must take the appropriate state or provincial boater safety courses.
- All assigned employees are required to familiarize themselves with the contents of this JSA before starting a work activity and review it with their supervisor during their daily safety meeting.

Job Safety Analysis

Groundwater Sampling

Project Name: Cedar Street Works Former Manufactured Gas Plant Site NYSDEC Site No. V00570	**Project Number:** E10921-02.05	**AHA Number:** 002	**Issue Date:** 1/28/2022
Location: New Rochelle, New York	**Contractor:** Anchor QEA, LLC	**Analysis by:** Pia Tapiawala	**Analysis Date:** 1/28/2022
Work Operation: Groundwater sampling	**Superintendent/Competent Person:** Scott Andrews	**Revised by:**	**Revised Date:**
Required Personal Protective Equipment (PPE): • Modified Level D—Long pants, long sleeves, and steel-toed footwear conforming to ASTM International (ASTM) F2412-05/ASTM F2413-05 • Safety glasses/splash goggles, hard hat, nitrile outer gloves and latex inner gloves, and, if boating, U.S. Coast Guard-approved personal flotation device (PFD; see cold stress section for cold-weather PFD information)		**Reviewed by:** Matthew Cavas, PG	**Reviewed Date:**
		Approved by:	**Approved Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
If using glassware		• Follow the JSA for handling glassware.	
Groundwater sample retrieval	Slips, trips, and falls	• Avoid walking while writing or texting—maintain a heads-up posture. • Be aware of potentially slippery surfaces, riprap, thick mud, and tripping hazards. Use handrails where available. Wear footwear that has sufficient traction. • Maintain good housekeeping practices. Clean up all spills immediately. • Be aware of weather effects on the work area, including wet and/or frozen ground. • Jumping, running, and horseplay are prohibited. • Keep all areas clean and free of debris to prevent any trips and falls. • Notify the field team members of any unsafe conditions.	• Routinely inspect work area for unsafe conditions.
Groundwater sample retrieval (continued)	Ingestion of contaminants, or skin or eye contact with contaminants	• Wear appropriate PPE to prevent or reduce exposure. • Contact 911 if necessary, and perform cardiopulmonary resuscitation (CPR) if breathing stops. • Move the exposed person away from the source of contamination and rinse their mouth. If skin exposure occurs, promptly wash the contaminated skin using soap or mild detergent and water. If eye exposure occurs, rinse the eyes with large amounts of water. • Follow decontamination procedures as outlined in the Health and Safety Plan (HASP).	• Ensure that decontamination procedures are on hand and are reviewed. • Ensure that PPE and rinsing water are available.

PLAYING IT SAFE

Job Safety Analysis

Groundwater Sampling

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
	Pinch points	• Maintain a safe distance from closing mechanisms and moving parts on sampling gear.	
	Biological hazards (flora [e.g., poison ivy and poison oak] and fauna [e.g., ticks, bees, spiders, mosquitoes, and snakes])	• Be aware of likely biological hazards in the work area. • Wear appropriate clothing (i.e., hat, long-sleeve shirt, long pants, leather gloves, and boots as appropriate). • Wear hand and arm protection when clearing plants or debris from the work area.	• Inspect clothing and skin for insects (e.g., ticks) after working in insect-prone areas.
	Muscle strain or injuries from improper lifting	• Use proper lifting techniques or ask for assistance with heavy objects, buckets, or other unwieldy equipment. •	• Evaluate weight and center of gravity of heavier items prior to lifting or moving.
	Noise exposure	• Wear hearing protection in high noise environments or when working around heavy machinery or equipment (action level of 85 decibels averaged over an 8-hour day).	• Ensure that hearing protection is available.
	Heat stress	• Adjust work schedules, as necessary, to avoid the hottest part of the day. • Take rest breaks as warranted. • Provide shelter (air-conditioned, if possible) or shaded areas to protect personnel during rest periods. • Maintain body fluids at normal levels. • Train workers to recognize the symptoms of heat-related illness.	• Review weather forecast prior to field work. • Monitor workers' physical conditions. • Monitor outside temperature versus worker activity.
Working outdoors	Cold stress	• Provide shelter (enclosed, heated environment) to protect personnel during rest periods. • Educate workers to recognize the symptoms of frostbite and hypothermia. • Use appropriate cold-weather gear. • Consider additional precautions if working near water in cold weather. • Have a dry change of clothing available. • Train workers to recognize the symptoms of cold-related illness.	• Review weather forecast prior to field work. • Monitor workers' physical conditions and PPE. • Monitor outside and water temperature versus worker activity and PPE.
	Rain or snow	• Wear appropriate PPE (rain gear). • Be aware of slip hazards, puddles, and electrical hazards when working in wet conditions. • If extremely cold conditions are forecast, consider additional precautions or postponing work activity.	• Review weather forecast prior to field work. • Inspect PPE daily prior to use. • Routinely inspect work area for deteriorating conditions.

Job Safety Analysis

Groundwater Sampling

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
	Sunshine	• Have abundant water available to prevent dehydration. • Consider wearing wide-brimmed headwear and light-colored, lightweight, sun-blocking clothing.	•
	Lightning	• Do not begin or continue work until lightning subsides for at least 30 minutes. Disconnect and do not use or touch electronic equipment. • Immediately head for shore if on the water and lightning is observed. If not able to get to shore, disconnect and do not use or touch the major electronic equipment, including the radio, throughout the duration of the storm.	• Obtain weather forecast and updates as needed.
	High winds	• Wear goggles or safety glasses if dust or debris are visible.	• Review weather forecast prior to field work. • Ensure that goggles or safety glasses are available.

Training Requirements:

- All personnel working on hazardous waste sites must receive appropriate training as required by 29 Code of Federal Regulations (CFR) 1910.120(e), including but not limited to initial 40-hour, 8-hour supervisor, and annual 8-hour refresher trainings.
- Medical clearance must be received on an annual basis as required by 29 CFR 1910.120(f).
- If boating is involved, and a professional captained vessel is not in use, boat operators must take the appropriate state boater safety courses.
- All assigned employees are required to familiarize themselves with the contents of this JSA before starting a work activity and review it with their supervisor during their daily safety meeting.

Job Safety Analysis

Decontamination Activities

Project Name: Cedar Street Works Former Manufactured Gas Plant Site NYSDEC Site No. V00570	**Project Number:** E10921-02.05	**JSA Number:** 003	**Issue Date:** 1/28/2022
Location: New Rochelle, New York	**Contractor:** Anchor QEA, LLC	**Analysis by:** Pia Tapiawala	**Analysis Date:** 1/28/2022
Work Operation: Decontamination activities	**Superintendent/Competent Person:** Scott Andrews	**Revised by:**	**Revised Date:**
Required Personal Protective Equipment (PPE): • High-visibility safety vest • Hard hat where overhead hazards and/or heavy equipment are present • U.S. Coast Guard-approved personal flotation device (PFD), if boating (see cold stress section for cold-weather PFD information)		**Reviewed by:** Matthew Cavas, PG	**Reviewed by:**
		Approved by: Fill in	**Approved Date:** Fill in

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
If boating		• Follow the Job Safety Analysis (JSA) for boating activities.	
Decontamination area set up	Vehicle, heavy equipment traffic, or boat traffic in work area	• Wear high-visibility safety vest and hard hat PPE. • Be alert when working around heavy equipment and/or other boats, especially if wearing hearing protection.	• Ensure that safety vests are available for staff and visitors.
	Muscle strain or injuries from improper lifting	• Use proper lifting techniques or ask for assistance with heavy objects. • If boating, avoid carrying objects directly onto or off of the boat; rather, load/unload objects while on the boat to/from the pier/shore.	• Evaluate weight and center of gravity of heavier items prior to lifting or moving.
	Biological hazards (flora [e.g., poison ivy, and poison oak] and fauna [e.g., ticks, bees, spiders, mosquitoes, and snakes])	• Be aware of likely biological hazards in the work area. • Wear appropriate clothing (i.e., hat, long-sleeve shirt, long pants, leather gloves, boots, and Tyvek coveralls, as appropriate), and apply insect repellent. • Wear hand and arm protection when clearing plants or debris from the work area.	• Ensure that insect repellent is available. • Inspect clothing and skin for insects (e.g., ticks) after working in insect-prone areas.

PLAYING IT SAFE

Job Safety Analysis

Decontamination Activities

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Decontamination activities	Injury from hand and power tool operation (e.g., spatula or drill)	• Be aware of sharp edges on hand tools (e.g., spatulas, knives, drill bits, and saw blades). • Be aware of electrical connections and water hazards when working with electric- or battery-operated tools. • Ensure that all tools are working properly; repair or replace defective tools. Repair when unplugged and off. • Keep guards on power tools when not in use.	• Inspect tools to ensure that they are in good working order. • Inspect electrical connections (if applicable). • Inspect tools periodically to ensure dry and clean operation.
	Noise exposure	• Wear hearing protection in high noise environments or when working around heavy machinery or equipment (action level of 85 decibels averaged over an 8-hour day).	• Ensure that hearing protection is available.
	Slips, trips, and falls	• Avoid walking while writing or texting—maintain a heads-up posture. • Be aware of potentially slippery surfaces and tripping hazards. Use handrails where available. Wear footwear that has sufficient traction. • Maintain good housekeeping practices. Clean up all spills immediately. • Be aware of weather effects on the work area, including wet and/or frozen ground. • Jumping, running, and horseplay are prohibited. • Keep all areas clean and free of debris to prevent any trips and falls. • Notify the field team members of any unsafe conditions.	• Routinely inspect work area for unsafe conditions.
	Ingestion of contaminants or decontamination fluids, or skin or eye contact with contaminants or decontamination fluids	• Wear appropriate PPE to prevent/reduce exposure. • Contact 911, as necessary; perform CPR if breathing stops. • Move exposed person away from source of contamination, and rinse mouth. If exposure to skin occurs, promptly wash contaminated skin using soap or mild detergent and water. Rinse eyes with large amounts of water. • Follow decontamination procedures as outlined in the Health and Safety Plan (HASP).	• Ensure that decontamination procedures are on hand and are reviewed. • Ensure that PPE and rinsing water are available.
Working outdoors	Heat stress	• Adjust work schedules, as necessary, to avoid the hottest part of the day. • Take rest breaks as warranted. • Provide shelter (air-conditioned, if possible) or shaded areas to protect personnel during rest periods. • Maintain body fluids at normal levels. • Train workers to recognize the symptoms of heat-related illness.	• Review weather forecast prior to field work. • Monitor workers' physical conditions. • Monitor outside temperature versus worker activity.

Job Safety Analysis

Decontamination Activities

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Working outdoors (continued)	Cold stress	• Provide shelter (enclosed, heated environment) to protect personnel during rest periods. • Educate workers to recognize the symptoms of frostbite and hypothermia. • Use appropriate cold-weather gear, up to and including Mustang-type bib coveralls or jacket/bib combinations. • Consider additional precautions if working near water in cold weather. • Have a dry change of clothing available. • Train workers to recognize the symptoms of cold-related illness.	• Review weather forecast prior to field work. • Monitor workers' physical conditions and PPE. • Monitor outside and water temperature versus worker activity and PPE.
	Rain or snow	• Wear appropriate PPE (rain gear). • Be aware of slip hazards, puddles, and electrical hazards when working in wet conditions. • If extremely cold conditions are forecast, consider additional precautions or postponing work activity.	• Review weather forecast prior to field work. • Inspect PPE daily prior to use. • Routinely inspect work area for deteriorating conditions.
	Sunshine	• Have sunscreen available for ultraviolet protection. • Have abundant water available to prevent dehydration. • Consider wearing wide-brimmed headwear and light-colored, lightweight, sun-blocking clothing.	• Ensure that sunscreen and water are available.
	Lightning	• Do not begin or continue work until lightning subsides for at least 30 minutes. Disconnect and do not use or touch electronic equipment.	• Obtain weather forecast and updates as needed.
	High winds	• Wear goggles or safety glasses if dust or debris are visible.	• Review weather forecast prior to field work. • Ensure that goggles or safety glasses are available.

Training Requirements:

- All personnel working on hazardous waste sites must receive appropriate training as required by 29 Code of Federal Regulations (CFR) 1910.120(e), including but not limited to initial 40-hour, 8-hour supervisor, and annual 8-hour refresher trainings.
- Medical clearance must be received on an annual basis as required by 29 CFR 1910.120(f).

Decontamination Activities

- If boating is involved, and a professional captained vessel is not in use, boat operators must take the appropriate state or provincial boater safety courses.
- All assigned employees are required to familiarize themselves with the contents of this JSA before starting a work activity and review it with their supervisor during their daily safety meeting.

Job Safety Analysis

Anchor QEA Motor Vehicle Operation

Project Name: Cedar Street Works Former Manufactured Gas Plant Site NYSDEC Site No. V00570	**Project Number:** E10921-02.05	**JSA Number:** 004	**Issue Date:** 1/28/2022
Location: New Rochelle, New York	**Contractor:** Anchor QEA, LLC	**Analysis by:** Pia Tapiawala	**Analysis Date:** 1/28/2022
Work Operation: Anchor QEA motor vehicle operation	**Superintendent/Competent Person:** Vehicle Driver	**Revised by:**	**Revised Date:**
Required Personal Protective Equipment (PPE): • Wear seat belt at all times • Make sure that clothing will not interfere with driving		**Reviewed by:** Matthew Cavas, PG	**Reviewed Date:**
		Approved by:	**Approved Date:**

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Anchor QEA motor vehicle operation	Unfamiliar with the vehicle	• Allow yourself some time to get familiar with an Anchor QEA vehicle, a rental vehicle, or one not used often. • Test the lights, windshield wipers, hazard lights, horn, parking brake, and other important functions. • Review the dashboard controls, steering radius, and overhead and side clearances. • Allow extra side, front, and back space around the vehicle while driving or parking an unfamiliar vehicle. • Adjust mirrors and the seat while the vehicle is in park. • Drive slowly in confined locations, as in a parking garage, parking lots, or industrial settings. Confirm adequate clearances by sight before turning or backing up in tight or unfamiliar locations. • Use a second person to be a spotter outside the vehicle if needed in tight spaces.	• Inspect fluid levels and air pressure in tires, adjust mirrors and seat positions appropriately, monitor the fuel level, and fill up when the fuel level is low

PLAYING IT SAFE

Job Safety Analysis

Anchor QEA Motor Vehicle Operation

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
	Speed and braking	• Fasten and properly adjust the seat belt. • Obey all posted and designated speed limits. • Radar detectors are prohibited in all company-owned, leased, or rented vehicles. • Reduce travel speed during hazardous conditions (e.g., rain, fog, or snow). • Identify whether your vehicle has Anti-Lock Brakes (ABS). If it does, DO NOT pump the brakes to stop when the vehicle has begun to skid. Apply steady pressure to the brakes. If the vehicle does not have ABS, pump the brakes to stop during slippery conditions.	• Seatbelt • Identify designated speed limits • Determine if vehicle has ABS
Anchor QEA motor vehicle operation (continued)	Distance spacing	• Continually check your rear and side view mirrors. • Use the 3-second rule to keep a safe distance between vehicles. • Increase the 3-second rule as necessary during hazardous travel conditions. • Regularly scan the area you will be entering in the next 10 to 12 seconds. • Always leave yourself an “out” during travel. • When stopping, make sure that you leave enough distance between you and the car in front of you. You should be able to see the rear tires of the vehicle in front when stopped. • Obey the speed limit and traffic regulations. • When at a red light and it turns green, use the “delayed start” technique, by counting to three before you take your foot off the brake. • DO NOT TAILGATE. • Keep headlights (and running lights, if available) on for maximum visibility.	• Seatbelt
	Skids	• If the vehicle has begun to skid out of control, turn the steering wheel in the direction of the skid and re-adjust the wheel, as necessary. • Reduce speed during hazardous travel conditions. • Use 4-wheel drive, if available, when driving vehicles off-road, on steep inclines, or in muddy conditions. • Do not take vehicles off-road if they cannot be operated safely in such conditions.	• Seatbelt
	Blind spots	• Become familiar with any blind spots associated with your vehicle. • Adjust mirrors to give the maximum viewing area. • Use your directional devices to signal all turns and when changing lanes; check rear and side view mirror and glance over your shoulder to check that the lane is clear. • Avoid other driver’s blind spots; slow down and let the other vehicle pass. • If parked for an extended period and staying in the vehicle, be sure to inspect the area for changed conditions (e.g., a car that moved in behind you) before leaving.	• Seatbelt • Mirrors

Job Safety Analysis

Anchor QEA Motor Vehicle Operation

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
	Backing	• Back into parking spaces upon arrival whenever possible. • Perform a 360-degree walk around the vehicle before backing to identify any new conditions or obstructions. • Use a spotter when backing whenever possible. • Understand hand signals. • Sound the horn prior to backing. • Check the rear and side view mirrors prior to backing. • Back slowly in areas of obstructed vision. • Anticipate others who may be backing out into your pathway and adjust accordingly.	• Seatbelt • Mirrors
Anchor QEA motor vehicle operation (continued)	Distractions (e.g., cell phones, reading maps or directions, eating)	• Do not engage in distracted driving—focus on operating the vehicle, and on your surroundings (e.g., road conditions and other drivers). • Obey state or local laws regarding cell phone use, at a minimum. • Certain clients prohibit cell phone use regardless of the state you are operating in—know your client's policy. • Use hands-free devices (not hand-held cellular phones) while driving. • Pull over to the side of the road when making a call or checking directions.	• Seatbelt • Hands-free devices connected and ready for use
	Accidents	• In the event of an accident, use the following procedures: – Stop, call for medical assistance, notify police, and complete an accident report and submit it to your supervisor. – Notify the Project Manager (PM) and Field Lead (FL). – Complete the appropriate incident investigation reports. – Contact Sara Weiskotten, Operations Liaison, at (857) 445-4987. – Contact Diana Reynolds, Insurance Liaison, at (302) 236-8403.	• Seatbelt
	Influenced by drugs or alcohol	• NEVER DRIVE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL. • Keep in mind that the person in another vehicle may be under the influence of controlled substances, and be prepared for erratic or sudden driving changes on their part.	• Seatbelt
	Driver attitude	• Do not operate any vehicle when abnormally tired, temporarily disabled (i.e., injured), or under the influence of drugs or alcohol. • Keep an even temper when driving. Do not let the actions of others affect your attitude. • Do not allow yourself to become frustrated, rushed, distracted, or drowsy.	• Seatbelt

Job Safety Analysis

Anchor QEA Motor Vehicle Operation

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
	Fatigue	• Stop and rest if fatigued. Exit the road and enter a safe area. Rest until fully refreshed. • Be aware that certain medications (such as cold or allergy medicines) may make you drowsy when driving a vehicle.	• Seatbelt
	Vehicle loading	• DO NOT OVERLOAD the vehicle. • Secure all equipment and supplies within the body of the vehicle using proper tie-downs. • Do not block side view mirrors with the load. • Do not transport U.S. Department of Transportation (DOT)-manifested hazardous materials. • Dispatch all equipment and personnel with proper forms and identification.	• Seatbelt
Anchor QEA motor vehicle operation (continued)	Equipment failure	• Perform daily inspections of your vehicle. • Maintain vehicle safety equipment (e.g., mirrors, alarms, horns, wipers, lights, and brakes). • Maintain the vehicle (e.g., tire pressure and fluid levels). • Any vehicle with mechanical defects that may endanger the safety of the driver, passengers, or the public shall not be used. • Ensure that appropriate safety equipment is in the vehicle. Safety equipment should include a spare tire, jack, first-aid kit, fire extinguisher, and flashlight. Flares and/or reflective triangles should be available in larger trucks. • Ensure that the proper documentation is in the vehicle. Documentation should include an operations manual for the vehicle, insurance card, vehicle registration, and accident forms.	• Inspect and maintain the vehicle

Training Requirements:

- All drivers are required to have a valid driver's license, and all vehicles must have appropriate state vehicle registration and inspection stickers. The use of hand-held wireless devices is prohibited while driving any vehicle for business use at any time, for personal use during business hours, and as defined by law.
- **If operating a vehicle or vehicle and trailer with a capacity greater than 10,000 pounds, U.S. Department of Transportation regulations may apply. Contact the PM prior to any travel in this configuration.**

Job Safety Analysis

Anchor QEA Motor Vehicle Operation

- All assigned employees are required to read, familiarize themselves with the contents of this Job Safety Analysis, and sign the signature page before the operation of an Anchor QEA vehicle, and review it with their supervisor during their daily safety meeting.
- All assigned employees are required to enroll and complete the Smith System Virtual Driving training programs (*Distracted Driving* and *Small Vehicle Forward - Five Keys to Safe Driving*) prior to driving an Anchor QEA vehicle.

Job Safety Analysis

Anchor QEA Motor Vehicle Operation

Vehicle Operation Job Safety Analysis Acknowledgement Form

The Anchor QEA Motor Vehicle Operation Job Safety Analysis must be read, understood, and signed before the operation of any Anchor QEA vehicle. My signature below certifies that I have read and understand the procedures presented in the Anchor QEA Motor Vehicle Operation Job Safety Analysis and have completed the Smith System Virtual Driving *Distracted Driving* and *Small Vehicle Forward - Five Keys to Safe Driving* training programs.

Date	Name (print)	Signature

Job Safety Analysis

Anchor QEA Motor Vehicle Operation

Date	Name (print)	Signature

Job Safety Analysis

Sample and Laboratory Glassware Handling

Project Name: Cedar Street Works Former Manufactured Gas Plant Site NYSDEC Site No. V00570	**Project Number:** E10921-02.05	**JSA Number:** 005	**Issue Date:** 1/28/2022
Location: New Rochelle, New York	**Contractor:** Anchor QEA, LLC	**Analysis by:** Pia Tapiawala	**Analysis Date:** 1/28/2022
Work Operation: Sample and laboratory glassware handling	**Superintendent/Competent Person:** Scott Andrews	**Revised by:**	**Revised Date:**
Required Personal Protective Equipment (PPE): • Modified Level D—Long pants, long sleeves, and steel-toed footwear conforming to ASTM International (ASTM) F2412-05/ASTM F2413-05 • Depending on activity, the following PPE may also be required: safety glasses/splash goggles, hard hat, nitrile outer gloves and latex inner gloves, and, if boating, U.S. Coast Guard-approved personal flotation device (PFD)		**Reviewed by:** Matthew Cavas, PG	**Reviewed Date:**
		Approved by: Fill in	**Approved Date:** Fill in

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Transporting and using glassware	Breakage of containers during field activities	• Use appropriately sized tubs or bottle carriers with dividers to prevent bottle-to-bottle contact during transport. • Consider using coated glassware, if practicable. • Carry oversize bottles in tubs or bottle carriers using both hands during transfer to the sampling vessel and whenever the vessel is underway.	• Ensure dividers are sufficient and will remain in place during transport.
	Faulty glassware	• Replace any glassware that is chipped, nicked, or cracked.	• Inspect glassware before use.
	Impact with equipment and other objects	• Use care when loading and unloading sampling equipment. • Minimize the handling of individual containers to the extent possible.	
Filling sample containers	Over-tightening of bottle lids causing breakage	• Avoid use of excessive force to tighten bottle caps (i.e., finger tight). • Secure lids with clear tape to prevent opening during transport.	
	Breakage during sample collection	• Place containers in plastic tubs between aliquots to limit contact with hard surfaces. • Place containers on a stable and non-slip surface during collection. • Use the buddy system as needed to hold bottles during filling.	

PLAYING IT SAFE

Job Safety Analysis

Sample and Laboratory Glassware Handling

Work Activity	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
Filling sample containers (continued)	Contact with sample preservatives (generally HCL or H_2SO_4 to lower pH to less than 2)	• Wear nitrile gloves and protective eyewear to prevent skin and eye contact if a container is damaged. • Do not open preserved bottles until necessary.	
Packing samples for shipment	Breakage during packing and shipment	• Use bottle wraps, foam sleeves, or bubble wrap to prevent bottle contact in the cooler. • Pack coolers snugly, but do not over pack.	• Ensure glass bottles do not touch to minimize potential breakage during transport.

Training Requirements:

- All personnel working on hazardous waste sites must receive appropriate training as required by 29 Code of Federal Regulations (CFR) 1910.120(e), including, but not limited to initial 40-hour, 8-hour supervisor, and annual 8-hour refresher trainings.
- Medical clearance must be received on an annual basis as required by 29 CFR 1910.120(f).
- All assigned employees are required to familiarize themselves with the contents of this JSA before starting a work activity and review it with their supervisor during their daily safety meeting.

Attachment E
Consolidated Edison Corporate Environmental Health and Safety Procedures

CORPORATE ENVIRONMENTAL, HEALTH AND SAFETY PROCEDURE

CEHSP A32.00 – Rules We Live By
Revision Date: 03/18/2021 Effective Date: 5/20/2021

CONTENTS

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- 4.2 – VIOLATION OF A RULE WE LIVE BY
- 4.3 – DEFINITIONS

RULES WE LIVE BY TABLE

1.0 PURPOSE

This procedure establishes a consistent approach to communicating and reinforcing the importance of following critical safety work practices designed to protect employees, contractors, and the public.

2.0 APPLICABILITY

This Environmental, Health and Safety Procedure (CEHSP) applies to all Con Edison employees (management and union) and contractor employees working for Con Edison.

3.0 INTRODUCTION

There are safety and operational procedures specifically designed to protect against the potential for significant injury due to energy (e.g., electricity, gas, steam, or falling from elevation) that must be controlled. Operating groups that work with such sources of energy have identified Rules We Live By. These rules are defined as a work procedure or safety requirement that, if not followed, could result in a severe injury or fatality, or place other individuals (employees or members of the public) at significant risk. At The Learning Center, the RWLB associated with a given activity of an operating department apply.

4.0 COMPLIANCE REQUIREMENTS

4.1 RULES WE LIVE BY IDENTIFICATION, TRAINING, AND REPORTING

4.1.1 IDENTIFICATION

Where work tasks require the safe control of energy sources such as electricity, gas, steam, or work at elevation, the operating organization must identify key procedures required to control or mitigate the effect or impact to the employee, fellow employees, contractor employees or the public. Lessons learned from previous incidents must be considered in the identification process.

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An organization must notify EH&S, Health and Safety, of any change to a Rule.

4.1.2 TRAINING AND COMMUNICATION

An organization's Rules We Live By and associated procedures must be reinforced in applicable skills training.

Each employee in the organization must receive OJT training on the Rules We Live By identified by the organization.

Rules We Live By must be reinforced, as applicable, in job briefings.

Rules We Live By must be incorporated into the scope of safety field observations and inspections.

Where contractor work practices involve Rules We Live By, contractor employees will be trained on the applicable Rules We Live By, reporting procedure, and consequences. The operating organization must communicate the applicable Rules to contractor management and ensure the Rules are incorporated in the eHASP. The contractor supervisor will be required to train their affected employees and subcontractor employees before they begin work.

4.1.3 REPORTING AND INVESTIGATION

If a supervisor observes a Rule We Live By being violated, or is notified of a potential violation, the work task involved in the observation must be stopped immediately.

If an employee, not a supervisor, believes a Rule We Live By may have been violated, he/she must stop the work task involved in the observation immediately and report the situation to the supervisor of the employee who committed the alleged violation.

The Operating Supervisor must contact the EH&S representative to obtain assistance in resolving the alleged violation. The EH&S representative will respond in person to the location of the alleged violation.

- The EH&S representative will act as the authority (expert) related to health, safety, and environmental rules, regulations, and procedures and will decide the merits of the alleged violation or contact a Subject Matter Expert (SME) from other areas of the company, including Engineering, EH&S, or Operations.

- In general, the number of people involved in the investigation should be kept to the minimum required to resolve the issue. The employee who observed the alleged violation should be included in the discussions to the extent necessary to ensure there is a clear understanding of the facts involved.

- Once the EH&S representative understands all the issues involved in the alleged violation, a determination of the validity of the violation shall be made. The EH&S representative's determination is final.

- If the EH&S representative cannot be reached, the job cannot continue until EH&S has addressed the issue. The EH&S Control Desk can be contacted to reach another EH&S representative who can respond to the location to resolve the alleged violation.

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- A close-out discussion with all parties involved, led by the EH&S representative, must be to ensure good three-way communication and understanding of the determination.

4.2 VIOLATION OF A RULE WE LIVE BY

A violation of a Rule We Live By will result in significant consequences.

Any employee who witnesses a violation of a Rule We Live By and does not stop the work as noted in Section 4.1.3 and report the violation will also be considered to have violated the Rule.

A violation by a contractor company or by a sub-contractor must be reported via an action line by the operating organization with contractor oversight.

The organization must notify EH&S after action has been taken as a result of the violation.

4.3 DEFINITIONS

Con Edison employee: This includes all management and union employees.

Contractor employee: This includes all per-diem contractor employees and those employees working for a contractor company hired by Con Edison.

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Paper copies of procedures and instructions are uncontrolled and therefore may be outdated. Please consult EH&S Central for the current version prior to use.

REVISION HISTORY

Revision Date	Revision #	Summary of Change	Author
1/21/14	2013 Annual Review	*CEHSP A32.00.01 RWLB - Table*: Permits, Electric Ops – Added language to clarify that entry for work in structures containing d-faulted feeders is permissible after associated source equipment has been de-energized.	G. Slintak
4/23/14	2013, Revision 1	*CEHSP A32.00.01 RWLB - Table*: Adjusted high hazard PPE rule as applied to Gas Operations in response to 4/22 request. Change clarifies the attachment point for use of PPE (previously associated with "blowing gas," a subjective term).	G. Slintak
5/16/14	2	Combined 'CEHSP A32.00 – Rules We Live By' and 'CEHSP A32.00.01 – Rules We Live By Table' into one document. The table will be an attachment to the procedure.	S. Ng
12/31/14	2014 Annual Review Rev. 3	Edits to reflect organization changes. Minor changes to clarify rules.	W. Capune
12/21/15	2015 Annual Review Rev. 4	Edits to reflect organizational changes in Shared Services. Customer Operations adopted the same language as Electric Operations for High Hazard PPE.	W. Capune
04/06/18	Annual Review Rev. 5	No changes requested. Removed the year (2016) from the RWLB Table. Additional editorial comments added by G.Slintak.	W. Capune
03/18/21	6	Removed reference to the Time Out procedure and outlined the determination process	McFarland

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RULES WE LIVE BY

Hazard	Electric Operations	Central Operations	Gas Operations	Customer Operations	Utility Shared Services
Verify Dead/Lockout-Tag Out	Properly test or spear to ensure that electric equipment, cable, or wire is "dead" as required regardless of voltage, before beginning dead work activities.	Properly test or verify that equipment is de-energized, isolated and protected prior to initiating dead work activities.			Properly lock out/tag out equipment before beginning work on the equipment. (when not intentionally live and PPE is required)
Permits (Operating, D-faults)	Enter D-Fault tagged structures only when authorized by the operating authority to perform feeder processing, or to perform work after all D-faults have been identified and de-energized.	• Only perform work that is within the authorized scope of work as listed on the work permit. • Do not change the status of a piece of equipment that has a Stop Tag applied to it. • Follow the sequence of an operating order.		Do not enter a structure that has been classified and tagged as a D-fault.	Only perform work that is within the authorized scope of work as listed on the work permit
Atmospheric Testing	• Perform air monitoring and ventilate as required for entry and work in an enclosed space or a permit-required confined space. • For excavations greater than 4 feet in depth the atmosphere shall be tested prior to entry or when the excavation is not already occupied.	• Perform air monitoring and ventilate as required for entry and work in an enclosed space or a permit-required confined space. • For excavations greater than 4 feet in depth the atmosphere shall be tested prior to entry or when the excavation is not already occupied.	• Perform air monitoring and ventilate as required for entry and work in an enclosed space or a permit-required confined space. • For excavations greater than 4 feet in depth the atmosphere shall be tested prior to entry or when the excavation is not already occupied.	Perform air monitoring and ventilate as required for entry and work in an enclosed space or a permit-required confined space.	Perform air monitoring and ventilate as required for entry and work in an enclosed space or a permit-required confined space.
Rescue/Retrieval	Entrant and attendant are required to wear rescue harness when working in enclosed spaces.	Entrant and attendant are required to wear rescue harness when working in enclosed spaces.	Entrant and attendant working in enclosed spaces shall wear rescue harnesses, when required.	Entrant and attendant are required to wear rescue harness when working in enclosed spaces.	Entrant and attendant are required to wear rescue harness when working in enclosed spaces
High Hazard Energy PPE	• Use fall protection equipment as required. • Use appropriate rubber gloves with protective gauntlets, rubber sleeves, fire retardant clothing and eye/protection face shield as required for the electrical hazard.	• Use fall protection equipment as required. • Use appropriate rubber gloves, rubber sleeves, fire retardant clothing, and eye protection/face shield as required for the electrical hazard. • In Steam Distribution, use appropriate water resistant coveralls and face shields before disconnecting any piping from the dead side of the trap valve up to and including the trap inlet valves and trap bypass valve. These coveralls and face shields must be worn until all piping is reconnected.	• Use fall protection equipment as required. • Wear airline respirator, FR coveralls, Fr hood & FR gloves or liners as required by IP-42	• Use fall protection equipment as required. • Use appropriate rubber gloves with protective gauntlets, rubber sleeves, fire retardant clothing, and eye protection/face shield as required for electrical hazard. • Do not come into contact or move a downed or low hanging utility wire while performing Site Safety or Damage Assessment work.	• Use fall protection equipment as required • Use the appropriate rubber gloves, rubber sleeves, fire retardant clothing, and eye protection/face shield as required for the electrical hazard
Sheeting/Shoring		Ensure that excavations five feet or deeper are properly sheeted and shored before anyone enters.	Ensure that excavations five feet or deeper are properly sheeted and shored before anyone enters.		
Gas Piping Integrity Test			Perform an integrity test before a customer turn-on.	Perform an integrity test before a customer turn-on.	
Securing Loads					Reels over 5,000lbs (individually or when bundled together) are secured per NYS Metal Coil requirements

Please note: At The Learning Center, the RWLB associated with a given activity of an operating department apply.

May 20, 2021

RULES WE LIVE BY

Please note: At The Learning Center, the RWLB associated with a given activity of an operating department apply.

Attachment F
COVID-19 Management Plan

Field Program COVID-19 Management Plan

Date:	February 2022
Project No:	E10921-01.01
Project Name:	Cedar Street Works Former Manufactured Gas Plant Site NYSDEC Site No. V00570

In response to the global situation regarding Coronavirus Disease 2019 (COVID-19), Anchor QEA, PLLC, has compiled the following guidance to support our ongoing field efforts, whether sediment sampling efforts, wetland delineations, groundwater evaluation, site visits, or construction management. Anchor QEA strongly encourages all staff to be fully vaccinated when they are eligible in the location where they reside. Anchor QEA also requests that, while not required, staff upload a record of their vaccination into the WorkCare screening portal.

This Field Program COVID-19 Management Plan (Plan) is an addendum to the existing project-specific Health and Safety Plan (HASP) for field activities and shall remain a portion of the HASP until superseded by other notification. All personnel who have previously signed acknowledging the HASP must sign off acknowledging this Plan. Acknowledgement of this Plan will be included with future acknowledgements of the overall HASP.

We must keep in mind that our underlying social distancing requirements and responsibilities are the foundation of all our activities. Do not come to work if you are feeling sick, and contact your Manager immediately if you have symptoms consistent with COVID-19, have tested positive for COVID-19, and/or suspect you have been exposed. We also need to be cognizant of changing state and local orders and directives (or removal of restrictions) associated with COVID-19. Specific field efforts will require discussions between the Project Manager, field staff, and client to address availability, travel, and other considerations. If necessary, specific state, local, or project-specific orders and directives can be included with this Plan after review by Health and Safety.

1. Field programs will follow this Field Program COVID-19 Management Plan unless the client, prime contractor, federal, state, or local government establish more restrictive measures, in which case the more restrictive measures will be followed.
2. For projects that do not have an established daily screening, the WorkCare screening portal is to be used.
3. Updated information can be found at the U.S. Centers for Disease Control and Prevention (CDC) website (https://www.cdc.gov/), as well as state and local health agency websites.
4. Staff traveling to certain locations may need to comply with specific testing or vaccination requirements. The company will coordinate with staff as appropriate to meet these requirements, realizing that staff selection for a specific project may be determined by these factors.
5. Nationwide, our community defense is to slow the spread of COVID-19, which may include not traveling between impacted areas and less impacted areas. Therefore, we will evaluate limiting

travel for field work on a case-by-case basis consistent with this community defense approach and following appropriate national, state, and local guidance. We expect that this situation will be fluid as conditions change in the country.

6. Field project schedules, modifications, and regulatory requirements will be discussed with the client representatives.

The objective of this Plan is to provide additional operational guidelines to the team that address the challenges presented by COVID-19 and ensure consistency in our response actions across the project team. These guidelines are consistent with and based on recommendations from the CDC, with multiple links provided throughout. All personnel have Stop Work Authority. If you should have questions or concerns, please direct those to your Field Lead, Staff Manager, or Project Manager.

Some site owners or prime contractors may conduct temperature screening prior to entering a site, which is in accordance with some current guidance. Some site owners or prime contractors may want to record actual temperature readings, test results, or information other than general yes or no questions related to travel, symptoms, vaccination status, etc. If you choose not to participate in the recording of screening information, the site owner or prime contractor may not allow you to access the site. You should immediately contact your Field Lead, Staff Manager, or your Project Manager to discuss alternative work and available options.

The following describes minimum measures to be followed by the project team:

Prior to Coming to the Site

- Travel is allowed.
- Understand the community exposure and travel history of all staff. If a staff member has traveled to an affected country outside the United States or has had close contact with an infected individual within the United States, we require that they be cleared by WorkCare.
  - The following link provides the CDC list of countries with Travel Health Notices in Place: https://wwwnc.cdc.gov/travel/notices
  - The following link provides CDC information on cases within the United States: https://www.cdc.gov/coronavirus/2019-ncov/cases-in-us.html
- If masks (i.e., N 95) are used, they should be used in accordance with OSHA 1910.120, stating, in part, that the user must be fit-tested and in a surveillance program.
- Prior to departing for the site, the Site Safety Officer should obtain enough supply of U.S. Environmental Protection Agency (EPA)-registered disinfectants, wipes, hand sanitizers, and gloves.
- Some projects may require temperature readings prior to entry to a project site. Anchor QEA supports privacy concerns, and if a temperature reading or vaccination status is recorded

(vs. a green light/red light approach based on a temperature threshold) we will take steps to document the confidentiality of that information. However, in some cases Anchor QEA cannot control the procedure nor document confidentiality. In these situations, Anchor QEA staff will need to acknowledge that if they choose to not comply in the future that is their right. If a staff member chooses to not comply, the Project Manager, Regional Lead, and Human Resources should be consulted.

- Some projects may require procedures to document a 14-day look-back period that is absent of symptoms consistent with COVID-19.
- Staff should be self-isolated, as necessary, prior to coming to the site in accordance with current federal, state, and local orders. Any staff member who has been exposed to any household member (including healthcare professionals) exhibiting COVID-19 symptoms or has tested positive for COVID-19 will not report to the site for work unless they have met the guidelines contained in this Plan.
- Exposure to, or close contact with, means being within 6 feet of an individual for 15 minutes or greater in a 24-hour period or being exposed to their cough or sneeze.
- If you meet the criteria listed for Primary or Secondary Exposure, listed below, do not report to work; contact your Manager, contact the Health and Safety representatives, and stay home until the appropriate return to work criteria are met.
- ***Regardless of vaccination status, if staff feel that they are sick or showing symptoms, they are required to stay home and not report to work (office or field).*** They should call their Manager immediately and notify them that they are sick. Showing up to work with symptoms will result in the staff being asked to leave to avoid potentially exposing others to the virus.
- If staff are showing symptoms, they are to contact WorkCare and their healthcare provider for medical advice. If staff feel the need to visit a medical professional, it is recommended that the medical office be contacted first to determine when it is appropriate to visit.
- If staff show any symptoms while on site, they will be asked to leave and not return until they have been cleared by WorkCare. They may be requested submit a physician's note, by WorkCare, releasing them back to work. The exception to this would be if their primary physician recommends more restrictive measures.
  - https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fspecific-groups%2Fguidance-business-response.html

Fully Vaccinated

The CDC defines "fully vaccinated" as greater than or equal to 2 weeks following the final dose in a two-dose series or following the initial dose in a single-dose vaccine.

Anchor QEA will follow CDC and Occupational Safety and Health Administration (OSHA) recommendations regarding fully vaccinated staff being able to forgo the face covering and social distancing requirements both in the office and field. For field work, reference the latest version of this Plan. Fully vaccinated staff must comply with the following guidelines:

- Complete an acknowledgement in Bamboo regarding the updated requirements as well as consent to share with Project Managers, Field Leads, Office Leads, and Staff Managers (who have a need to know) information related to being fully vaccinated if that information has been in accordance with the updated requirements.
- Vaccination information is uploaded into the WorkCare portal. This is to help us meet various state requirements for the employer to determine if the staff member is fully vaccinated.
- Staff who are fully vaccinated, even if information is uploaded to WorkCare, may still use face coverings and follow social distancing if they desire.
- Out of respect, all staff will have face coverings available and fully vaccinated staff will use face coverings if requested by others in close contact situations.
- Fully vaccinated staff are not required to use face coverings or follow social distancing during meetings, meals, or other close contact situations unless requested.
- All staff will still be required to complete the WorkCare daily screening or other project-specific screening.
- All laws, regulations, client requirements, field work requirements, building requirements, and other company requirements apply to all staff (e.g., air travel requirements).
- Fully vaccinated staff that have notified the company may sit together without social distancing or face coverings for meals.
- Food and beverages are allowed to be brought to the project site for sharing, if they are individually packaged.
- Travel is allowed to include sharing vehicles with others who are fully vaccinated.
- Staff must be considerate of others.
- If asymptomatic following close contact with a Primary Exposure, staff do not need to isolate but do need to follow up with WorkCare.

Staff are not required to obtain the vaccination or to notify the company if they have been vaccinated unless they wish to follow the above process. Fully vaccinated staff who have had close contact with a Primary Exposure or who have symptoms consistent with COVID-19 must be cleared to return to work following the processes outlined in the Case Response section below.

Not Fully Vaccinated

The CDC defines "fully vaccinated" as greater than or equal to 2 weeks following the final dose in a two-dose series or following the initial dose in a single-dose vaccine.

Anchor QEA will follow CDC and OSHA recommendations for staff who are not fully vaccinated regarding face covering and social distancing requirements both in the office and field. For field work, reference the latest version of this Plan. Staff who are not fully vaccinated must comply with the following guidelines:

- All staff will still be required to complete the WorkCare daily screening or project-specific screening.
- All laws, regulations, client requirements, field work requirements, building requirements, and other company requirements apply to all staff (e.g., air travel requirements).
- Avoid close contact (i.e., handshakes or other physical contact) and practice social distancing (stay at least 6 feet away from others).
- Meetings are allowed; however, those who are not fully vaccinated must adhere to social distancing requirements.
- If there is a chance that an unvaccinated staff member might have close contact with someone, such as being within 6 feet of an individual for 15 minutes or greater in a 24-hour period, or being exposed to their cough or sneeze, the staff member must wear a face covering in accordance with CDC guidance.
- Common areas (i.e., kitchens, break areas, conference rooms, entryways, restrooms, and copier and printer stations) are to be avoided to the greatest extent possible and social distancing must be observed by those not fully vaccinated.
- The use of communal coffee pots, microwaves, refrigerators, and similar items are allowed.
- Food and beverages are allowed to be brought to the project site for sharing, if they are individually packaged.
- Travel is allowed.
- Travel is preferred to be in individual vehicles.
- Staff should wear cloth face coverings in public settings, in addition to social distancing measures, including travel to the site or office, grocery stores, and picking up to-go food.
- Avoid restaurants if open; use drive-in or take-out services.
- The CDC recommends wearing cloth face coverings in public settings where other social distancing measures are difficult to maintain (e.g., grocery stores and pharmacies) especially in areas of significant community-based transmission.
- Staff must be considerate of others.

Staff are not required to obtain the vaccination or to notify the company if they have been vaccinated unless they wish to follow the process for fully vaccinated staff.

Visitors

- Visitors are allowed but must complete a WorkCare visitor screening or project-specific screening. They additionally must sign an affirmation statement if they wish to forgo the face covering and social distancing requirements.
- Meetings with outside parties should take place virtually, when possible.
- Delivery personnel should not remain in indoor settings for longer than 15 minutes without completing the visitor screening.
- For visitors to forgo the face covering and social distancing requirement, they must attest that they are fully vaccinated when signing in.
- All laws, regulations, client requirements, field work requirements, building requirements, and other company requirements apply to all visitors (e.g., air travel requirements).

On-Site Preventative Measures and Cleaning Requirements

- All staff who work on the site will be required to undergo a site safety orientation (tailgate meeting), which will include information on specific measures to be followed to address efforts to prevent the spread of COVID-19. All field staff are required to vocalize concerns and ensure that protective measures that will slow the spread of COVID-19 are employed.
- Follow the site-specific HASP Personal Protective Equipment (PPE) requirements.
- One step to control spread of the virus at the project job site is focused on hygiene. All staff and management staff will follow CDC guidance regarding hand washing.
  - https://www.cdc.gov/handwashing/index.html
  - Hand wash stations and/or sanitizing wipes/sanitizing gel will be made readily available around the job site and within project office trailers. If these supplies are insufficient, work should be stopped until additional supplies are procured.
- Office trailers will also be cleaned at least twice a day using disinfectant to wipe all surfaces that may be touched by hand including desk and table surfaces. In addition, office trailer personnel (as directed by the Field Lead) will be responsible for multiple daily cleaning of the various field offices and related workspaces.
- Smart phones and radios should be wiped down frequently throughout the day and should not be shared to the greatest extent possible. If these items are shared, they are to be wiped down prior to handing off to another individual or placing in storage for the day.
- Field support areas, boats/vessels, and equipment cabs will be cleaned throughout the day and at every shift change. All "touch" surfaces will be thoroughly wiped clean using a disinfectant.
- Staff should follow published guidance to limit transmission at home and outside of work: https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-prevent-spread.html

- The following links provide a list of U.S. Environmental Protection Agency recommended cleaning products able to kill the virus, as well as some initial guidance with alternatives if supplies run out. ***"Note: Inclusion on this list does not constitute an endorsement by EPA. Additional disinfectants may meet the criteria for use against SARS-CoV-2. EPA will update this list with additional products as needed."***
  - https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2
  - If these products are not available, then either a diluted bleach solution or 70% alcohol solution will work.
  - https://www.cdc.gov/coronavirus/2019-ncov/community/home/cleaning-disinfection.html
- If a staff member becomes ill while on site, they should return to their hotel room or local home, contact their healthcare provider, and follow their guidance. The staff member's Manager should be contacted immediately. Our Health and Safety representatives will follow up with the staff member. If the staff member has a confirmed or presumed case as determined by a healthcare provider, we will follow our procedures as outlined in this document. If the staff member is not able to transport themselves, local emergency responders will be called as per company protocol.

Case Response, and Equipment and Facility Decontamination

According to the CDC, symptoms can appear 2 to 14 days after exposure. Symptoms or combinations of symptoms that may be consistent with COVID-19 include cough, shortness of breath, difficulty breathing, fever (100.4°F [37.8°C] or greater), chills, repeated shaking with chills, muscle pain or body aches, headache, sore throat, congestion or runny nose, nausea or vomiting, diarrhea, or new loss of taste or smell.

If you have symptoms that are consistent with COVID-19 but have not tested positive, regardless of what your primary physician concludes, you are to self-isolate until you have been released to return to work by WorkCare. Immediately contact your Regional Lead and Project Manager. WorkCare may ask you to submit a physician's note releasing you back to work. The exception to this would be if your primary physician recommends more restrictive measures. In this case there is no need to alert or self-isolate any other staff.

Regarding COVID-19 exposures, there are three general scenarios:

- **Primary Exposure:** These are staff who have tested positive for the virus. If you have tested positive for COVID-19, you must be in self-isolation and an effort will be made to contact those people you had direct contact with in the last 14 days. You must not return to the work site until you have been released to return by WorkCare. The exception to this would be if your primary physician recommends more restrictive measures.

- **Secondary Exposure:** These are staff who, within the last 14 days, have had direct contact with someone who has tested positive for COVID-19. You must self-isolate until released by WorkCare to return. You are encouraged to seek medical care. If you start to have symptoms or test positive, follow the appropriate guidance for Primary Exposure noted above.
- **Tertiary Exposure:** These are staff who have had direct contact with someone that meets Secondary Exposure criteria or have been in the same general area. In this scenario, there is no requirement to isolate; however, the staff should self-monitor for the development of symptoms.

In the event there is a documented case of a staff member becoming infected with COVID-19 (Primary Exposure) the field management team will take immediate action as follows:

- The staff member should immediately self-isolate until they have been released to return by WorkCare.
- Notify the Project Manager, Human Resources, and Regional Lead immediately.
- The staff member's work steps will be traced back 14 days to identify work areas the individual may have contacted. All identified areas will be isolated and marked off limits to all site personnel, until a decontamination process can be implemented.
- All identified areas will be disinfected by qualified individuals following CDC guidelines.
- Staff who came in direct contact with the individual will be notified. The Regional Lead will work with the Project Manager and Human Resources to notify the Anchor QEA staff who were identified.
- The Project Manager, in coordination with the client, will notify subcontractors and vendors on the site who had direct contact with the individual.
- The Project Manager should notify the client immediately and inform them of our backup staffing plan as well as our notification plan.
- Confidentiality for the staff member should be maintained.

If a staff member, within the last 14 days, has had direct contact with someone diagnosed with COVID-19 (Secondary Exposure), the field management team will take immediate action as follows:

- Send staff home immediately and have them coordinate with WorkCare for their return.
- Let the Regional Lead and Project Manager know immediately.
- Continue cleaning of common touch areas with recommended disinfectants.
- If staff tests positive, this becomes a Primary Exposure scenario, and that guidance should then be followed.

Situations where a staff member may have had Tertiary Exposure are more difficult to manage. This involves having direct contact with someone who has had Secondary Exposure. In the event of Tertiary Exposure, the field management team will take immediate action as follows:

- Let the Regional Lead and Project Manager know immediately.
- No further notifications are necessary with this scenario.
- Continue cleaning of common touch areas with recommended disinfectants.
- This becomes a Secondary Exposure scenario if the acquaintance is confirmed to be infected, and that guidance should then be followed.

When staff are in self-isolation, their Manager or designee will follow up with them two times per week.

General Measures / Guidance

- Staff must follow the same prevention guidelines off site, which includes travel, hotel, and other activities, in order to address potential exposures outside the workplace.
- Travel, whether by train or plane, will be reviewed on a case-by-case basis. Mass transit should be avoided where social distancing is difficult.
- The virus may live on a variety of surfaces for some period of time; closely follow the cleaner/disinfectant contact time. Avoid combining products that are incompatible and may create toxic byproducts.
- When at hotels, disinfect your own room with EPA-registered cleaners or alternatives, and use the NO HOUSEKEEPING sign to minimize the people coming into your room.
- Catch coughs and sneezes with a disposable tissue, etc. and throw away, then wash hands. If tissues are not available, direct coughs and sneezes into elbow.
- Avoid touching your own mouth, nose, or eyes.
- Hand washing stations with soap and water will be available at all restroom facilities. Frequent hand washing is recommended throughout the day. Washing hands thoroughly for a minimum of 20 seconds with soap and water is one of the most effective ways to prevent the spread of germs. Personnel should wash their hands regularly, before and after going to the bathroom, before and after eating, and after coughing, sneezing, or blowing their nose.
- If soap and water are not available, use hand sanitizer with a minimum of 60% alcohol content.
- Anchor QEA will provide staff with face coverings that can be used for field projects and staff may also use their own face covering if they choose.
- Some projects, municipalities, counties, and states may implement additional requirements for the use of face coverings, gloves, or other items. Those requirements should be followed.

- Time spent in large groups in enclosed spaces will be avoided. Potential alternatives could include phone conferences or holding meetings outside (i.e., field crew safety meetings). Field activities, whether inside or outside, should be planned to minimize staff density in that location.
- Avoid use of shared beverage containers (e.g., coffee pots, water coolers) or food setups (e.g., pizza, buffets). For instance, bring an individual water bottle.
- Work requiring several or more staff will need to be evaluated and a determination will need to be made on how the work can be done safely with a few staff, if at all. If the work cannot be conducted safely, then it may have to be rescheduled for a later time.
- Disinfecting wipes will be located throughout the site for wiping down hard surfaces as required. Alternatives, such as bleach/water solutions, may be used in addition to or in place of disinfecting wipes.
- The frequency and scope of the cleaning program for project facilities (office trailers, bathrooms, other buildings, and work areas) will be reviewed and increased, as necessary.
- Areas where staff eat should be a focus of cleaning efforts.
- Field team equipment operators, vessel operators, and vehicle drivers (whether Anchor QEA equipment or subconsultant equipment) will be provided with disinfecting wipes to clean the enclosed spaces daily. Emphasis should be on hard surfaces that are commonly touched (steering wheel, door handles, levers, buttons).
- Alternates for critical job functions should be available.
- All staff will have their own PPE and will not share with others. Respirators and PPE will be cleaned/disinfected when doffing, along with a thorough arm, hand, and face washing when exiting.
- All staff need to be vigilant regarding potential exposure and transmission of COVID-19. Avoiding any complications related to this outbreak will be a team effort as much as any safety or production concerns related to the project.

COVID-19 Management Plan Acknowledgement

Project Number: _____

Project Name: _____

My signature below certifies that I have read and understand the policies and procedures specified in this Field Program COVID-19 Management Plan.

Date	Name (print)	Signature	Company

APPENDIX F
COMMUNITY AIR MONITORING PLAN

March 2026
Cedar Street Works Former Manufactured Gas Plant Site
NYSDEC Site No. 360173

Appendix F
Community Air Monitoring Plan

Prepared for
Consolidated Edison Company of New York, Inc.
3101 20th Avenue, Building 136, 2nd Floor
Long Island City, New York 11105

Prepared by
Anchor QEA Engineering, PLLC
54 Genesee St, Suite 100A
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Project Number: E10921-02.05
https://anchorqea-my.sharepoint.com/personal/mcavas_anchorqea_com/Documents/ConEdison/Cedar Street SMP/Appendices/Appendix F/App F_CAMP.docx

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FIGURE

Figure 1 CAMP Station Locations ..... **Error! Bookmark not defined.**

ATTACHMENT

Attachment 1 New York State Department of Health Generic Community Air Monitoring Plan

ABBREVIATIONS

µg/m^3	micrograms per cubic meter
Anchor QEA	Anchor QEA Engineering, PLLC
CAMP	*Community Air Monitoring Plan*
Con Edison	Consolidated Edison Company of New York, Inc.
HASP	*Health and Safety Plan*
MGP	manufactured gas plant
NAPL	nonaqueous phase liquid
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OVA	organic vapor analyzer
particulates	total suspended particulates
PDI	pre-design investigation
PID	photoionization detector
PM10	particulate matter less than 10 microns in diameter
ppm	parts per million
QEP	Qualified Environmental Professional
Site	Cedar Street Works former manufactured gas plant
VOC	volatile organic compound

1 Introduction

This *Community Air Monitoring Plan* (CAMP) has been prepared to support performance of intrusive work at the location of the former manufactured gas plant (MGP) situated within Cedar Street and the parcel designated as Section 1, Block 247, Lot 15 (the parcel) on the Tax Map of the City of New Rochelle, County of Westchester (hereinafter referred to as the "Site") pursuant to the site -specific *Health and Safety Plan* (HASP).

The purpose of this CAMP is to describe real-time air monitoring for volatile organic compounds (VOCs) and particulates within and at the perimeter of any areas where intrusive activities are to occur. This CAMP includes monitoring requirements during intrusive activities, minimum requirements for dust and odor controls, air emission action levels, air monitoring procedures, a monitoring schedule, and data collection and reporting to be performed during and following the intrusive activities.

A Qualified Environmental Professional (QEP) is responsible for providing all labor, materials, and equipment necessary to implement the community air monitoring program specified herein. The QEP is ultimately responsible for confirming all corrective measures associated with the community air monitoring program (including the control of dust, vapors, and odors) are performed in accordance with this CAMP.

1.1 Potential Air Emissions Related to Intrusive Activities

As indicated in the New York State Department of Health (NYSDOH) Generic CAMP (Attachment 1), the following intrusive activities may be performed at the Site and have the potential to generate localized impacts to air quality:

- Installation of soil borings or monitoring wells
- Test pit excavation
- Installation of soil gas probes
- Groundwater monitoring
- Material handling (e.g., manipulation of excavated materials and/or investigation-derived waste to render them suitable for off-site treatment/disposal and loading materials for transport to the off-site treatment/disposal facility)
- Nonaqueous phase liquid (NAPL) gauging and recovery activities

2 Air Monitoring Procedures

The community air monitoring program is intended to be a discrete program that will operated in conjunction with the Exclusion Zone air monitoring program as defined by the site-specific HASP. The QEP will conduct real-time community air monitoring throughout the remedial construction. Monitoring will be conducted at representative locations around the perimeter of the Exclusion Zone for VOCs and total suspended particulates (particulates). However, particulate monitoring will not be performed during precipitation events. Additional information regarding the monitoring locations, equipment, and action levels is presented as follows.

CAMP data will be collected daily and will be provided via email to the NYSDEC, DOH Project Managers and Consolidated Edison Company of New York, Inc. (Con Edison) on a daily basis. A hard copy of the data will be maintained by the QEP.

2.1 Monitoring Location Selection and Deployment

VOC and particulate monitoring station locations will be determined daily based on data from the on-site meteorological monitoring station and the nature of the anticipated remediation activities. An upwind location for VOC and particulate monitoring will be selected at the start of each workday. One downwind (based on predominant wind direction) location for VOC and particulate monitoring will also be selected (Figure 1). The VOC and particulate monitoring stations will be deployed each day before the start of work activities. If wind direction shifts radically during the workday for an extended period of time, such that the upwind location and downwind locations no longer fall within acceptable guidelines (+/- 60° compass change from the original wind direction), the monitoring stations will be relocated so the upwind and downwind positions are maintained throughout the duration of the workday. Air monitoring location changes will be documented in a field logbook.

2.2 Sampling Methods

Real-time monitoring for total VOCs and particulate matter less than 10 microns in diameter (PM10) will be conducted during intrusive activities at the Site. As required by the NYSDOH Generic CAMP (Attachment 1), VOCs will be monitored continuously during all intrusive and/or potential dust-generating activities (e.g., installation of erosion control measures, sheetpile installation, excavation, backfilling, soil mixing/stabilization, and material handling activities) using instrumentation equipped with electronic data-logging capabilities.

2.2.1 Total Volatile Organic Compounds

Total VOCs in ambient air will be monitored and recorded using a portable organic vapor analyzer (OVA) equipped with a photoionization detector (PID) with data-logging capabilities (MiniRae2000 or equivalent). The OVA-PID may be housed in a watertight shelter attached to a tripod and set to an

appropriate height. All measurements should be made at a height of approximately 5 feet above the ground. Total VOC levels will be measured continuously, and a running average will be calculated and recorded every 15 minutes.

2.2.2 PM10 Monitoring

Real-time monitoring for particulates will be conducted during remedial activities at the Site. As required by the NYSDOH Generic CAMP (Attachment 1), real-time airborne particulate monitoring will be conducted continuously during all intrusive and/or potential dust-generating activities (e.g., installation of erosion and sediment control measures, sheetpile installation, excavation, backfilling, and material-handling activities) using instrumentation equipped with electronic data-logging capabilities. A real-time particulate monitor (MIE DataRAM PDR1000 or equivalent) will be used for particulate monitoring. The equipment will be equipped with an audible alarm to indicate exceedance of the action level.

In addition, fugitive dust migration will be visually assessed during all work activities. All average concentrations (calculated for continuous 15 minute increments [e.g., 08:00 to 08:15, 08:15 to 08:30]) and any instantaneous readings taken to assess appropriate course of action will be recorded using an electronic data logger and/or in the field logbook.

Fugitive dust migration will be visually assessed during all work activities, and reasonable dust-suppression techniques will be used during any Site activities that may generate fugitive dust.

2.3 Action Levels

The action levels provided in the following subsections will be used to initiate corrective actions, if necessary, based on real-time monitoring. Each piece of monitoring equipment will have alarm capabilities (audible and/or visual) to indicate exceedances of the action levels specified below.

2.3.1 Action Levels for Volatile Organic Compounds

As outlined in the NYSDOH Generic CAMP (Attachment 1), if the ambient air concentration for total VOCs exceeds 5.0 parts per million (ppm) above background (i.e., upwind location) for the 15 minute average, work activities will be temporarily halted while monitoring continues. If the total VOC concentrations readily decrease (through observation of instantaneous readings) below 5.0 ppm above background, then work activities can resume with continuous monitoring.

If the ambient air concentrations for total VOCs persist at levels in excess of 5.0 ppm above background but less than 25.0 ppm above background, work activities will be halted, the source of the elevated VOC concentrations identified, corrective actions undertaken to reduce or abate the

emissions, and air monitoring will be continued. Once these actions have been implemented, work activities can resume provided the following two conditions are met:

- The 15-minute average VOC concentrations remain below 5.0 ppm above background.
- The VOC level 200 feet downwind of the monitoring location or half the distance to the nearest potential receptor or residential/commercial structure (whichever is less, but in no case less than 20 feet) is below 5.0 ppm above background for the 15-minute average.

If the ambient air concentrations for total VOCs exceed 25.0 ppm above background, the work activities must cease, and emissions-control measures must be implemented.

2.3.2 Action Levels for PM10

The following PM10 action levels and responses, based on the NYSDOH generic CAMP, will be implemented during any intrusive activity that may generate emissions:

- If the average ambient air concentration of PM10 at any one (or more) of the sampling locations is noted at levels in excess of 100 micrograms per cubic meter ($\mu g/m^3$) above the background (upwind location) for the 15-minute interval, or if airborne dust is observed leaving the work area, intrusive Site activities will be temporarily halted. The source of the elevated PM10 concentration is to be identified, corrective actions to reduce or abate the emissions will be undertaken, and air monitoring will continue. Work may continue following the implementation of dust-suppression techniques, provided the PM10 levels do not exceed 150 $\mu g/m^3$ above background and no visible dust is migrating from the work area.
- If, after implementation of dust-suppression techniques, the PM10 levels are greater than 150 $\mu g/m^3$ above background, work will stop and Site activities will be re-evaluated. Work will only resume after dust-suppression measures and other controls are implemented, PM10 levels are less than 150 $\mu g/m^3$ above background, and no visible dust is migrating from the work area.

2.4 Emissions Control Measures

Air emissions-control measures will be implemented by a QEP (or person under their supervision) concurrently with any intrusive activities (as needed) to limit the potential for organic vapor and dust emissions or odors from the Site. Air emissions associated with excavation and backfilling, material handling and stockpiling, other intrusive activities, and certain non-intrusive activities (such as mobilization, transportation, and restoration activities) will be controlled as described below.

The following emissions-control measures may be used during these activities, depending on specific circumstances, visual observations, and air monitoring results:

- Apply water or BioSolve spray to exposed soil/material piles.

- Cover excavated material or excavation faces with polyethylene sheeting or other appropriate material.
- Minimize surface area of exposed material.
- Containerize excavation materials and soil.
- Apply vapor-suppression foam.
- Apply water on haul roads and/or staging areas, wet equipment, and spray water on earth-removal equipment buckets during dumping.
- Establish a vegetative cover immediately after placement of cover soil.

The QEP is required to mobilize BioSolve (or approved equivalent) and vapor-suppressant foam (including application equipment) to the Site prior to initiating intrusive activities and to maintain an adequate supply of such materials for the duration of such activities.

2.5 Meteorological Monitoring

Meteorological monitoring will be conducted continuously at the Site using a portable meteorological monitoring system. The meteorological monitoring system will be deployed at a location in accordance with siting criteria established by the U.S. Environmental Protection Agency and the New York State Department of Environmental Conservation (NYSDEC) for meteorological monitoring systems (*Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements* [USEPA 1989] and New York State Air Guide-19 – *Oversight of Private Air Monitoring Networks***,** dated June 1989 [NYSDEC 1989]). Use of these guidelines enables the meteorological monitoring system to provide representative observations of the local meteorological conditions. Security and accessibility to the meteorological monitoring system will also be considered during the selection of the meteorological monitoring system location.

The meteorological monitoring system will monitor wind speed, wind direction, relative humidity, and ambient temperature. Wind direction and wind speed will be monitored and recorded at least once per hour during intrusive activities. Wind direction will be determined using a windsock, wind vane, multi-purpose wind meter, or other appropriate equipment. Wind speed will be determined using a handheld wind speed meter. Alternatively, Anchor QEA may use a multi-parameter meteorological monitoring system (such as a Met One station or equivalent).

2.6 Instrument Calibration

Calibration of the VOC, PM10, and meteorological monitoring instrumentation will be conducted in accordance with each of the equipment manufacturer's calibration and quality assurance requirements. The VOC and particulate monitors will be calibrated daily (at a minimum), and calibrations will be recorded in the field logbook.

3 Vapor Emission Response Plan

Anchor QEA will prepare a Vapor Emission Response Plan to be implemented for worker safety following an exceedance of the 15-minute average VOC concentration within the Exclusion Zone. Anchor QEA (and its subcontractors) will initiate engineering controls for employee safety.

If an exceedance of the 15-minute average VOC concentration of 5.0 ppm above background is measured at the perimeter of the Exclusion Zone, all intrusive activities will be stopped, and the following action will be taken:

- Continue total VOC monitoring within the Exclusion Zone and at the perimeter of the Exclusion Zone. If the total VOC level drops below 5.0 ppm above background, excavation activities can resume with the addition of engineering controls or modifications to the excavation process to minimize VOC emissions. However, if the VOC level persists above 5.0 ppm, based on continual observance of the total volatile organic analyzer, the contractor will immediately implement engineering controls such as misting the area with a vapor-suppression solution of BioSolve, covering the excavation, and backfilling, as needed, to reduce emissions and, at the same time, should notify NYSDEC and Con Edison.
- If after the implementation of additional engineering controls, the total VOC levels drop below 5.0 ppm (above background) within the Exclusion Zone and at the perimeter of the Exclusion Zone, the excavation activity can resume, provided process and work activities were adjusted to reduce emission levels
- If the total VOC levels continue to be greater than 5.0 ppm (above background) at the perimeter of the Exclusion Zone, all Site activities must be discontinued. When the work is shut down, downwind air monitoring as directed by Anchor QEA's QEP in consultation with the NYSDEC representative will be implemented to ensure the emission does not impact the nearest residential or commercial structure at levels exceeding those specified in the Major Vapor Emission Response Plan (see Section 4).

The following primary engineering controls may be implemented to reduce emission levels:

- Adding a vapor-suppression solution of BioSolve to impacted media (application in excavated areas will be a light mist as to avoid increasing solubility of wastes leading to increased groundwater contamination)
- Limiting excavation size and the surface area of exposed contaminated soil

4 Major Vapor Emission Response Plan

If, after the cessation of the work activities and implementation of engineering controls, total VOC levels exceed 5.0 ppm (above background) at the perimeter of the Exclusion Zone (as defined by the site-specific HASP), then the following actions will be immediately taken:

- Cover the excavation with polyethylene sheeting or clean soil.
- Notify individuals on the CAMP contact list provided in Table 1-1 of the Site Management Plan and the City Police Department at 911.
- Continue real-time VOC monitoring at the upwind, downwind, and nearest receptor until VOC levels drop below 5.0 ppm.
- If total VOC levels persist above the 5.0 ppm (above background), Anchor QEA's QEP, Con Edison, NYSDEC, and NYSDOH will consult with each other and the emergency response agencies to determine the appropriate actions to be implemented. Anchor QEA has ultimate authority during major vapor emission emergencies. Intrusive activities shall not be resumed until the NYSDEC approves the restart of work activities.

5 Monitoring Schedule and Data Collection and Reporting

The following identifies the monitoring schedule and data collection and reporting requirements.

5.1 Monitoring Schedule

Real-time VOC and PM10 monitoring will be performed continuously throughout the intrusive activities. VOC monitoring will also be performed during non-intrusive sampling-type activities (such as NAPL gauging and recovery). Wind direction and speed will be monitored and recorded at least once per hour during investigation activities.

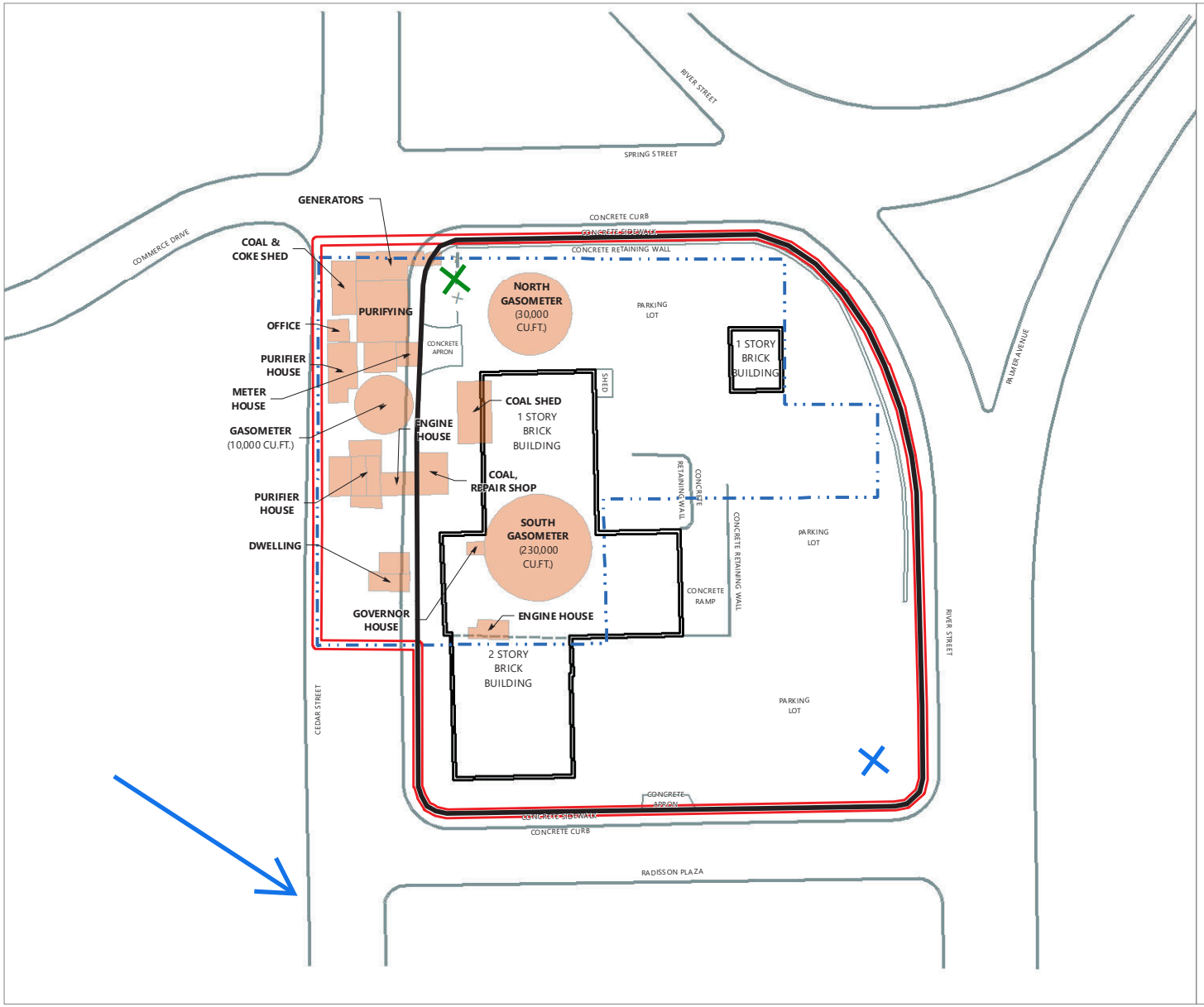
5.2 Data Collection and Reporting

Air monitoring data will be collected continuously from VOC and PM10 monitors during intrusive (and non-intrusive) monitored activities by an electronic data-logging system. The data management software will be set up so instantaneous observed readings would be recorded by the electronic data acquisition system and averaged throughout 15-minute time periods. All readings will be recorded and archived for review by NYSDOH and NYSDEC personnel.

6 References

NYSDEC (New York State Department of Environmental Conservation), 1989, *New York State Air Guide-19 – Oversight of Private Air Monitoring Networks*. June 1989.

USEPA, 1989. *Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements.* Revised August 1989.



LEGEND:

- Site Boundary
- Approximate Limits of Former MGP Site
- Limits of Tax Parcel (Currently Donnybrook Realty Corp Property)
- Property Structure
- Historical MGP Structure
- Prevailing Wind Direction
- Downwind CAMP Station
- Upwind CAMP Station

NOTE:

1. Base map information based on a survey provided by Chazen Engineering, Land Surveying & Landscape Architecture, CO, P.C. dated 1/20/2009.
2. Historical MGP structure locations and limits of former MGP are approximate and based on information presented in the *Cedar Street Works Remedial Investigation Report* (URS 2017), *Site Characterization Work Plan for the Former Cedar Street Works Site* (Parsons 2005), and *Atlas of Westchester County, New York* (Hopkins 1929).
3. All locations are approximate.

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ANCHOR QEA

Figure 1
CAMP Station Locations
NYSDEC Site No. 360173, New Rochelle, New York
Consolidated Edison Company of New York, Inc.

Attachment 1
New York State Department of Health
Generic Community Air Monitoring Plan

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

Appendix 1B
Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

(a) Objects to be measured: Dust, mists or aerosols;
(b) Measurement Ranges: 0.001 to 400 mg/m3 (1 to 400,000 :ug/m3);
(c) Precision (2-sigma) at constant temperature: +/- 10 :g/m3 for one second averaging; and +/- 1.5 g/m3 for sixty second averaging;
(d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);
(e) Resolution: 0.1% of reading or 1g/m3, whichever is larger;
(f) Particle Size Range of Maximum Response: 0.1-10;
(g) Total Number of Data Points in Memory: 10,000;
(h) Logged Data: Each data point with average concentration, time/date and data point number
(i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;
(j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;
(k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
(l) Operating Temperature: -10 to 50^{o} C (14 to 122^{o} F);
(m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.

5. The action level will be established at 150 ug/m3 (15 minutes average). While conservative,

this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m3, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

(a) Applying water on haul roads;
(b) Wetting equipment and excavation faces;
(c) Spraying water on buckets during excavation and dumping;
(d) Hauling materials in properly tarped or watertight containers;
(e) Restricting vehicle speeds to 10 mph;
(f) Covering excavated areas and material after excavation activity ceases; and
(g) Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150ug/m3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

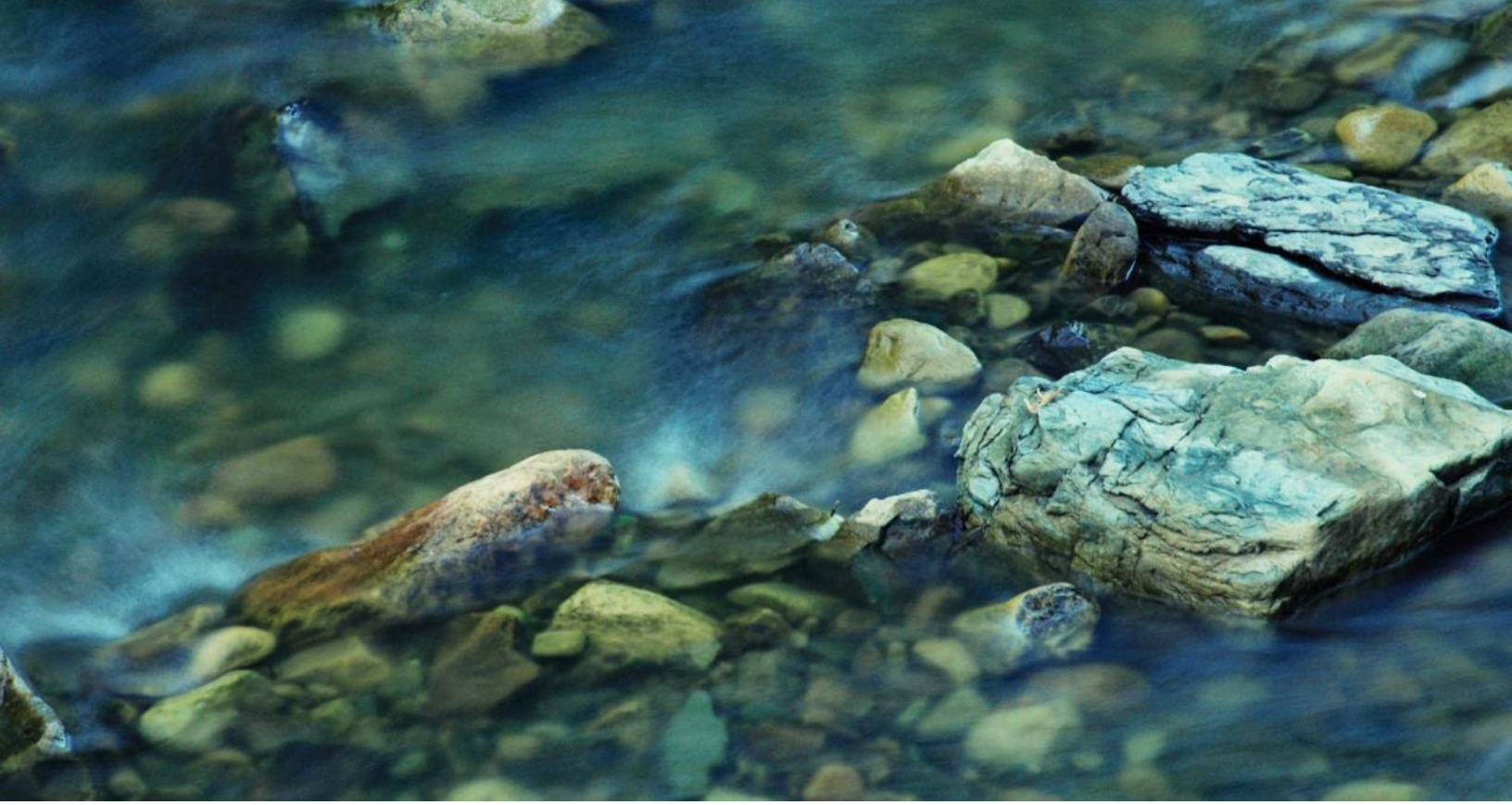
8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

Appendix 1C
DEC Permits Subject to Exemption

In accordance with section 1.10, exemptions from the following permit programs may be granted to the person responsible for conducting the remedial programs undertaken pursuant to section 1.2:

Air - Title 5 permits
Air - State permits
Air - Registrations
Ballast Discharge
Chemical Control
Coastal Erosion Hazard Areas
Construction of Hazardous Waste Management Facilities
Construction of Solid Waste Management Facilities
Dams
Excavation and Fill in Navigatable Waters (Article 15)
Flood Hazard Area Development
Freshwater Wetland
Hazardous Waste
Long Island Wells
Mined Land Reclamation
Navigation Law - Docks
Navigation Law - Floating Objects
Navigation Law - Marinas
Non-Industrial Waste Transport
Operation of Solid Waste Management Facilities
Operation of Hazardous Waste Management Facilities
State Pollution Discharge Elimination Systems (SPDES)
Stream Disturbance
Tidal Wetlands
Water Quality Certification
Water Supply
Wild, Scenic and Recreational Rivers

APPENDIX G
O&M MANUAL (FOR EACH ACTIVE EC)



March 2026
Cedar St former MGP New Rochelle, NY State Superfund Project

ANCHOR QEA

Operation and Maintenance Manual

Prepared for Consolidated Edison Company of New York, Inc.

March 2026
Cedar St former MGP New Rochelle, NY State Superfund Project

Operation and Maintenance Manual

Prepared for
Consolidated Edison Company of New York, Inc.
31-01 20th Avenue
Long Island City, New York 11105-2048

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Camillus, New York 13031

Project Number:E80921-01.03
https://anchorqea-my.sharepoint.com/personal/mcavas_anchorqea_com/Documents/ConEdison/Cedar Street SMP/Appendices/Appendix G/AppendixG_CedarSt_OM_Manual_.docx

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Figure 3 Site Cover Types

ATTACHMENTS

Attachment A Standard Operating Procedures

Attachment B Well Construction Information

ABBREVIATIONS

O&M	operation and maintenance
OU	operable unit
MGP	Manufactured Gas Plant
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
SMP	Site Management Plan
NAPL	nonaqueous phase liquid
Con Edison	Consolidated Edison Company of New York, Inc.
RI	Remedial Investigation
IC	institutional control
EC	engineering control
SOP	standard operating procedures
HASP	health and safety plan
RSO	remedial site optimization
PPE	personal protective equipment
LNAPL	light nonaqueous phase liquid
DNAPL	dense nonaqueous phase liquid
VOC	volatile organic compound
SVOC	semivolatile organic compounds
PRR	periodic review report
CAMP	Community Air Monitoring Plan

1. Introduction

This Operation and Maintenance (O&M) Manual is a required element of the remedial program at CE-Cedar St MGP New Rochelle State Superfund Project located in Westchester County in New Rochelle, New York (hereinafter referred to as the "Site"; see Figure 1). The Site was in the New York State (NYS) Voluntary Cleanup Program Site No. V00570, which was administered by New York State Department of Environmental Conservation (NYSDEC). The NYSDEC and Consolidated Edison Co. of New York, Inc. (CE), entered into a Consent Order Site No. 360173 on July 25, 2018.

As described in the Site Management Plan (SMP; Anchor QEA 2026) the remedial program for the Site includes institutional and engineering controls as well as possible installation and operation of a passive coal tar or nonaqueous phase liquid (NAPL) recovery system. This O&M Manual provides information necessary to operate, monitor and maintain the NAPL recovery elements of the remedy selected for the Site should they be implemented.

This NYSDEC-approved O&M Manual will be an appendix to the Site's SMP. This O&M Manual will be periodically updated, as needed, to reflect changes in Site conditions or the manner in which the NAPL recovery system is operated and/or maintained.

1.1. Site Overview

Consolidated Edison Company of New York, Inc. (Con Edison) and its predecessors-in-interest operated MGP-related facilities on the Site between approximately 1863 and 1951. The operation of MGP facilities resulted in the depositing of MGP-related waste products into the soil and groundwater at the Site, including, but not limited to, coal tar. Con Edison, as the party responsible for the cleanup of these MGP-related wastes under state and federal law, entered into a Voluntary Cleanup Agreement (VCA) on August 15, 2002 with the NYSDEC to remediate the Site. Following the termination of the Voluntary Cleanup Program in 2018, the Department and Con Edison entered into a Consent Order on July 25, 2018. The boundaries of the Site are more fully described in the metes and bounds site description that is part of the Deed Restriction included in Appendix A of the SMP.

Following completion of the Cedar Street Works Former MGP Site (RI), a Remedial Investigation Report for the Site, dated July 2017 was completed by URS Corporation on behalf of Con Edison. In 2025, Anchor QEA completed a Pre-Design investigation of the Site. The RI and PDI revealed the presence of NAPL in unrecoverable quantities, subsurface soil with concentrations of compounds of concern exceeding the NYS Unrestricted Use Soil Cleanup Objectives, and groundwater with concentrations exceeding the NYS Ambient Ground Water Quality Standards and Guidance Values at the Site. These impacts are referred to as "remaining contamination."

The selected remedy for this Site consisted of Institutional and Engineering Controls (ICs and ECs). ICs and ECs have been incorporated into the Site remedy to control exposure to remaining

contamination to ensure protection of public health and the environment. The ICs consist of an Environmental Easement, granted to the NYSDEC, and recorded with the New York County Clerk. The Deed Restriction requires compliance with the SMP (including this O&M Manual as Appendix G).

The current Site EC is a cover system. If coal tar recovery is needed, the recovery system is addressed by this O&M Manual.

1.2. Manual Organization

This O&M Manual has been organized into the following sections:

Section	Purpose
Section 1 - Introduction	Provides general information, site history and facility description.
Section 2 – Monitoring Wells	Presents an overview of the NAPL recovery system components and the O&M requirements
Section 3 – Groundwater Sampling	Presents an overview of groundwater sampling procedures and O&M requirements
Section 4 – Cover System	Presents an overview of the cover system and the O&M requirements
Section 5 – Reporting	Presents record keeping and reporting requirements for the ECs
Section 6 - Schedule	Provides a schedule for implementation of the O&M activities

In addition this O&M Manual is supported by tables, figures, and the following attachments:

- Attachment A: Standard Operating Procedures
- Attachment B: Well Construction Logs
- Attachment C: As-Built Drawing of NAPL Recovery Wells and Site Cover

2. Monitoring Wells

This section presents an overview of the monitoring well inspection for the Site and outlines the associated operation and maintenance (O&M) activities that would be implemented if recoverable NAPL is encountered during site management activities. Under current site conditions, no dedicated NAPL recovery system is installed or operated at the Site. Standard Operating Procedures (SOPs) to support potential NAPL response and recovery activities are included as Attachment A to this O&M Manual.

2.1. Monitoring Well Inspection

The existing monitoring wells (shown in Figure 2 and listed in Table 2) will be inspected at the frequencies described in Section 5 of this O&M Manual. The objective of these inspections is to check for damage to the wells or changes to the Site that could negatively impact the function of the wells. During groundwater well inspection, field staff will visually review the well pad and surrounding area, measure the static water level, and measure the total depth of the well. Procedures to be followed are outlined in SOP-1 included in Attachment A. Data collected during the inspection activities will be recorded on the O&M field form attached to that SOP.

In general, field staff will visually confirm the well's location. If Site conditions have changed such that a well is now within an active work zone or roadway or cannot be found it will be documented, the change in conditions will be recorded on the inspection form including with SOP-1. Once located, the concrete pad will be visually reviewed for signs of wear, cracks, or evidence that the pad has "heaved" due to freezing or thawing during the winter or spring months. The location and condition of the pad will be documented with a photograph that is attached to the well inspection form and maintained with project records.

Following completion of the exterior inspection, the well lid will be removed and the exposed casing visually assessed to document the condition of the well plug and casing, as well as the presence of any accumulated debris or liquids within the vault. The well plug will then be removed, and a weighted string will be lowered to the bottom of the well and retrieved to evaluate the presence and thickness of coal tar.

If coal tar is encountered, its thickness will be measured. Coal tar is considered recoverable if thickness exceeds 1 foot in 2-inch wells or 0.5 feet in 4-inch wells; in such cases, recovery will be conducted as described below.

The static water level and total well depth will be measured and recorded on the inspection form, along with coal tar observations and measurements. These data will be compared to prior measurements and the well construction details provided in Table 1. Variations from previous measurements or original construction specifications may indicate changes in subsurface conditions

or potential well damage and may warrant further evaluation (e.g., video inspection of the well interior).

2.2. Coal Tar Recovery

No dedicated coal tar recovery wells are currently installed or operated at the Site. Accordingly, there is no routine operation or maintenance of a recovery system under current site conditions. Coal tar recovery is considered a contingency measure and would be implemented only if coal tar is encountered during routine monitoring or inspection activities.

If coal tar is observed in a monitoring well, recovery would be conducted using passive recovery methods and off-site disposal of accumulated coal tar,. The following activities would be implemented, as applicable, in the event coal tar recovery is required:

1. **Well Inspection and Inventory**
   Monitoring wells in which coal tar is observed would be inspected to confirm well integrity, accessibility, and suitability for recovery activities.

2. **Coal Tar Gauging**
   The affected monitoring well(s) would be gauged to confirm the presence, thickness, and persistence of coal tar. Gauging frequency would be determined based on site conditions and in coordination with NYSDEC.

3. **Coal Tar Recovery**
   Accumulated coal tar would be removed manually or using temporary recovery equipment deployed within the affected monitoring well. Recovered material would be properly containerized, characterized, and transported off-site for disposal or recycling in accordance with applicable regulations.

While performing any coal tar -related monitoring or recovery activities described above, the Health and Safety Plan (HASP) included as part of the SMP will be followed at all times by all personnel on Site. The HASP included with the SMP represents the minimum health and safety requirements and may be modified as needed to address changes in site conditions or specific tasks. Any modifications to the HASP will be documented in accordance with the SMP. Health and safety procedures related to air monitoring and personal protective equipment (PPE) requirements are outlined in the HASP (Attachment E of the SMP).

3. Groundwater Sampling

As part of the Site monitoring to assess the performance and effectiveness of the remedial program groundwater samples will periodically be collected for chemical analysis. Groundwater samples will be collected from existing Site monitoring wells and analyzed for volatile organic compounds (VOCs), cyanide, PAHs and metals. Figure 2 shows the monitoring wells anticipated to be sampled and Table 2 presents a summary of the Site monitoring wells and the analytical sampling requirements.

Groundwater samples will be collected following standard low-flow groundwater sampling techniques following procedures outlined in SOP 2. Monitoring wells where coal tar is detected within the well at the time of groundwater sampling will be excluded from sampling. These wells will continue to be monitored for the presence of coal tar and have any recoverable coal tar removed during the regular O&M events.

4. Cover System

As part of the selected remedy for this Site, an existing cover system will be maintained to prevent exposure to remaining subsurface contamination at the Site (see Figure 3). This cover system is comprised of buildings, playgrounds, recreational areas, roadways, sidewalks, grass, and landscaped areas overlying 2 feet of imported fill brought to the Site following closure of the MGP (see the SMP for additional information regarding the cover system).

Site-wide visual inspections of the existing cover system will be performed by Con Edison's representative at a minimum of once per year and be performed and reported as part of the annual Site-wide inspection described in Section 4 of the SMP. Site-wide inspections (including the cover system) will also be performed after all severe weather conditions that the Con Edison believes are likely to have affected the ICs or ECs. A field form to be completed during Site inspections is included in Attachment A.

5. Reporting

Data collected from the O&M events will be tabulated and summarized in the O&M Summary Report that will be included as an attachment to the annual Periodic Review Report (PRR) as described in Section 7.0 of the SMP. The O&M Summary Report will also include tabulated results for groundwater analytical sampling along with any recommendations for future O&M activities.

Modifications to the O&M activities such as an increase or decrease in the frequency of O&M activities or modification to SOPs or equipment used will be proposed to NYSDEC. Any requested modifications to the O&M Plan would not be implemented until approved by the NYSDEC.

6. Schedule

Table 3 presents the schedule for O&M activities. Modifications or changes to the O&M schedule based on collected data will be proposed to NYSDEC for approval prior to implementation of the change.

As shown in Table 3existing monitoring wells identified during the well inventory will be sampled for groundwater analysis once every three years. The results will be evaluated and monitoring wells with results below the NYS Ambient Ground Water Quality Standards and Guidance Values criteria for three consecutive sampling events will be considered for a reduced frequency or elimination from the sampling program. Modifications to the proposed frequency of groundwater monitoring for specific monitoring wells will be will be proposed to NYSDEC. Any requested modifications to the groundwater monitoring plan would not be implemented until approved by the NYSDEC.

7. References

Anchor QEA, 2026. Site Management Plan. NYSDEC Site Number 360173, Cedar Street former MGP Site. Prepared for Consolidated Edison Company of New York, Inc.

Tables

Table 1

Summary Monitoring Well and Piezometer Construction Information

Monitoring Well ID	Northing	Easting	Well Diameter (inches)	Ground Elevation (feet AMSL)	PVC Casing Elevation (feet AMSL)	Steel Casing Elevation (feet AMSL)	Well Screen Interval (feet bgs)	Depth to Base of Well (feet bgs)
MW-01	759084.6	691308.4	2.0	51.19	50.90	N/A	8 - 18	18
MW-2A	758977.1	691381.2	2.0	52.33	51.95	N/A	4 - 14	14
MW-2B	758971.0	691385.0	4.0	52.34	51.71	52.02	24 - 39	39
MW-3A	759096.7	691444.0	2.0	50.32	49.97	N/A	6 - 16	16
MW-3B	759098.4	691447.0	4.0	50.32	49.37	50.20	26 - 41	43
MW-05	759147.6	691568.7	2.0	45.13	44.73	N/A	4 - 14	14
MW-06	759091.1	691623.3	2.0	43.16	42.94	N/A	7 - 17	17
MW-7A	759067.3	691339.8	2.0	51.64	51.30	N/A	9 - 19	19
MW-7B	759070.8	691345.2	2.0	51.75	51.33	N/A	30 - 40	40
MW-8A	759091.8	691163.8	2.0	51.77	51.39	N/A	5 - 15	15
MW-8B	759092.3	691158.9	2.0	51.69	51.25	51.46	28 - 38	38
MW-09	759185.3	691291.9	2.0	49.22	48.83	N/A	5.5 - 15.5	15.5
MW-10	758975.4	691253.5	2.0	52.05	51.82	N/A	6 - 16	16
MW-11A	758926.0	691544.8	2.0	45.75	45.39	N/A	4.5 - 12.5	12.5
MW-11B	758929.5	691550.4	4.0	45.67	45.09	45.13	25.9 - 40.9	40.9
MW-12A	758949.7	691680.4	2.0	38.63	38.34	N/A	4 - 14	14
MW-12B	758944.8	691672.6	4.0	39.15	38.32	38.80	26 - 41	41
PZ-2	759079.5	691398.7	2.0	51.02	50.59	N/A	18-28	30
PZ-3	759129.6	691377.0	2.0	50.68	50.37	N/A	10-20	22

Notes:

1. Survey coordinates (Northing and Easting) are presented in U.S. Survey feet utilizing North American Datum of 1983 State Plane Coordinates.

AMSL: above mean sea level

bgs: below ground surface

Table 2

Well ID	Northing	Easting	Well Diameter (inches)	Total Depth[1]	Screen Length (feet)	Screen Depth[1]		Analytical Testing Summary			
						Upper	Lower	VOC (SW 8260)	TAL Metals (SW 6010B)	PAHs (SW 8270c)	Cyanide (SW 901A)
MW-01	759084.6	691308.4	2.0	18	10	8	18	X	X	X	X
MW-2A	758977.1	691381.2	2.0	14	10	4	14	X	X	X	X
MW-2B	758971.0	691385.0	4.0	39	15	24	39	X	X	X	X
MW-3A	759096.7	691444.0	2.0	16	10	6	16	X	X	X	X
MW-3B	759098.4	691447.0	4.0	43	15	26	41	X	X	X	X
MW-05	759147.6	691568.7	2.0	14	10	4	14	X	X	X	X
MW-06	759091.1	691623.3	2.0	17	10	7	17	X	X	X	X
MW-7A	759067.3	691339.8	2.0	19	10	9	19	X	X	X	X
MW-7B	759070.8	691345.2	2.0	40	10	30	40	X	X	X	X
MW-8A	759091.8	691163.8	2.0	15	10	5	15	X	X	X	X
MW-8B	759092.3	691158.9	2.0	38	10	28	38	X	X	X	X
MW-09	759185.3	691291.9	2.0	15.5	10	5.5	15.5	X	X	X	X
MW-10	758975.4	691253.5	2.0	16	10	6	16	X	X	X	X
MW-11A	758926.0	691544.8	2.0	12.5	8	4.5	12.5	X	X	X	X
MW-11B	758929.5	691550.4	4.0	40.9	15	25.9	40.9	X	X	X	X
MW-12A	758949.7	691680.4	2.0	14	10	4	14	X	X	X	X
MW-12B	758944.8	691672.6	4.0	41	15	26	41	X	X	X	X
PZ-2	759079.5	691398.7	2.0	30	10	18	28	X	X	X	X
PZ-3	759129.6	691377.0	2.0	22	10	10	20	X	X	X	X

Notes:

1. Depth as measured from the ground surface.

ID: identification

MGP: Manufactured Gas Plant

SVOC: semivolatile organic compound

VOC: volatile organic compound

Table 3
Operation and Maintenance Schedule

	Year 1		Year 2	Year 3	Year 4		Year 5
Well ID	Groundwater Sampling	Cover System Inspection	Cover System Inspection	Cover System Inspection	Groundwater Sampling[3]	Cover System Inspection	Cover System Inspection
MW-01	Triennially	Annually	Annually	Annually	Triennially	Annually	Annually
MW-2A	Triennially				Triennially		
MW-2B	Triennially				Triennially		
MW-3A	Triennially				Triennially		
MW-3B	Triennially				Triennially		
MW-05	Triennially				Triennially		
MW-06	Triennially				Triennially		
MW-7A	Triennially				Triennially		
MW-7B	Triennially				Triennially		
MW-8A	Triennially				Triennially		
MW-8B	Triennially				Triennially		
MW-09	Triennially				Triennially		
MW-10	Triennially				Triennially		
MW-11A	Triennially				Triennially		
MW-11B	Triennially				Triennially		
MW-12A	Triennially				Triennially		
MW-12B	Triennially				Triennially		
PZ-2	Triennially				Triennially		
PZ-3	Triennially				Triennially		

Notes:

1. Following Year 1 O&M events the monitoring schedule may be adjusted as described in the O&M Plan.

2. Inventory and inspection will occur during the annual covery system inspection.

3. Monitoring wells included in triannual sampling may be eliminated from the monitoring schedule after 3 consecutive events of results below applicable NYSDEC criteria as described in the O&M Plan.

ID: identification

NYSDEC: New York State Department of Environmental Conservation

O&M: operation and maintenance

Figures



Figure 1
Site Location Map
Cedar St. MGP
O&M Manual
Consolidated Edison Company of New York, Inc.

DRAFT



LEGEND:

- Historical MGP Structure
- Toyota Dealership Structure
- Monitoring Well (2009)
- Overburden Monitoring Well (RI)
- Bedrock Monitoring Well (RI)
- Soil Boring/Piezometer

NOTES:

1. Base map information based on a survey provided by Chazen Engineering, Land Surveying & Landscape Architecture, CO, P.C. dated 1/20/2009.
2. Historical MGP structure locations are approximate and based on information presented in the *Cedar Street Works Remedial Investigation Report* (RIR), prepared by URS and dated July 2017.
3. Figure reproduced from the RIR, Figure 3-1.
4. Sample location SG-1 and the indoor/ambient air sample location are approximate.
5. Monitoring wells MW-T1 and MW-T2 were reported as damaged and not usable during the RI.
6. All locations are approximate.
7. RI = Remedial Investigation

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ANCHOR QEA

Figure 2
Monitoring Well and Piezometer Locations
Cedar St. MGP
O&M Manual
Consolidated Edison Company of New York, Inc.



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ANCHOR QEA

Figure 3-1
IC Boundary and Site Cover
Cedar St. MGP
O&M Manual
Consolidated Edison Company of New York, Inc.

Attachment A
Standard Operating Procedures

SOP 1
Well Inspection/Inventory, Coal Tar Monitoring, and Coal Tar Removal

Well Inspection/Inventory, Coal Tar Monitoring, and Coal Tar Removal

SOP 1

Project: CE-Cedar St MGP New Rochelle State Superfund Project

Date:

Prepared by: _____ Date: _____

Approved by: _____ Date: _____

1 Purpose

The purpose of this Standard Operating Procedure (SOP) is to establish uniform procedures for inspection and inventory of all monitoring wells as well as coal tar monitoring and removal from wells where accumulated. This SOP describes the requirements, process, and documentation procedures to be followed.

The details within this SOP should be used in conjunction with the Operations and Maintenance (O&M) Plan and Health and Safety Plan (HASP) attached to the *Site Management Plan* (SMP; Anchor QEA 2026).

2 Scope and Applicability

This SOP applies to task orders and projects associated with Anchor QEA Engineering, PLLC. This SOP may be modified, as required, depending on site-specific conditions, equipment limitations, or limitations imposed by the procedure. The ultimate procedure employed will be documented in the

appropriate project reports. If changes are required due to unanticipated field conditions, the changes will be discussed with the project manager as soon as practicable and will be documented in the final project monthly or annual reports.

3 Summary of Method

Well inspection and inventory entail locating all existing monitoring wells and inspecting to determine their condition to function as intended. Coal tar monitoring and removal entails gauging recovery and/or monitoring wells to identify the presence of coal tar and then removing it for disposal.

Only qualified personnel will manage field activities. Field personnel executing these procedures will have read, be familiar with, and comply with the requirements of this SOP. Additionally, field personnel will be under the direct supervision of qualified professionals who are experienced in performing these tasks.

Anchor QEA field personnel and subcontractors will have completed current company-required health and safety training (e.g., 40-hour Hazardous Waste Operations training, site-specific training, and first aid and cardiopulmonary resuscitation [CPR] training) as needed.

4 Equipment List

Equipment and materials that will be used by Anchor QEA personnel for overseeing and directing these activities include the following:

- Camera
- Tape measure
- Containers to include 55-gallon steel, Department of Transportation open-top drums and 5-gallon pails with lids
- Field log book or daily log forms and operations and maintenance (O&M) field form attached to this SOP
- Interface probe (100-foot length)
- Proper personal protective equipment (PPE) as outlined in the project HASP including coveralls, gloves, and photoionization detector (PID)
- Plastic sheeting, absorbent pads, paper towels, trash bags, and similar materials to maintain a clean work area and contain any potential spills
- Cotton string or rope and threaded rod
- Bailers (disposable polyethylene or stainless steel)
- Decontamination supplies to include water, soap, degreaser, and solvent for use in cleaning if necessary, such as Hexane or ethyl acetate

5 Health and Safety Considerations

Health and safety issues for the work associated with this SOP, including physical, chemical, and biological hazards, are addressed in the HASP attached to the SMP (Anchor QEA 2026), which serves as the minimum requirements for work on the Site. The HASP will be followed during all activities conducted by Anchor QEA personnel and subcontractors.

The HASP and will be used to guide the NAPL removal activities in a safe manner. The following specific health and safety issues must be considered when completing NAPL removal:

- Air monitoring will be conducted for chemicals at action level as established in the HASP.
- Appropriate PPE must be worn to avoid contact with NAPL.
- Potential hazards from working in a public area and potential hazards to the public by NAPL removal activities must be addressed before activities begin and as conditions change.
- Waste generated during the locating activities must be properly managed in accordance with facility and applicable regulatory requirements.

6 Procedure

During well inspection and inventory, NAPL monitoring, and NAPL removal activities the following procedures will be followed.

6.1 Well Inspection and Inventory

1. Gather all necessary supplies listed in Section 4, above. Arrange for a drum delivery to the site and notify client of the schedule to ensure property owners and others are notified as necessary.
2. Upon arrival establish an IDW storage area. This will be where drums or containers of waste will be stored. The area should be established with cones or similar barricades to demarcate the area and a secondary containment set up so that any potential spills are contained.
3. Use the predetermined list of wells to be surveyed to plan the locations to be inspected and inventoried.
4. Move on the site to the location of a well and locate. Arrange gauging equipment on a plastic sheet or trash bag.
5. Survey the flush mount manhole or stickup well cover for damage and document any necessary repairs on the O&M Field Form (Attachment 1). Ensure that all fields have been completed on the O&M Field Form.
6. Open the manhole or stickup and remove the inner cap or “J-plug”. Use a PID to measure the air immediately above the well casing, in the workers breathing zone and record the measurements. Follow the air monitoring action levels in the HASP.

7. Use the interface probe to first measure the static water depth in the well. Be sure to measure from the known survey point for each location. Record the depth to water measurement to the nearest 0.01 feet and record.
8. Lower a threaded rod attached to a cotton string or rope to the bottom of the well and measure the total depth of the well (threads may be left as-is to trap coal tar or may be covered with white, cotton tape which coal tar, when present, will stain). Record the measurement as well as any observations of the condition of the bottom of the well (e.g., hard or soft).
9. Remove the equipment and inspect the threaded rod and cotton rope or string for signs of coal tar.
10. Determine the thickness of NAPL identified in any wells and use the well diameter to estimate the volume of NAPL. If recoverable coal tar is present in a well (>0.5 feet in 4" well and >1 foot in 2" well), then proceed with the coal tar removal process below.
11. Once measurements are complete remove and decontaminate all equipment, place the "J-plug" cap back on the well casing and close the flush mount or stick-up well cover.
12. Clean up all PPE and other materials prior to moving to the next well location.
13. If only performing well inspection and inventory activities, replace the "J-plug", close the manhole or stickup, and clean up all materials before moving to the next well location.

6.2 Coal Tar Removal

Following well monitoring, those wells identified with a potentially recoverable amount of coal tar will be revisited. The following procedures describe coal tar removal:

1. Gather all necessary supplies listed in Section 4 above.
2. At wells with potentially recoverable coal tar, open the flush mount of stick-up well cover.
3. Create a work zone with cones or other similar barriers and an area of plastic sheeting. Plastic sheeting should be secured to the well casing when possible.
4. Field staff should ensure that proper PPE and air monitoring equipment is on hand and don appropriate equipment.
5. Place the bailer, storage container, and air monitoring equipment on the plastic sheeting. Ensure that absorbent pads are also nearby for potential spillage.
6. Open the inner well cap or "J-plug" and use the PID to measure the air immediately above the well casing as well as the worker breathing zone and record the measurements.
7. Tie a rope or string to the bailer and secure the other end to the well cap or some other object to that the bailer is always tied-off.
8. Lower the bailer into the well and then slowly through the water column. Ensure that the bailer is lowered to and below the zone where NAPL was previously measured.
9. Allow the bailer to rest for a few moments before pulling the bailer back to the surface.

10. Once near the surface ensure that an appropriate container is nearby to transfer the bailer contents into. Then remove the bailer, move over the container and discharge either by inverting or displacing the ball/flapper at the bottom.
11. Once the bailer has been emptied, repeat the above process. Periodically check the water level in the well with the interface probe and record.
12. Once NAPL has stopped being removed remove the bailer and place into an appropriate container for disposal.
13. Replace the inner cap or "J-plug" and the clean up the area. Take care to ensure that any materials that came into contact with NAPL are properly disposed of in labeled containers.

6.3 Documentation

All activities conducted under this SOP will be documented, at a minimum, in a project specific field book or on daily log field forms. For activities described herein the O&M Field Form (Attachment 1) will be completed for each well during an O&M event.

7 Waste Management

Investigation derived waste (IDW), rinse water, PPE, NAPL, and other waste materials generated during field activities (waste) must be placed in appropriate containers and labeled. Be sure to segregate those waste items impacted with NAPL from those that did not come into contact with NAPL. Waste materials will be stored securely in a location that has been approved by Consolidated Edison of New York, Inc.

8 Quality Assurance

It is the responsibility of the field team leader to periodically check to ensure the procedures are in conformance with those stated in this SOP.

9 Reference

Anchor QEA, 2026. *Site Management Plan*. NYSDEC Site Number 360173, Cedar Street former MGP. Prepared for Consolidated Edison Company of New York, Inc.

Attachment 1
Operations and Maintenance Field Form

Operations and Maintenance Field Form

Project:		Date:	
Project No:		Site Name:	
Field Staff:		Location ID:	

A. Water Depths		**B. NAPL Measurement**	
Time:		Time:	NAPL Present: Y / N
Depth to Water (feet measured from top of inner casing):		NAPL Thickness (feet)	
Total Depth (feet measured from top of inner casing):		Approximate NAPL Volume (gallons)	
Confidence of Total Depth Measurement:	Solid/Hard Contact / Moderate/Some Buoyancy / Poor/Hard to Differentiate	Notes:	

C. Well Inspection (provide additional detail in Notes section or at bottom of page)

1. Describe Well Access:	Good	Bad	Notes:		
2. Name Posted on Well?	Yes	No	Notes:		
3. Vegetation around wellhead?	None	Some	Heavy	Notes:	
4. Type of well pad.	Concrete	Other	Notes:		
5. Condition of pad.	Good/No Cracks/Stable		Moderate/Some Cracks		Poor/Large Cracks/Unstable
6. Wellhead	Stickup	Flush Mount	Notes:		
7. Type of wellhead.	PVC	Steel	Notes:		
8. Condition of wellhead.	Good/Operable		Moderate/Some Deterioration		Poor/Inoperable/Rusty/Unstable
9. Well locked?	Yes	No	Notes:		
10. Ease of opening/closing lock?	Easy	Moderate	Hard	Very Hard	Notes:
11. Type of well casing plug.	Expandable Cap	Steel	PVC	Threaded Cap	Non-Threaded Cap
12. Vent hole in well casing?	Yes	No	Notes:		
13. Types of well casing.	PVC	Steel	Stainless Steel	Notes:	
14. Diameter of well casing (inches).	2″	4″	Other:	Notes:	
15. Well casing marked with measuring point?	Yes	No	Notes:		

Notes:

ANCHOR QEA

SOP 2
Low-Flow Groundwater Sample Collection

Low-Flow Groundwater Sample Collection

SOP 02

Project:

Date:

Prepared by: _____ Date: _____

Approved by: _____ Date: _____

1 Purpose

The purpose of this Standard Operating Procedure (SOP) is to establish uniform procedures for collection of groundwater samples following low-flow groundwater sampling methodology. This SOP describes the requirements, process, and documentation procedures to be followed. The details within this SOP should be used in conjunction with the Operations and Maintenance (O&M) Plan and Health and Safety Plan (HASP) attached to the *Site Management Plan* (SMP; Anchor QEA 2026).

2 Scope and Applicability

This SOP applies to task orders and projects associated with Anchor QEA Engineering, PLLC. This SOP may be modified, as required, depending on site-specific conditions, equipment limitations, or limitations imposed by the procedure. The ultimate procedure employed will be documented in the appropriate project reports. If changes are required due to unanticipated field conditions, the changes will be discussed with the project manager as soon as practicable and will be documented in the final project monthly or annual reports.

3 Summary of Method

Low-flow groundwater sample collection entails collecting groundwater samples following low-flow sampling protocols. As outlined in the O&M Plan, all existing monitoring wells will be sampled according to the included schedule. Additional details on low-flow groundwater sampling procedures can be found in the United States Environmental Protection Agency publications (USEPA 1998, 2017).

Only qualified personnel will manage field activities. Field personnel executing these procedures will have read, be familiar with, and comply with the requirements of this SOP as well as the USEPA references cited. Additionally, field personnel will be under the direct supervision of qualified professionals who are experienced in performing these tasks.

Anchor QEA field personnel and subcontractors will have completed current company-required health and safety training (e.g., 40-hour Hazardous Waste Operations training, site-specific training, and first aid and cardiopulmonary resuscitation [CPR] training) as needed.

4 Equipment and Supplies

Equipment and materials that will be used by Anchor QEA personnel for overseeing and directing these activities include the following. Additional equipment may be required, pending field conditions.

- Appropriate personal protective equipment (PPE) and clothing as defined in the HASP
- Decontamination equipment
- Standardized field log forms (field forms) and log book
- Groundwater monitoring and sampling log
- Black ballpoint pen or Sharpie permanent marker (or equivalent)
- White board and pens
- Photoionization detector (PID)
- Interface probe or water-level indicator
- Bladder pump with dedicated bladder and polyethylene tubing
- Oil-less compressor for bladder pump
- Silicone flexible tubing (for peristaltic pump)
- Marine battery
- Multi-parameter water quality meter and manufacturer's operating manual
- Calibration standards:
  - pH (4.0, 7.0, and 10.0 standard buffer solutions)
  - Conductivity
  - Turbidity standards (0 nephelometric turbidity units [NTU], 40 NTU, and 100 NTU)

  - Miscellaneous others (as necessary)
- Deionized water
- Laboratory-issued sampling containers
- 5-gallon buckets with lids or suitable containers for purge water and plastic sheeting and trash bags
- Graduated measuring cup
- Tape measure
- Decontamination supplies including phosphate-free soap, potable water, distilled or de-ionized water, and tubs for containing wash water.
- De-greaser or solvent for use in cleaning if necessary such as Hexane or ethyl acetate
- Plastic or duct tape
- Paper towels
- Digital camera

5 Procedures

The following general description of procedures will be followed for the data collection activities. Additional details can be found in USEPA guidance (USEPA 1998, 2017).

1. Load all pre-cleaned sampling equipment, including decontamination fluids, equipment and IDW containers, and place fresh ice in the sample holding containers.
2. At each monitoring well, measure the static water level and check for presence of NAPL (if has not already been determined).
3. The static water level measurement and total depth of well casing will be used to assess how much water is present in the well casing before sampling starts.
4. Polyethylene tubing will be connected to the bladder pump and it will be lowered to the approximate middle of the well screen for groundwater sampling.
5. Once in place, purging may begin. Start purging at the same rate of sample collection during previous events (if known). Otherwise start at a slow rate and adjust as necessary but strive for no draw down in the water level.
6. During purging of groundwater, water quality parameters (pH, conductivity, dissolved oxygen [DO], temperature, oxidation reduction potential [ORP], and turbidity) will be measured and recorded with a portable instrument (Horiba U-10 or similar instrument). Record water quality readings every 5 minutes on the field forms.
7. Samples will be collected after field water quality parameters have stabilized. The groundwater will be considered adequately purged when the water quality parameters have stabilized as follows (for three consecutive measurements):
   a. ± 0.1 for pH
   b. ± 3 percent for specific conductance (conductivity)

c. ± 10 millivolts for ORP
d. ± 10 percent for DO and turbidity
e. ± 10 millivolts for ORP
f. ± 10 percent for DO and turbidity
g. Water level draw down of 0.3 feet or less

8. During sampling, the pump will be run at a purge rate of less than 500 milliliters (mL) per minute to avoid over-pressure and clogging or excessive vacuum bubbles in the sampling line.
9. In the event that the parameters or water level within the monitoring well do not stabilize purging will continue for a minimum of 4 hours. After 4 hours, sample will be collected and a deviation from low-flow procedures noted.
10. Samples will be collected for chemical analyses listed in the O&M Manual.
11. Groundwater samples will be placed in a cooler at 4°C for transport to the laboratory.
12. All field activities will be documented, including sampling and field measurement activities, and the sample collection record and water quality data log will be filled out in their entirety.
13. Field records and forms will be reviewed by the Field Team Leader as soon as possible prior to filing with project data.
14. At the end of sampling a monitoring well the multi-parameter water quality meter and sampling pump will be decontaminated prior to use at the next location.
    a. Disassemble the sampling pump and water quality meter and remove all disposable tubing.
    b. Open the water-quality meter flow-through cell and wash with phosphate free soap followed by a thorough rinse with potable water and deionized water.
    c. Wash the disassembled bladder pump in phosphate free soap followed by a thorough rinse with potable water and deionized water. If NAPL was encountered and has stained the pump or any parts use Hexane or ethyl acetate when necessary to clean and then repeat the wash and rinse.
    d. Allow equipment to air-dry prior to reassembly and use at the next location.

6 Quality Assurance/Quality Control

Quality control procedures will consist of following standard instrument operation procedures for collecting groundwater. Entries in the field forms will be double-checked by the field team staff to verify the information is correct. It is the responsibility of the Field Team Leader to periodically check to ensure the procedures are in conformance with those stated in this SOP.

7 Field Sample Identification and Custody

7.1 Sample Identification

Each sample will be given a unique alphanumeric identifier in accordance with the following classification system example:

Sample Identification

LL*	NN*	N-N	LL
Sample Type	**Sample Number**	**Depth Code**	**QC Identifier**
Water Sample Type: MW - Monitoring Well Sample Number: Number referenced to a sample location map. QC Identifier: FB - Field Blank MS - Matrix Spike TB - Trip Blank MD - Matrix Spike Duplicate WB - Wash or Rinse Blank MB - Matrix Blank			

* L = Letter
* N = Number

Field duplicate samples will be assigned identifiers that do not allow the laboratory to distinguish them as field duplicates. Each sample container will be labeled prior to packing for shipment. The sample identifier, site name, date and time of sampling, and analytical parameters will be written on the label in waterproof ink and recorded in the field book.

7.2 Chain-of-Custody

A COC form will accompany the sample containers during selection and preparation at the laboratory, during shipment to the field, and during return shipment to the laboratory. The COC form will identify each sample container and the analytical parameters for each, and will list the field personnel that collected the samples, the project name and number, the name of the analytical laboratory that will receive the samples, and the method of sample shipment. If samples are split and sent to different laboratories, a copy of the COC form will be sent with each sample shipment. The COC form will be completed by field personnel as samples are collected and packed for shipment. Other items related to the COC process include:

- Erroneous markings will be crossed-out with a single line and initialed by the author.

- The REMARKS space will be used to indicate if the sample is a matrix spike, matrix spike duplicate, or matrix duplicate.
- Trip and field blanks will be listed on separate rows.
- After the samples have been collected and sample information has been listed on the COC form, the method of shipment, the shipping cooler identification number(s), and the shipper air bill number will be entered on the COC form.
- A second member of the field team will review the COC form for completeness and accuracy whenever possible.
- Finally, a member of the sampling team will write his/her signature, the date, and time on the first RELINQUISHED BY space. Duplicate copies of each COC form must be completed.
- One copy of the COC form will be retained by sampling personnel. Blind duplicate samples will be identified on the copy retained by the sampling crew. The original will be sealed in a plastic bag and taped inside the lid of the shipping cooler and without the additional identification of blind duplicate samples.
- Sample shipments will be refrigerated at 4°C, typically by packing with ice, to preserve the samples during shipment.
- After the shipping cooler is closed, custody seals provided by the laboratory will be affixed to the latch and across the front and back of the cooler lid, and signed by the person relinquishing the samples to the shipper.
- The seal will be covered with clear tape, and the cooler lid will be secured by wrapping with packing tape.
- The cooler will be relinquished to the shipper, typically an overnight carrier.
- The COC seal must be broken to open the container. Breakage of the seals before receipt at the laboratory may indicate tampering. If tampering is apparent, the laboratory will contact the Project Manager, and the samples will not be analyzed.
- The samples must be delivered to the laboratory within 48 hours of collection.

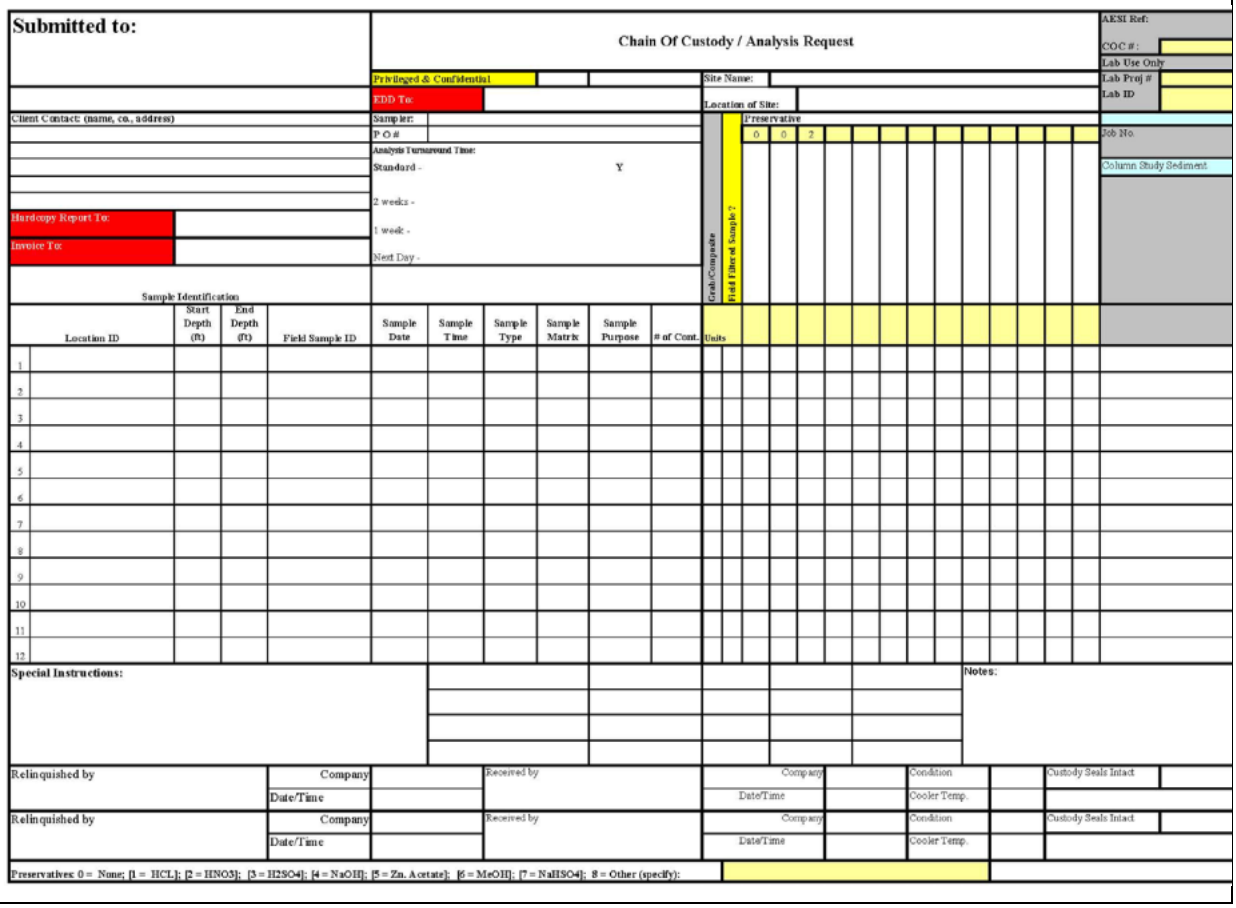
7.3 Sample Documentation

The field team leader will be retaining a copy of the COC, and, in addition, the field team leader will ensure the following information about each sample is recorded in the field book and/or on the sample logs:

- Sample identifier
- Identification of sampled media (e.g., groundwater)
- Sample location with respect to known reference point
- Physical description of sample location
- Field measurements, (e.g., pH, temperature, conductivity, and water levels)
- Date and time of collection

- Sample collection method
- Volume of groundwater purged before sampling
- Number of sample containers
- Analytical parameters
- Preservatives used
- Shipping information:
- Dates and method of sample shipments
- COC form numbers
- Federal Express Air Bill numbers

Figure 8-1
Chain-of-Custody Form



8 References

Anchor QEA, 2026. *Site Management Plan.* NYSDEC Site Number 360173, Cedar Street former MGP Site. Prepared for Consolidated Edison Company of New York, Inc.

USEPA, 1998. *Ground Water Sampling Procedure Low Stress (Low Flow) Purging and Sampling*. Prepared by U.S. environmental Protection Agency Region II. March 1998.

USEPA, 2017. *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells*. Quality Assurance Unit, U.S. Environmental Protection Agency – Region 1. September 2017.

Attachment 1
Low-Flow Groundwater Sample Collection Field Form

Low-Flow Groundwater Sample Collection Field Form

Project:		Date:	☐ QC Sample
Project No:		Location ID:	
Field Staff:			
A. Monitoring Setup			
Time:		Pump Installed Depth (feet; measured from top of inner casing):	
Depth to Water (feet; measured from top of inner casing):		NAPL Present (Yes/No):	

Water Quality Instrument Make/Model:				Instrument Serial No.			
Sensor (check applicable parameters)	☐ Temperature	☐ pH	☐ Spec. Conductance	☐ Diss. Oxygen	☐ Oxygen Reduction Potential	☐ Turbidity	☐ Other?
Sensor ID/serial No.	#_____	#____	#_____	#_____	#_____	#_____	#_____

B. Water Quality Data		Pre-Purge Start Time*:				Sampler Inlet Depth:			
		Pre-Purge Rate*:				Initial Depth to Water:			
Time	Pump Rate (mL/min)	Temperature (°C)	pH	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Water Level (feet)	Notes (color, odor, etc.):

Sampling ID	Sampling Depth (Below Mudline) (ft)	Sample Time	Analyses

Notes:

ANCHOR QEA

Attachment B
Well Construction Information

MONITORING WELL CONSTRUCTION DATA

DATE: 5/23/2025	CLIENT: Consolidated Edison, Inc.	Site No: E50921-07.01

WELL/BORING NO: PZ-SB-2

PROJECT NAME: Cedar St. Former MGP Site

ADDRESS: 47 Cedar Street
New Rochelle, NY

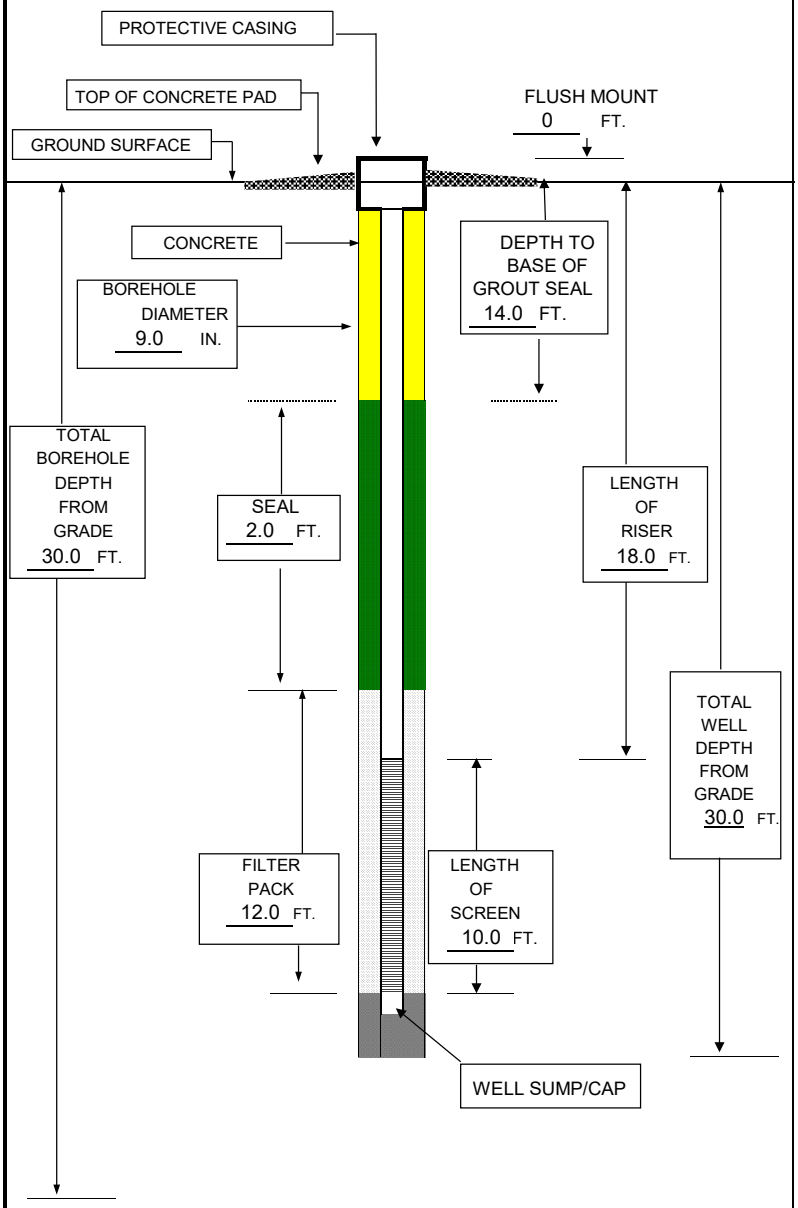
WELL CONTRACTOR: ADT

COORDINATES:
NORTH 759079.5
EAST 691398.7

TOP OF SLAB ELEVATION: 51.02

TOP OF CASING ELEVATION: 50.59

WELL SCHEMATIC



CONSTRUCTION DATA

CASING INFORMATION

MATERIAL: [X] PVC [ ] STAINLESS [ ] CARBON [ ] OTHER
DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER IN.
JOINTS: [X] THREADED [ ] WELDED [ ] SCREWED [ ] COUPLED [ ] OTHER
SCHEDULE: 40

SCREEN INFORMATION

MATERIAL: [X] PVC [ ] STAINLESS [ ] TEFLON [ ] OTHER
DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER IN
SLOT: [X] 0.010 [ ] 0.020 [ ] OTHER IN

CENTRALIZER: [ ] YES [X] NO

FILTER PACK MATERIAL

20/40 SAND [ ]
OTHER [X] #2

BENTONITE WELL SEAL

[ ] 1/2-INCH PELLETS
[ ] 1/4-INCH PELLETS
[X] CHIPS
[ ] OTHER

SURFACE PROTECTION

CONCRETE PAD: [ ] 3'X3' [ ] 4'X4' [X] OTHER 1'X1'

WELL SUMP/CAP

[X] YES
[ ] NO
LENGTH 2.00 FT.

REMARKS:

1. Vertical Datum is in North American Vertical Datum of 1988 (NAVD88).
2. Horizontal Datum is in North American Datum of 1983 (NAD83).
3. Top of Casing Elevation surveyed at marked measuring point at top of PVC casing.

MONITORING WELL CONSTRUCTION DATA

DATE: 5/23/2025	CLIENT: Consolidated Edison, Inc.	Site No: E50921-07.01

WELL/BORING NO: PZ-SB-3

PROJECT NAME: Cedar St. Former MGP Site

ADDRESS: 47 Cedar Street
New Rochelle, NY

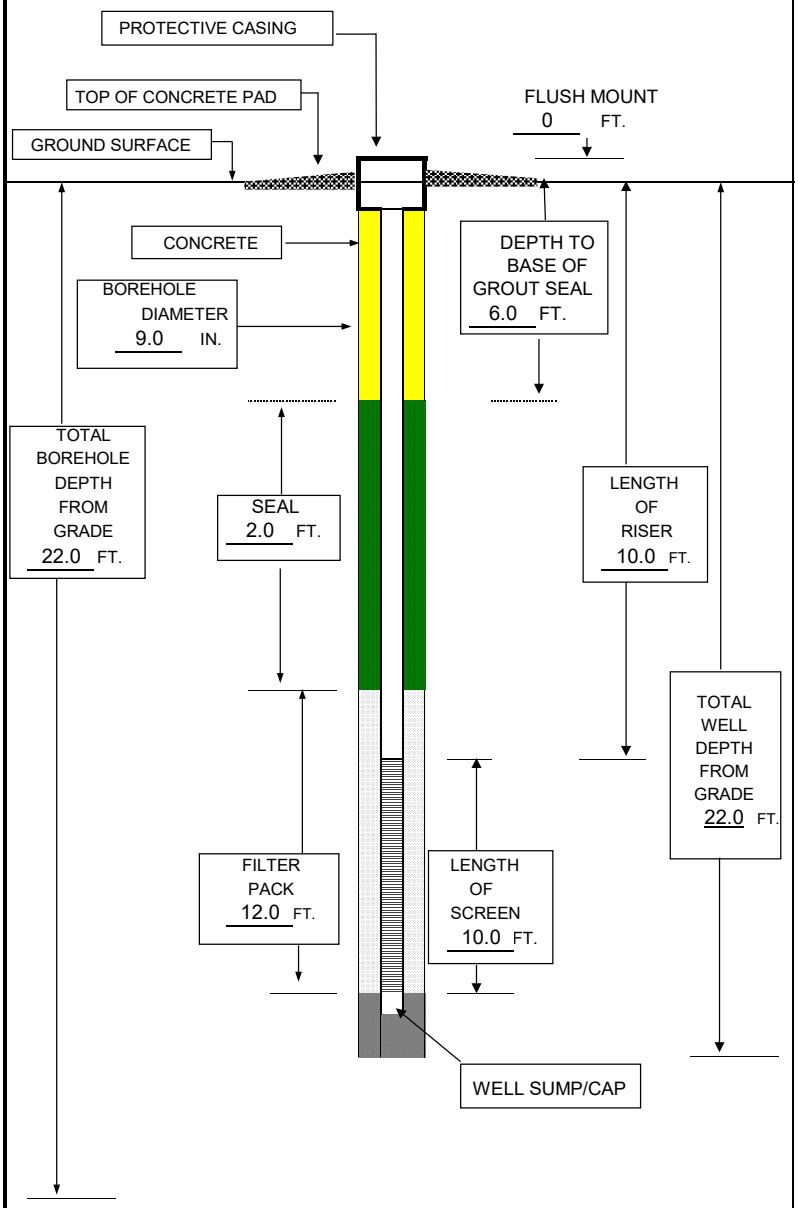
WELL CONTRACTOR: ADT

COORDINATES:
NORTH 759129.6
EAST 691377.0

TOP OF SLAB ELEVATION: 50.68

TOP OF CASING ELEVATION: 50.37

WELL SCHEMATIC



CONSTRUCTION DATA

CASING INFORMATION

MATERIAL: [X] PVC [ ] STAINLESS [ ] CARBON [ ] OTHER
DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER IN.
JOINTS: [X] THREADED [ ] WELDED [ ] SCREWED [ ] COUPLED [ ] OTHER
SCHEDULE: 40

SCREEN INFORMATION

MATERIAL: [X] PVC [ ] STAINLESS [ ] TEFLON [ ] OTHER
DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER IN
SLOT: [X] 0.010 [ ] 0.020 [ ] OTHER IN

CENTRALIZER: [ ] YES [X] NO

FILTER PACK MATERIAL

20/40 SAND [ ]
OTHER [X] #2

BENTONITE WELL SEAL

[ ] 1/2-INCH PELLETS
[ ] 1/4-INCH PELLETS
[X] CHIPS
[ ] OTHER

SURFACE PROTECTION

CONCRETE PAD: [ ] 3'X3' [ ] 4'X4' [X] OTHER 1'X1'

WELL SUMP/CAP

[X] YES
[ ] NO
LENGTH 2.00 FT.

REMARKS:

1. Vertical Datum is in North American Vertical Datum of 1988 (NAVD88).
2. Horizontal Datum is in North American Datum of 1983 (NAD83).
3. Top of Casing Elevation surveyed at marked measuring point at top of PVC casing.

DRILLING SUMMARY

Geologist:
M. Gutmann, A. Papaneocleous

Drilling Company:
Glacier Drilling LLC

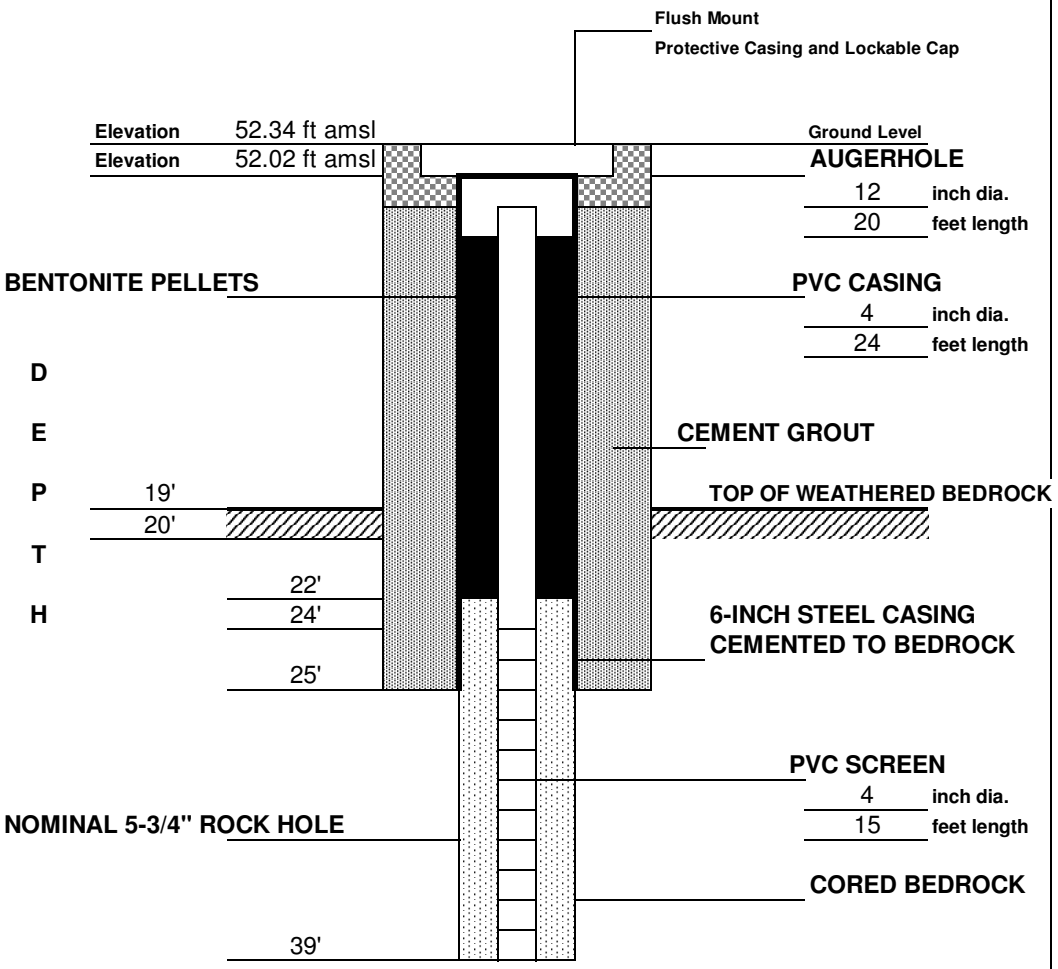
Driller:
Terry Bell

Rig Make/Model:
CME 85

Date:
3/26/2014

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 4" PVC	**Type:** #2 Sand **Setting:** 22-39'
Monitor: 4" PVC	**Slot Size:** 0.020"	***SEAL MATERIAL***
		Type: Bentonite Pellets **Setting:** 20-22'
		Type: Bentonite Pellets **Setting:** 10-20'

COMMENTS:
The boring was advanced with 4-1/4-inch ID HSAs, 8-1/4-inch ID HSAs, 4-inch HQ casing to 20 ft, and Nx cored to 25 ft. The borehole was then reamed with a 7-7/8-inch roller bit from 20 to 25 ft. Six-inch ID steel casing was then set into the rock socket and tremie grouted in place from 25 ft to the surface. Fourteen feet of HQ core were then drilled by a core barrel inserted into the 6-inch casing. The well was completed using 4-inch diameter PVC screen and riser.

LEGEND
- Concrete
- Cement Grout
- Bentonite Seal
- Silica Sandpack

Client:	**Consolidated Edison Company of New York, Inc.**	**Location:**	**Con Edison Cedar Street Works Site**
URS Corporation		**MONITORING WELL CONSTRUCTION DETAILS**	**Project No.:** **11176944**
			Well Number: **MW-02B**

DRILLING SUMMARY

Geologist:
M. Gutmann, A. Papaneocleous

Drilling Company:
Glacier Drilling LLC

Driller:
Terry Bell

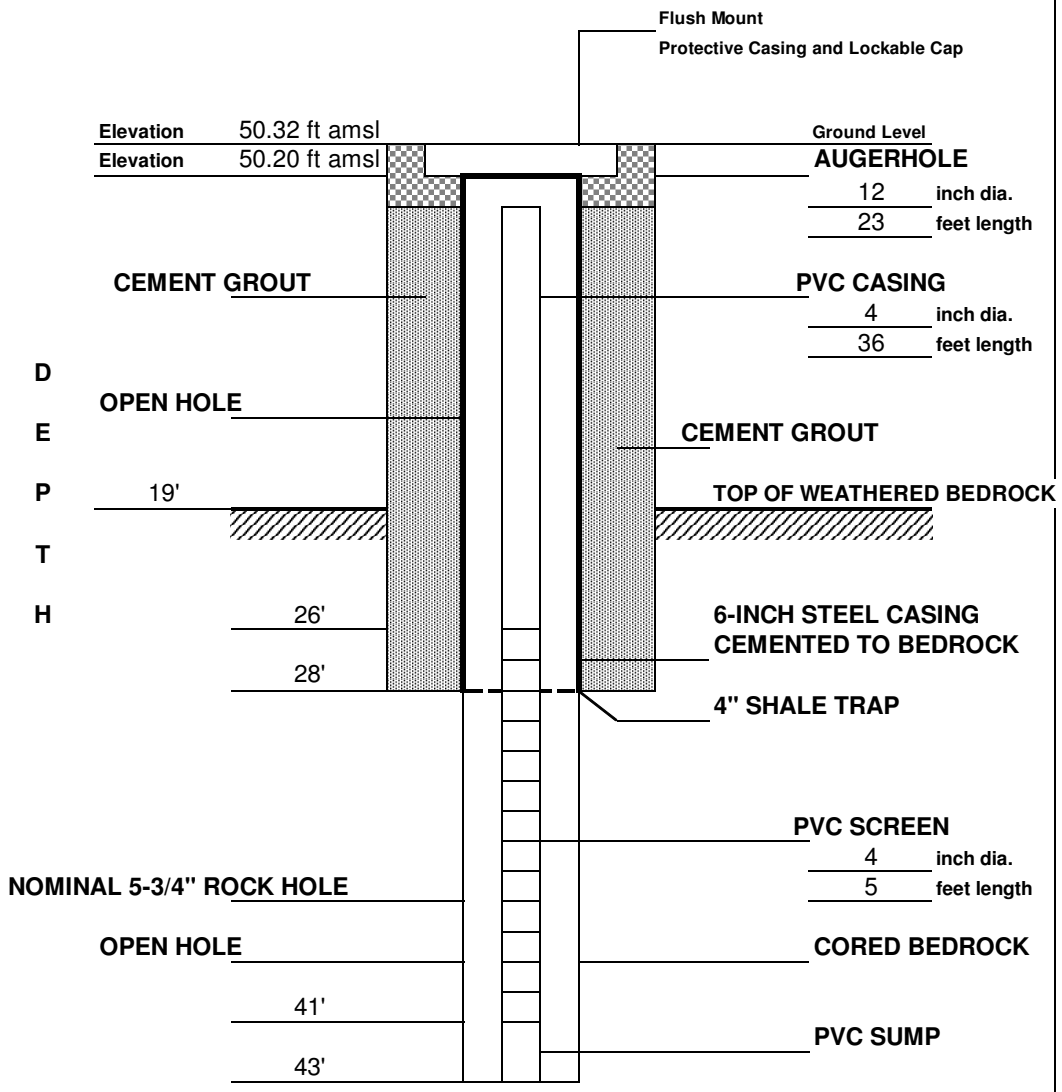
Rig Make/Model:
CME 85

Date:
3/26/2014

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.

WELL DESIGN



CASING MATERIAL	SCREEN MATERIAL	FILTER MATERIAL
Surface: Steel grade box	**Type:** 4" PVC	**Type:** None **Setting:** None
Monitor: 4" PVC	**Slot Size:** 0.020"	**SEAL MATERIAL**
		Type: None **Setting:** None
		Type: None **Setting:** None

COMMENTS:

The boring was advanced with 4-1/4-inch ID HSAs, 8-1/4-inch ID HSAs, 4-inch HQ casing to 23 ft, and Nx-cored to 28 ft. The borehole was then reamed with a 7-7/8-inch roller bit from 23 to 28 ft. Six-inch ID steel casing was then set into the rock socket and tremie grouted in place from 28 ft to the surface. Fifteen feet of HQ core were then drilled by a core barrel inserted into the 6-inch casing. The well was completed using 4-inch diameter PVC screen and riser.

LEGEND

- Concrete
- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client:	**Consolidated Edison Company of New York, Inc.**	**Location:**	**Con Edison Cedar Street Works Site**
URS Corporation		**MONITORING WELL CONSTRUCTION DETAILS**	

Project No.: **11176944**

Well Number: **MW-03B**

DRILLING SUMMARY

Geologist:
John Boyd

Drilling Company:
Associated Environmental

Driller:
John Veiss

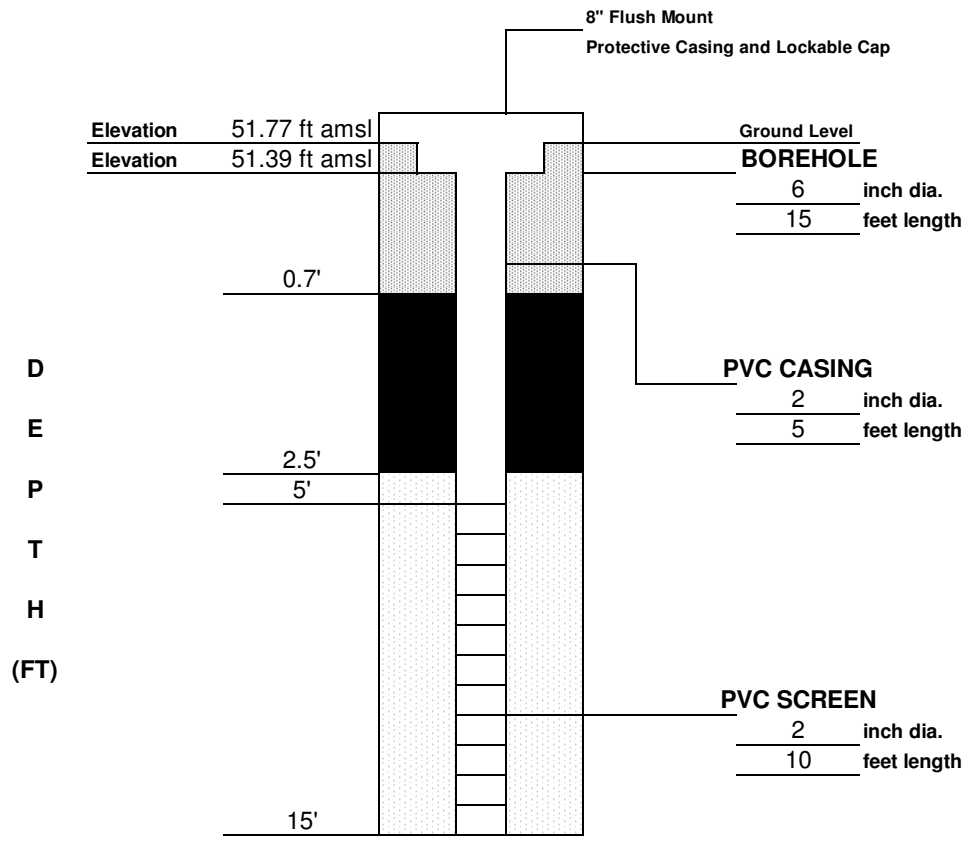
Rig Make/Model:
Geoprobe 7822 DT

Date:
10/31/2013

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.

WELL DESIGN



CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" SCH 40 PVC	**Type:** #2 Sand **Setting:** 2.5-15'
Monitor: 2" SCH 40 PVC	**Slot Size:** 0.020"	***SEAL MATERIAL***
		Type: Bentonite **Setting:** 0.7-2.5'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Consolidated Edison Company of New York, Inc.	**Location:** Con Edison Cedar Street Works Site	**Project No.:** 11176944
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-08A

DRILLING SUMMARY

Geologist:
A. Papaneocleous

Drilling Company:
Associated Environmental

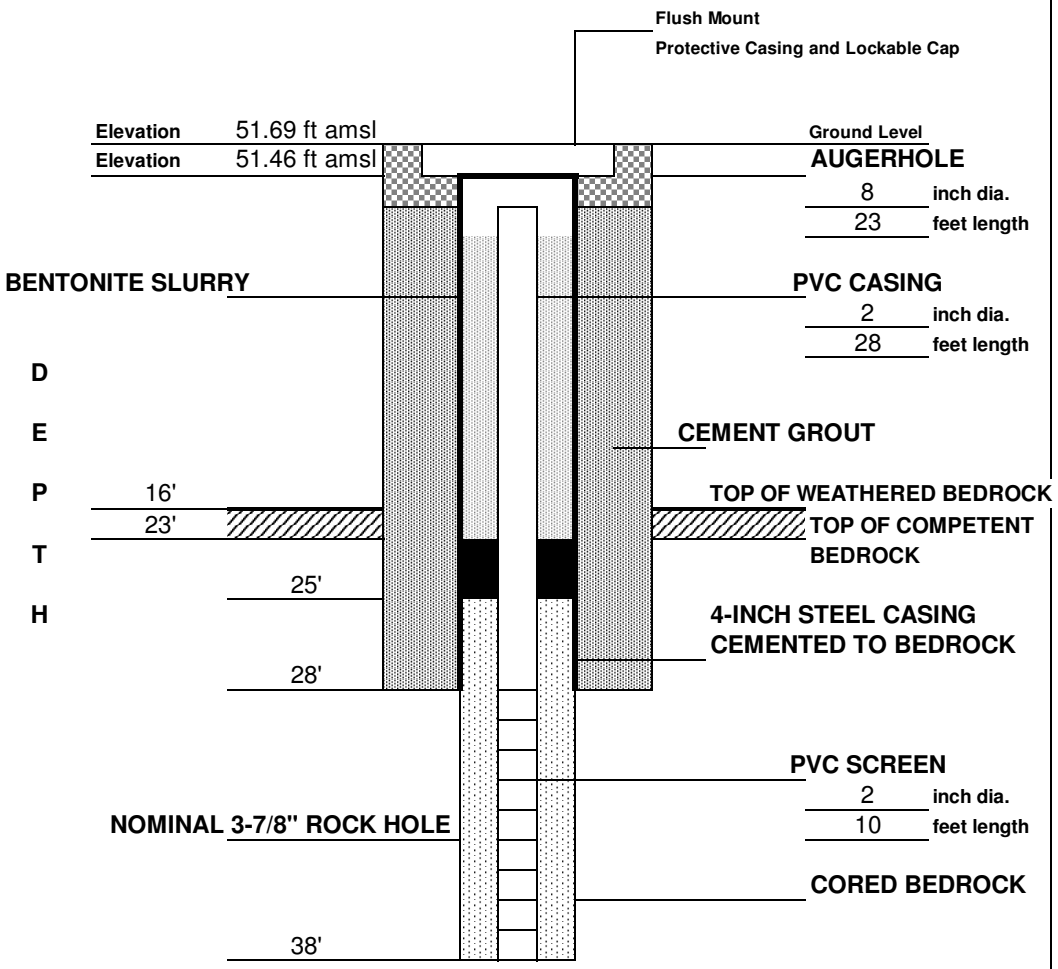
Driller:
Ryan Jensen

Rig Make/Model:
Dietrich D-3

Date:
11/26/2013

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** #2 Sand **Setting:** 25-38'
Monitor: 2" PVC	**Slot Size:** 0.020"	***SEAL MATERIAL***
		Type: Bentonite Pellets **Setting:** 23-25'
		Type: Bentonite Slurry **Setting:** 1-23'

COMMENTS:
The boring was advanced with 4-1/4-inch and 6-1/4"ID HSAs and 4-inch HQ casing to 23 ft. The borehole was then reamed with a 5-7/8-inch roller bit/air hammer from 23 to 28 ft. Four-inch ID steel casing was then set into the rock socket and tremie grouted in place from 28 ft to the surface. Ten feet of Nx core were then drilled by a core barrel inserted into the 4-inch casing. The well was completed using 2-inch diameter PVC screen and riser.

LEGEND
- Concrete
- Cement Grout
- Bentonite Seal
- Silica Sandpack

Client:	**Consolidated Edison Company of New York, Inc.**	**Location:**	**Con Edison Cedar Street Works Site**
URS Corporation		**MONITORING WELL CONSTRUCTION DETAILS**	

Project No.: **11176944**

Well Number: **MW-08B**

DRILLING SUMMARY

Geologist:
John Boyd

Drilling Company:
Associated Environmental

Driller:
John Veiss

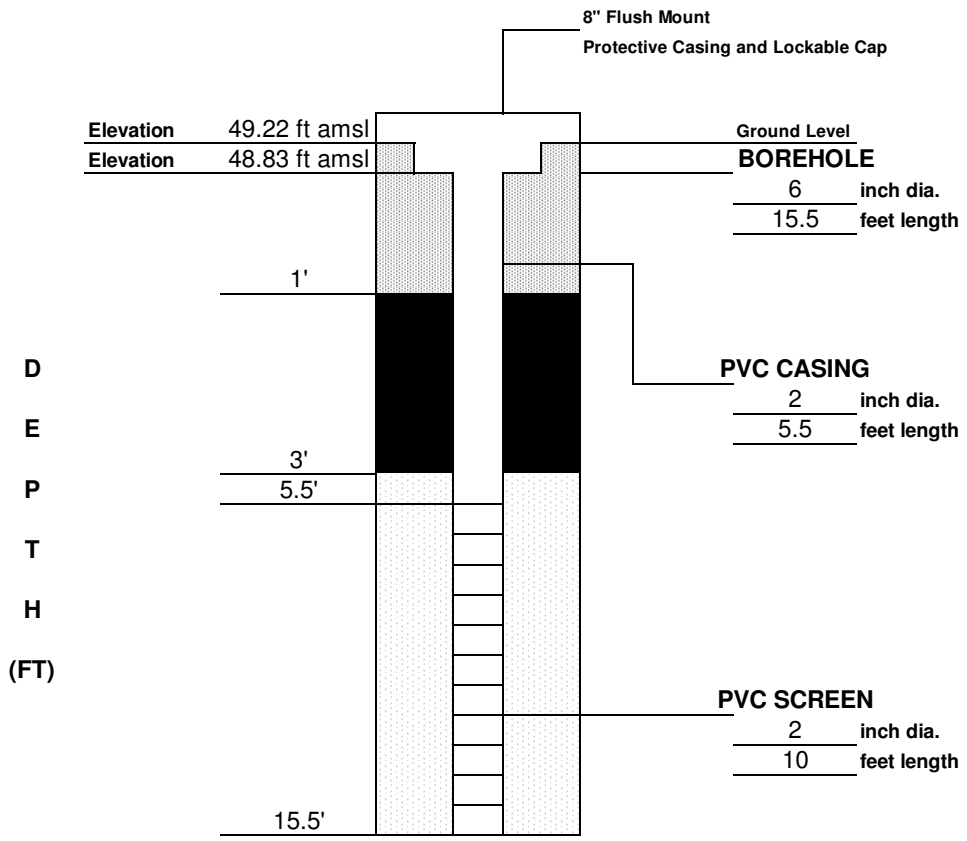
Rig Make/Model:
Geoprobe 7822 DT

Date:
10/30/2013

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.

WELL DESIGN



CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" SCH 40 PVC	**Type:** #2 Sand **Setting:** 3-15.5'
		SEAL MATERIAL
Monitor: 2" SCH 40 PVC	**Slot Size:** 0.020"	**Type:** Bentonite **Setting:** 1-3'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Consolidated Edison Company of New York, Inc.	**Location:** Con Edison Cedar Street Works Site	**Project No.:** 11176944
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-09

DRILLING SUMMARY

Geologist:
John Boyd

Drilling Company:
Associated Environmental

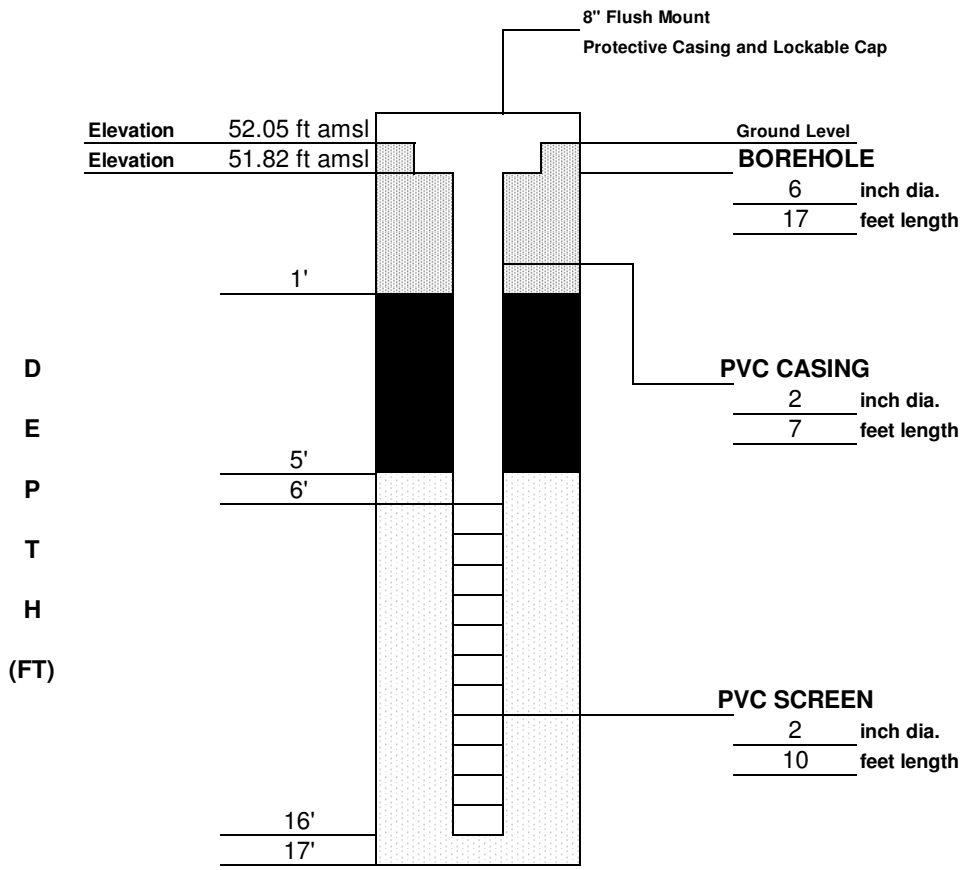
Driller:
John Veiss

Rig Make/Model:
Geoprobe 7822 DT

Date:
10/31/2013

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" SCH 40 PVC	**Type:** #2 Sand **Setting:** 5-17'
Monitor: 2" SCH 40 PVC	**Slot Size:** 0.020"	***SEAL MATERIAL***
		Type: Bentonite **Setting:** 1-5'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Consolidated Edison Company of New York, Inc.	**Location:** Con Edison Cedar Street Works Site	**Project No.:** 11176944
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-10

DRILLING SUMMARY

Geologist:
John Boyd

Drilling Company:
Associated Environmental

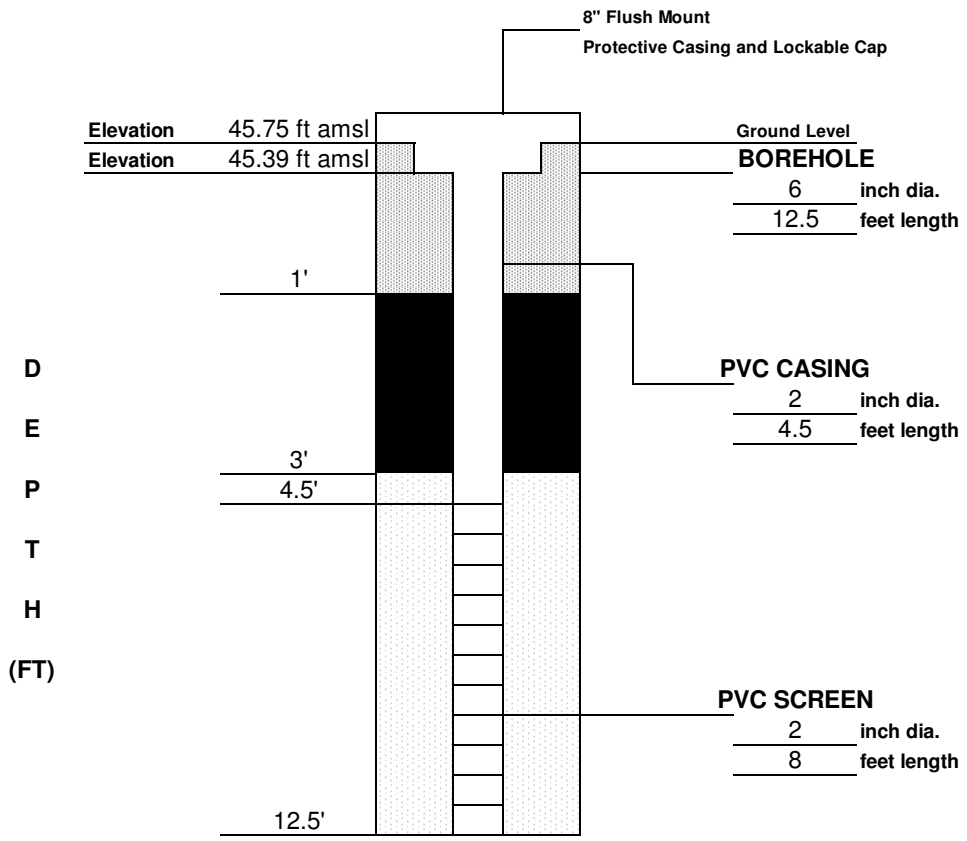
Driller:
John Veiss

Rig Make/Model:
Geoprobe 7822 DT

Date:
11/19/2013

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" SCH 40 PVC	**Type:** #2 Sand **Setting:** 3-12.5'
Monitor: 2" SCH 40 PVC	**Slot Size:** 0.020"	***SEAL MATERIAL***
		Type: Bentonite **Setting:** 1-3'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Consolidated Edison Company of New York, Inc.	**Location:** Con Edison Cedar Street Works Site	**Project No.:** 11176944
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-11A

DRILLING SUMMARY

Geologist:
M. Gutmann, A. Papaneocleous

Drilling Company:
Glacier Drilling LLC

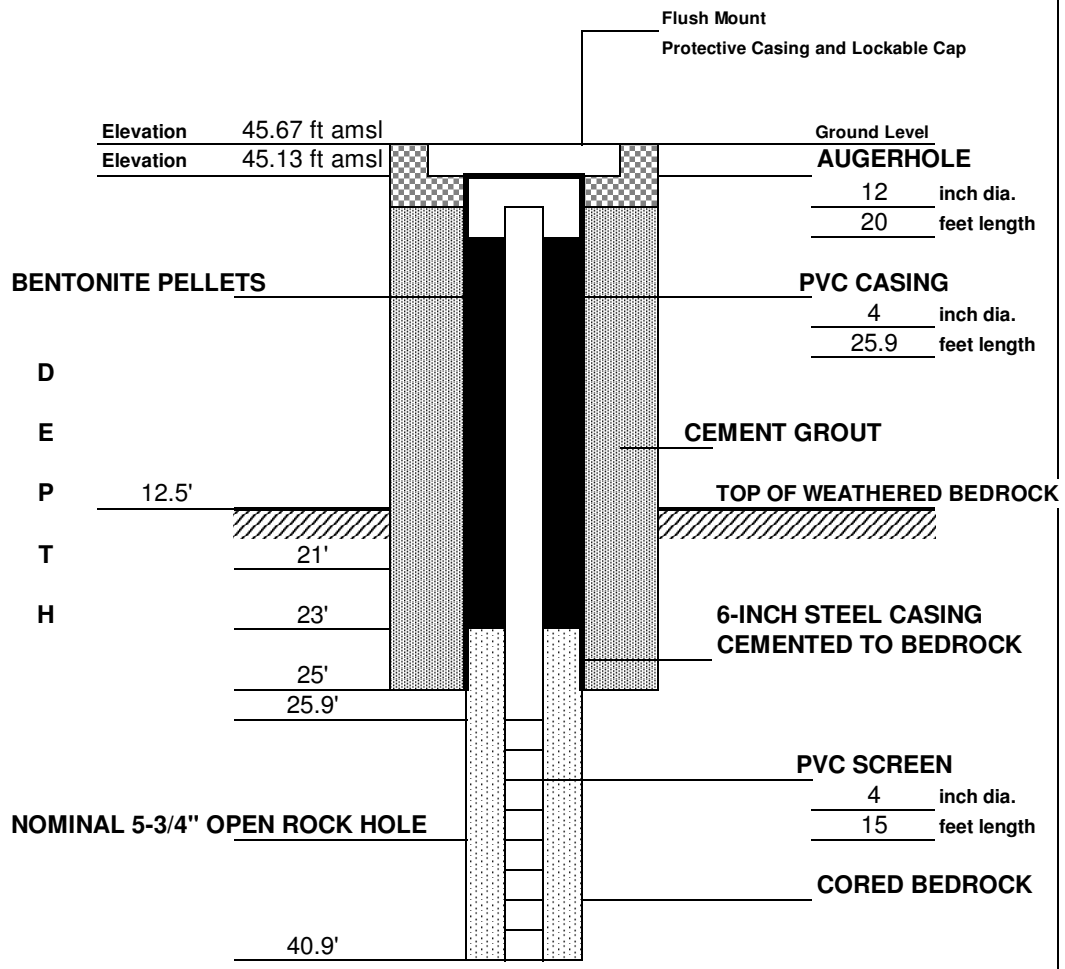
Driller:
Terry Bell

Rig Make/Model:
CME 85

Date:
3/25/2014

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 4" PVC	**Type:** #2 Sand **Setting:** 23-40.9'
Monitor: 4" PVC	**Slot Size:** 0.020"	***SEAL MATERIAL***
		Type: Bentonite Pellets **Setting:** 21-23'
		Type: Bentonite Pellets **Setting:** 10-21'

COMMENTS:
The boring was advanced with 4-1/4-inch ID HSAs, 8-1/4-inch ID HSAs, 4-inch HQ casing to 20 ft, and NX cored to 25 ft. The borehole was then reamed with a 7-7/8-inch roller bit from 20 to 25 ft. Six-inch ID steel casing was then set into the rock socket and tremie grouted in place from 25 ft to the surface. Approximately 16 feet of HQ core were then drilled by a core barrel inserted into the 6-inch casing. The well was completed using 4-inch diameter PVC screen and riser.

LEGEND
- Concrete
- Cement Grout
- Bentonite Seal
- Silica Sandpack

Client:	**Consolidated Edison Company of New York, Inc.**	**Location:**	**Con Edison Cedar Street Works Site**
URS Corporation		**MONITORING WELL CONSTRUCTION DETAILS**	**Project No.:** **11176944**
			Well Number: **MW-11B**

DRILLING SUMMARY

Geologist:
John Boyd

Drilling Company:
Associated Environmental

Driller:
John Veiss

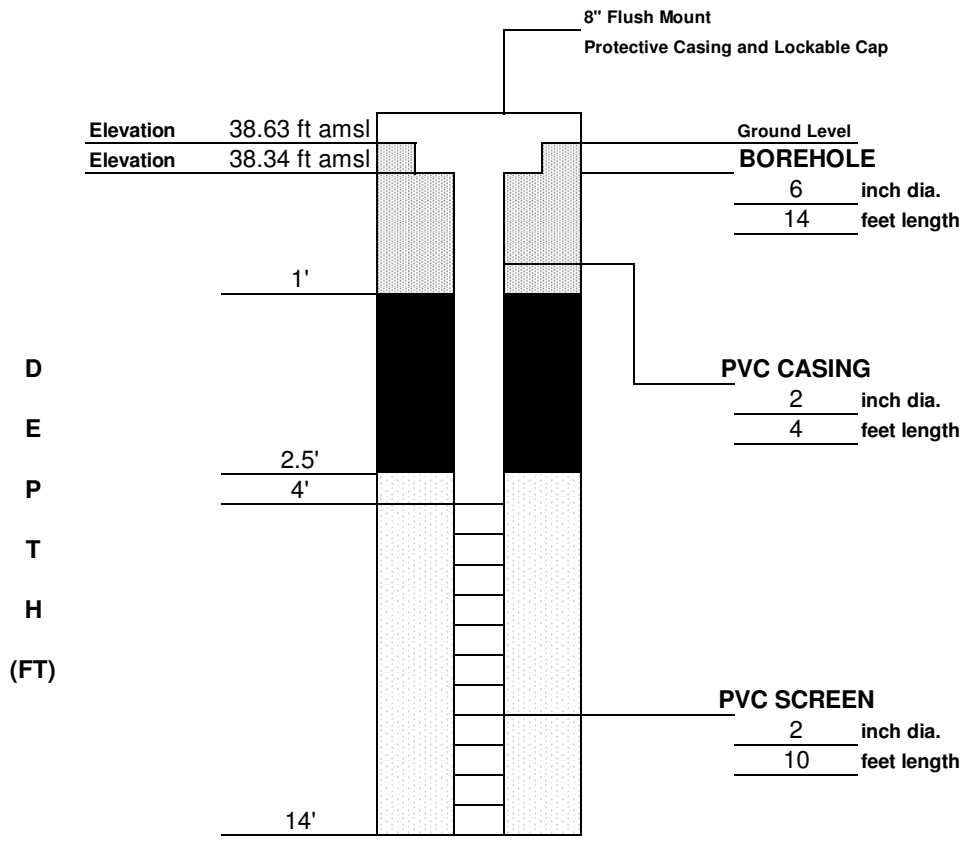
Rig Make/Model:
Geoprobe 7822 DT

Date:
1/24/2014

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.

WELL DESIGN



CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" SCH 40 PVC	**Type:** #2 Sand **Setting:** 3-12.5'
		SEAL MATERIAL
Monitor: 2" SCH 40 PVC	**Slot Size:** 0.020"	**Type:** Bentonite **Setting:** 1-3'

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Consolidated Edison Company of New York, Inc.	**Location:** Con Edison Cedar Street Works Site	**Project No.:** 11176944
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-12A

DRILLING SUMMARY

Geologist:
M. Gutmann

Drilling Company:
Glacier Drilling LLC

Driller:
Terry Bell

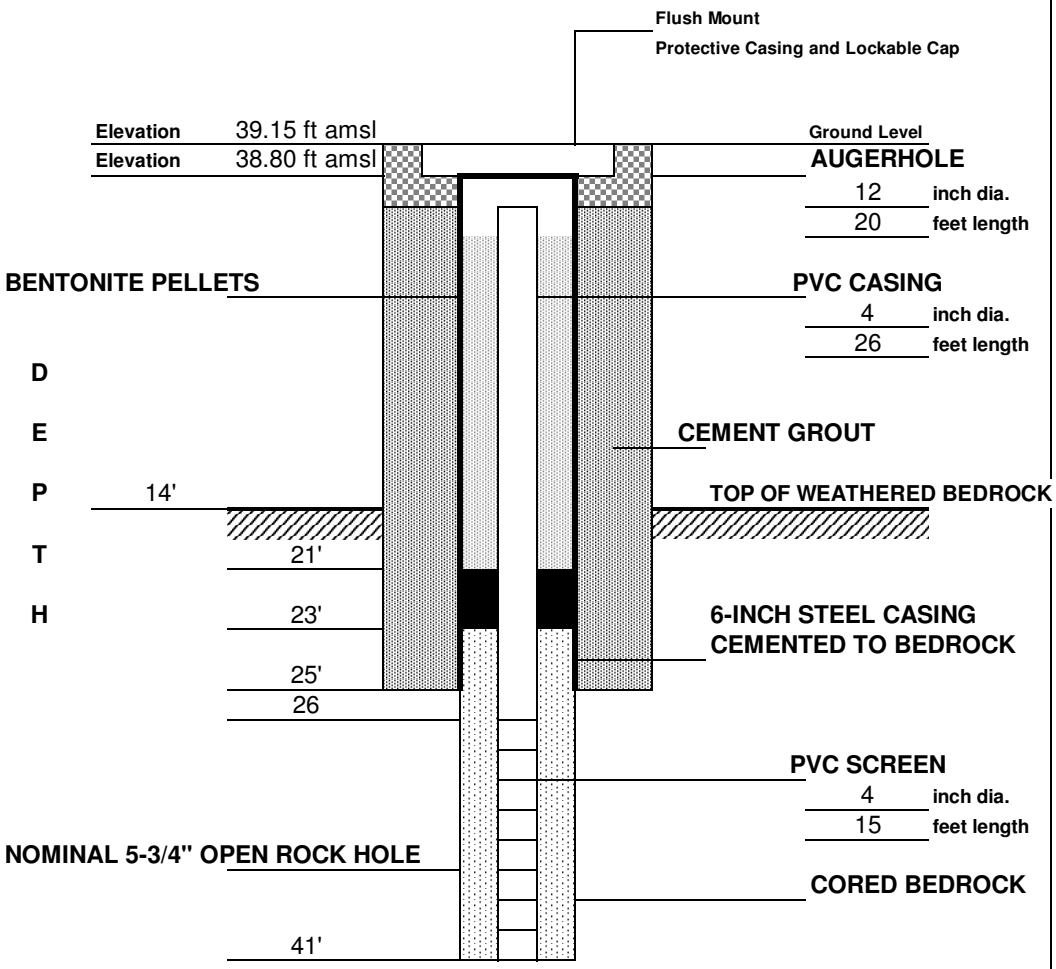
Rig Make/Model:
CME 85

Date:
3/26/2014

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log for Lithologic Description.

WELL DESIGN



CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 4" PVC	**Type:** #2 Sand **Setting:** 23-41'
Monitor: 4" PVC	**Slot Size:** 0.020"	***SEAL MATERIAL***
		Type: Bentonite Pellets **Setting:** 21-23'
		Type: Bentonite Pellets **Setting:** 10-21'

COMMENTS:
The boring was advanced with 4-1/4-inch ID HSAs, 8-1/4-inch ID HSAs, 4-inch HQ casing to 20 ft, and Nx cored to 25 ft. The borehole was then reamed with a 7-7/8-inch roller bit from 20 to 25 ft. Six-inch ID steel casing was then set into the rock socket and tremie grouted in place from 25 ft to the surface. Fifteen feet of HQ core were then drilled by a core barrel inserted into the 6-inch casing. The well was completed using 4-inch diameter PVC screen and riser.

LEGEND
- Concrete
- Cement Grout
- Bentonite Seal
- Silica Sandpack

Client:	**Consolidated Edison Company of New York, Inc.**	**Location:**	**Con Edison Cedar Street Works Site**
URS Corporation		**MONITORING WELL CONSTRUCTION DETAILS**	**Project No.:** **11176944**
			Well Number: **MW-12B**

APPENDIX H
RESPONSIBILITIES of OWNER and REMEDIAL PARTY

Responsibilities

The responsibilities for implementing the Site Management Plan ("SMP") for the Cedar Street Former Manufactured Gas Plant site (the "site"), number 360173, are divided between the site owner(s) and a Remedial Party, as defined below. The owner(s) are currently listed as: Donnybrook Realty Corporation and N.R. Automotive, Inc. d/b/a New Rochelle Toyota (the "owner").

Solely for the purposes of this document and based upon the facts related to a particular site and the remedial program being carried out, the term Remedial Party ("RP") refers to any of the following: certificate of completion holder, volunteer, applicant, responsible party, and, in the event the New York State Department of Environmental Conservation ("NYSDEC") is carrying out remediation or site management, the NYSDEC and/or an agent acting on its behalf. The RP is:

Consolidated Edison Company of New York, Inc.
31-01 20th Avenue
Long Island City, New York 11105-2048

Contact:
Matthew Levinson, PE; Project Manager

Nothing on this page shall supersede the provisions of an Environmental Easement, Consent Order, Consent Decree, agreement, or other legally binding document that affects rights and obligations relating to the site.

Site Owner's Responsibilities:

1) The owner shall follow the provisions of the SMP as they relate to future construction and excavation at the site.
2) The owner shall be responsible for any ongoing maintenance required for the Cover System described in Section 3.3.1 of this SMP.
3) In accordance with a periodic time frame determined by the NYSDEC, the owner shall periodically certify, in writing, that all Institutional Controls set forth in an Environmental Easement remain in place and continue to be complied with. The owner shall provide a written certification to the RP, upon the RP's request, in order to allow the RP to include the certification in the site's Periodic Review Report (PRR) certification to the NYSDEC.
4) In the event the site is delisted, the owner remains bound by the Environmental Easement and shall submit, upon request by the NYSDEC, a written certification that the -Environmental Easement is still in place and has been complied with.
5) The owner shall grant access to the site to the RP and the NYSDEC and its agents for the purposes of performing activities required under the SMP and assuring compliance with the SMP.
6) The owner is responsible for assuring the security of the remedial components located on its property to the best of its ability. If damage to the remedial components or vandalism is evident, the owner shall notify the site's RP and the NYSDEC in accordance with the timeframes indicated in Section 1.3-Notifications.
7) If some action or inaction by the owner adversely impacts the site, the owner must notify the site's RP and the NYSDEC in accordance with the time frame indicated in Section 1.3-Notifications and coordinate the performance of necessary corrective actions with the RP.
8) The owner must notify the RP and the NYSDEC of any change in ownership of the site property (identifying the tax map numbers in any correspondence) and provide contact information for the new owner of the site property. 6 NYCRR Part contains notification requirements applicable to any construction or

activity changes and changes in ownership. Among the notification requirements is the following: Sixty days prior written notification must be made to the NYSDEC. Notification is to be submitted to the NYSDEC Division of Environmental Remediation's Site Control Section. Notification requirements for a change in use are detailed in Section 1.3 of the SMP. A change of use includes, but is not limited to, any activity that may increase direct human or environmental exposure (e.g., day care, school or park). A 60-Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html.

9) In accordance with the tenant notification law, within 15 days of receipt, the owner must supply a copy of any vapor intrusion data, that is produced with respect to structures and that exceeds NYSDOH or OSHA guidelines on the site, whether produced by the NYSDEC, RP, or owner, to the tenants on the property. The owner must otherwise comply with the tenant and occupant notification provisions of Environmental Conservation Law Article 27, Title 24.

Remedial Party Responsibilities

1) The RP must follow the SMP provisions regarding any construction and/or excavation it undertakes at the site.
2) The RP shall report to the NYSDEC all activities required for remediation, operation, maintenance, monitoring, and reporting. Such reporting includes, but is not limited to, periodic review reports and certifications, electronic data deliverables, corrective action work plans and reports, and updated SMPs.
3) Before accessing the site property to undertake a specific activity, the RP shall provide the owner advance notification that shall include an explanation of the work expected to be completed. The RP shall provide to (i) the owner, upon the owner's request, (ii) the NYSDEC, and (iii) other entities, if required by the SMP, a copy of any data generated during the site visit and/or any final report produced.

4) If the NYSDEC determines that an update of the SMP is necessary, the RP shall update the SMP and obtain final approval from the NYSDEC. Within 5 business days after NYSDEC approval, the RP shall submit a copy of the approved SMP to the owner(s).
5) The RP shall notify the NYSDEC and the owner of any changes in RP ownership and/or control and of any changes in the party/entity responsible for the operation, maintenance, and monitoring of and reporting with respect to any remedial system (Engineering Controls). The RP shall provide contact information for the new party/entity. Such activity constitutes a Change of Use pursuant to 375-1.11(d) and requires 60-days prior notice to the NYSDEC. A 60-Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html .
6) The RP shall notify the NYSDEC of any damage to or modification of the systems as required under Section 1.3- Notifications of the SMP.
7) Prior to a change in use that impacts the remedial system or requirements and/or responsibilities for implementing the SMP, the RP shall submit to the NYSDEC for approval an amended SMP.
8) Any change in use, change in ownership, change in site classification (*e.g.*, delisting), reduction or expansion of remediation, and other significant changes related to the site may result in a change in responsibilities and, therefore, necessitate an update to the SMP and/or updated legal documents. The RP shall contact the NYSDEC project manager to discuss the need to update such documents.

Change in RP ownership and/or control and/or site ownership does not affect the RP's obligations with respect to the site unless a legally binding document executed by the NYSDEC releases the RP of its obligations.

Future site owners and RPs and their successors and assigns are required to carry out the activities set forth above.

APPENDIX I
SITE MANAGEMENT FORMS

DRAFT



LEGEND:

IC Boundaries

Site Cover Type

Buildings

Paved Areas

Lawn/Landscaped Areas

NOTE:
1. Aerial imagery: Esri (2023)

0 100

Feet

Publish Date: 2026/02/12, 11:55 AM | User: tweldy
Filepath: \\GSTFile01\GIS\Jobs\Con_Edison_0921\CedarStreetWorksSite\Maps\SiteManagementPlan\SiteManagementPlan.aprx | AQ_SMP_Fig3-1_ICBoundariesandSiteCover

ANCHOR QEA

Figure 1
IC Boundaries and Site Cover

Site Management Plan for Cedar St. MGP
NYSDEC Site No. 360173, New Rochelle, New York
Consolidated Edison Company of New York, Inc.

Inspector's Annual Report

Contract No.: _____

Report Date: _____

Report No.: _____

Anchor QEA Field Rep.: _____

Project Name/Location: _____

Report Submitted To		Weather Temp. And Precipitation		Time of Site Visit/Observation
Client:		AM:		
CC:		PM:		

Activity		
Construction Task	**Location of Work**	**Comment/Notes**

Notes on general site conditions at time of inspection.
Notes on site management activities conducted including (where appropriate) confirmation sampling and health and safety inspection.
Notes on Site records status.

Site-Wide Annual Inspection		
Institutional Control	**Compliance**	**Comment/Notes**

ANCHOR QEA

Inspector's Annual Report

Contract No.: _____
Report Date: _____
Report No.: _____

Anchor QEA Field Rep.: _____
Project Name/Location: _____

Property use is restricted residential use;	Y / N	
All engineering controls operated and maintained as specified in SMP;	Y / N	
Ground water beneath the site is not used as described in SMP;	Y / N	
Ground water and other environmental or public health monitoring performed as defined in SMP;	Y / N	
Data and information pertinent to site management was reported as defined in SMP;	Y / N	
Activities that disturbed remaining contaminated material were conducted in accordance with SMP;	Y / N	
Monitoring to assess performance and effectiveness of the remedy was performed as defined in SMP;	Y / N	
Operation, maintenance, monitoring, inspection and reporting of any mechanical or physical component of the remedy was performed as defined in SMP;	Y / N	
Potential for vapor intrusion must be evaluated for any new building(s) newly developed and any existing building(s) as defined in SMP;	Y / N	
Vegetable gardens and farming on the Site are prohibited as defined in SMP.	Y / N	
Engineering Control	**Compliance**	**Comment/Notes**
Cover	Y / N	
NAPL Recovery System	Y / N	
Notes on site cover		
Area(s) of disturbance to soil cover should be identified on attached Figure 1.		

Inspector's Annual Report

Contract No.: _____

Report Date: _____

Report No.: _____

Anchor QEA Field Rep.: _____

Project Name/Location: _____

Diary	
Time	
Time	
Time	
Time	
Time	
Time	
Time	
Time	
Time	
Time	
Time	
Time	
Time	
Time	
Time	
Time	
Other Observations	

Inspector's Annual Report

Contract No.: _____

Report Date: _____

Report No.: _____

Anchor QEA Field Rep.: _____

Project Name/Location: _____

Photographs	
Comment:	Comment:
Comment:	Comment:

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Request to Import/Reuse Fill or Soil

This form is based on the information required by DER-10, Section 5.4(e) and 6NYCRR Part 360.13. Use of this form is not a substitute for reading the applicable regulations and Technical Guidance document.

SECTION 1 – SITE BACKGROUND

Site Name:

Site Number:

The allowable site use is: Choose an item

Have Ecological Resources been identified? Choose an item

Is this soil originating from the site? Choose an item

How many cubic yards of soil will be imported/reused? Choose an item

If greater than 1000 cubic yards will be imported, enter volume to be imported:

SECTION 2 – MATERIAL OTHER THAN SOIL

Is the material to be imported gravel, rock or stone? Choose an item

Does it contain less than 10%, by weight, material that passes a size 100 sieve? Choose an item

Is this virgin material from a permitted mine or quarry? Choose an item

Is this material recycled concrete or brick from a DEC registered processing facility? Choose an item

SECTION 3 - SAMPLING

Provide a brief description of the number and type of samples collected in the space below:

Example Text: 5 discrete samples were collected and analyzed for VOCs. 2 composite samples were collected and analyzed for SVOCs, Inorganics & PCBs/Pesticides.

If the material meets requirements of DER-10 section 5.4(e)5 (other material), no chemical testing needed.

SECTION 3 CONT'D - SAMPLING

Provide a brief written summary of the sampling results or attach evaluation tables (compare to DER-10, Appendix 5):

Example Text: Arsenic was detected up to 17 ppm in 1 (of 5) samples; the allowable level is 16 ppm.

If Ecological Resources have been identified use the "If Ecological Resources are Present" column in Appendix 5.

SECTION 4 – SOURCE OF FILL

Name of person providing fill and relationship to the source:

Name and address of fill source:

Location where fill was obtained:

Identification of any state or local approvals as a fill source:

If no approvals are available, provide a brief history of the use of the property that is the fill source:

Provide a list of supporting documentation included with this request:

The information provided on this form is accurate and complete.

_____ _____

Signature Date

_____

Print Name

_____

Firm

APPENDIX J
QUALITY ASSURANCE PROJECT PLAN

March 2026

Appendix J – Quality Assurance Project Plan

Cedar St. former MGP New Rochelle – NYSDEC Site No. 360173
Index No. D2-0003-0208

Prepared for
Consolidated Edison of New York, Inc.
3101 20th Avenue, Building 136, 2nd Floor
Long Island City, New York 11105

Prepared by
Anchor QEA Engineering, PLLC
54 Genesee St, Suite 100A
Camillus, New York 13031

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ABBREVIATIONS

°C	degrees Celsius
%R	percent recovery
µg	microgram
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
CCV	continuing calibration verifications
COC	chain-of-custody
Con Edison	Consolidated Edison of New York
CRQL	Contract Required Quantitation Limits
EDD	Electronic Data Deliverable
ELAP	Environmental Laboratory Approval Program
FSP	Field Sampling Plan
GC	gas chromatography
HCl	hydrogen chloride
HDPE	high density polyethylene
HNO_3	nitric acid
ID	identification
kg	kilogram
L	liter
LCS	laboratory control sample
MD	matrix duplicate
mg/L	Milligrams per liter
MGP	manufactured gas plant
mL	milliliter
MS	matrix spike
MSD	matrix spike duplicate
N/A	not applicable
NaOH	sodium hydroxide
NAPL	nonaqueous phase liquid
ND	not determined
NFG	National Functional Guidelines
NIST	National Institute of Standards and Technology
NYCDEP	New York City Department of Environmental Protection
NYSDEC	New York State Department of Environmental Conservation
OU	operable unit
oz	ounce

PCB	polychlorinated biphenyl
ppbv	parts per billion by volume
PQL	Practical Quantitation Limits
QA	quality assurance
QAO	Quality Assurance Officer
QAPP	Quality Assurance Project Plan
QC	quality control
RPD	relative percent difference
Site	East 21st Street Works former MGP site located at Block 978, Lot 1, in Manhattan, New York
SMP	Site Management Plan
SMP Entity/Entities or Party/Parties	Con Edison, other municipal/utilities workers (e.g., New York City Department of Environmental Protection, Verizon), and New Rochelle Toyota Dealership employees
SOP	Standard Operating Procedures
SRM	Standard Reference Materials
SVOC	semivolatile organic compound
TCLP	toxicity characteristic leaching procedure
TIC	Tentatively Identified Compound
USEPA	United States Environmental Protection Agency
VOA	volatile organic analysis
VOC	volatile organic compound

1 Introduction

This appendix presents the Quality Assurance Project Plan (QAPP) for parties performing intrusive work and media (soil, groundwater, air, waste) sampling at Cedar St former MGP New Rochelle State Superfund Project located in New Rochelle, New York site located at Block 247, Lot 15, in New Rochelle, New York (hereinafter referred to as the Site) pursuant to the Site-specific Site Management Plan (SMP; Anchor QEA 2026). This QAPP describes the analytical methods and protocols to be implemented in connection with environmental media sample collection and analysis.

1.1 Scope of Work

The SMP provides information regarding the monitoring requirements for any intrusive activities that involve disturbing the soil located within the SMP area by Consolidated Edison of New York (Con Edison), other municipal/utilities workers, or New Rochelle Toyota Dealership employees or their contractors, collectively referred to as SMP Entities or Parties. Intrusive activities may include, but are not limited to, excavation, fence post installation, regrading of the property, or installation or maintenance of subsurface utilities or conduit at any depth below grade. In addition, the SMP provides requirements for indoor air monitoring and coal tar monitoring and recovery to be conducted by Con Edison and their representatives.

The scope of work regarding environmental media sampling activities is described in the SMP and sample collection activities are described in the O&M Plan provided as **Appendix G** to the SMP. Soil and groundwater samples may be collected during intrusive work if necessary. These samples may be analyzed following methods in United States Environmental Protection Agency (USEPA) SW-846 "Test Methods for Evaluating Solid Waste," November 1986, third edition (and subsequent updates; USEPA 1986) and Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (USEPA 1999).

2 Project Organization

The SMP Entity responsible for implementing this appendix will develop a project organization summary for inclusion with its project planning documents consistent with New York State Department of Environmental Conservation (NYSDEC) DER-10 and this QAPP.

3 Quality Assurance/Quality Control Objectives for Measurement of Data

3.1 Introduction

The quality assurance (QA) and quality control (QC) objectives for all measurement data include precision, accuracy, representativeness, completeness, and comparability. These objectives are defined in the following subsections and are formulated to meet the requirements of USEPA SW-846. The analytical methods and their Contract Required Quantitation Limits (CRQLs) are presented in Section 7.

3.2 Precision

Precision is an expression of the reproducibility of measurements of the same parameter under a given set of conditions. Specifically, it is a quantitative measurement of the variability of a group of measurements compared to their average value (USEPA 1987). Precision is usually stated in terms of standard deviation, but other estimates such as the coefficient of variation (relative standard deviation), range (maximum value minus minimum value), relative range, and relative percent difference (RPD), are common.

For this project, field sampling precision will be determined by analyzing blind duplicate samples (labeled so the laboratory does not recognize them as duplicates) for the same parameters at a rate of 5% of samples analyzed. Results will be evaluated in the data validation (Section 9).

Analytical precision will be determined by the laboratory by calculating the RPD value for the results of the analysis of laboratory duplicates and matrix spike duplicates (MSD). Because RPD values can become skewed the closer to the CRQL that results are, results less than five times the CRQL will be evaluated by the difference between them. The formula for calculating RPD is as follows:

Equation 1

$$\text{RPD} = \frac{|V1 - V2|}{(V1 + V2)/2} \times 100$$

where:

RPD	=	Relative percent difference
$V1, V2$	=	The two values to be compared
$\|V1 - V2\|$	=	The absolute value of the difference between the two values
$(V1 + V2)/2$	=	The average of the two values

The control limits for analytical precision, calculated as the RPD or difference values between duplicate analyses, will be specified by the laboratory.

3.3 Accuracy

Accuracy is a measure of the degree of agreement of a measured value with the true or expected value of the quantity of concern (Taylor 1987), or the difference between a measured value and the true or accepted reference value. The accuracy of an analytical procedure is best determined by the analysis of a sample containing a known quantity of material, and is expressed as the percent of the known quantity that is recovered or measured. The recovery of a given analyte is dependent on the sample matrix, method of analysis, and the specific compound or element measured. The concentration of the analyte relative to the detection limit of the analytical method is also a major factor in determining the accuracy of the measurement. Concentrations of analytes that are close to the detection limits are less accurate because they are more affected by such factors as instrument "noise". Higher concentrations will not be as affected by instrument noise or other variables and thus be more accurate.

Sampling accuracy may be determined through the assessment of the analytical results of field blanks and trip blanks for each sample set. Analytical accuracy is typically assessed by examining the percent recoveries of surrogate compounds that are added to each sample (organic analyses only) and the percent recoveries of analytes spiked in selected samples and laboratory blanks. Additionally, initial and continuing calibrations must be performed and accomplished within the established method control limits to define the instrument accuracy before analytical accuracy can be determined for any sample set.

Accuracy is normally measured as the percent recovery (%R) of a known amount of analyte added to a sample (matrix spike) or to a blank (blank spike or laboratory control sample). The %R is calculated as follows:

Equation 2

$$\%\mathrm{R} = \frac{SSR - SR}{SA} \times 100$$

where:

$\%R$	=	Percent recovery
SSR	=	Spike sample result: Concentration of analyte obtained by analyzing the sample with the spike added
SR	=	Sample result: The background value, i.e., the concentration of the analyte obtained by analyzing the sample
SA	=	Spiked analyte: Concentration of the analyte spike added to the sample

The control limits for accuracy for each parameter will be specified by the laboratory conducting the analyses. If the parent sample concentration is significantly greater than (greater than 5 times) the spike concentration, the spike %R cannot be accurately quantified and control limits do not apply in these instances.

3.4 Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness is a qualitative parameter that is most concerned with the proper design of the sampling program (USEPA 1987). Samples must be representative of the environmental media being sampled. Selection of sample locations and sampling procedures will incorporate consideration of obtaining the most representative sample possible.

Field and laboratory procedures will be performed in such a manner as to demonstrate, to the degree that is technically possible, that the data derived represents the in-place quality of the material sampled. Every effort will be made to prevent the introduction of chemical compounds into the sample via sample containers, handling, and analysis. Decontamination of sampling equipment will be performed between sample collection as detailed in the FSP. Laboratory sample containers will be precleaned and the laboratory will retain documentation certifying the cleanliness of jars and bottles and the purity of preservatives provided. Analysis of field blanks, trip blanks, and method blanks will also be performed to monitor for potential sample contamination from field and laboratory procedures.

The assessment of representativeness also must consider the degree of heterogeneity in the material from which the samples are collected. Sampling heterogeneity will be evaluated during data validation via the analysis of blind field duplicate samples. The analytical laboratory will also follow acceptable procedures to ensure the samples are adequately homogenized prior to taking aliquots for analyses, so the reported results are representative of the sample received.

Chain-of-custody (COC) procedures will be followed to document that contamination of samples has not occurred during sample collection, processing, handling, and shipping. Details of blank, duplicate, and COC procedures are presented in Sections 5 and 6.

3.5 Completeness

Completeness is defined as the percentage of measurements made that are judged to be valid (USEPA 1987). The QC objective for completeness is the generation of valid data for greater than or equal to 90% of the analyses requested. Completeness is defined as follows for all sample measurements:

Equation 3

$$\%\mathrm{C} = \frac{V}{T} \times 100$$

where:

$\%C$	=	Percent completeness
V	=	Number of acceptable data points
T	=	Total number of data points

3.6 Comparability

Comparability expresses the degree of confidence with which one data set can be compared to another (USEPA 1987). The comparability of all data collected for this project will be demonstrated by the following:

- Using identified standard methods for sampling and analysis phases of this project
- Requiring traceability of all analytical standards and/or source materials to the USEPA or National Institute of Standards and Technology (NIST)
- Requiring all calibrations be verified with an independently prepared standard from a source other than that used for calibration (if applicable)
- Using standard reporting units and reporting formats including the reporting of QC data
- Performing a complete data validation on all analytical results, including the use of data qualifiers

- Requiring all validation qualifiers be used any time an analytical result is used for any purpose

These steps will allow future users of either the data, or the conclusions drawn from them, to be able to judge the comparability of these data and conclusions.

4 Sampling Program

4.1 Introduction

The sampling program will provide data concerning the presence and the nature and extent of contamination of groundwater, provide water and soil waste characterization, and provide air monitoring results. This section presents sample container preparation procedures, sample preservation procedures, sample holding times, and field QC sample requirements. The field and laboratory QC samples and frequency of analyses are presented in Table 4-1. The sampling procedures are presented in the FSP.

4.2 Sample Container Preparation and Sample Preservation

Sample containers will be properly washed and decontaminated prior to their use by either the analytical laboratory or the container vendor to the specifications required by the USEPA. Copies of the sample container QC analyses will be provided by the laboratory for each container lot used to collect samples. The appropriate preservatives will be added by the container vendor, by the laboratory, or in the field. The required containers are listed in Tables 4-2.

Samples shall be preserved according to the preservation techniques listed in Tables 4-2. Following sample collection, the sample bottles shall be placed on ice in the shipping cooler, cooled to between 2°C and 6°C with ice (as required), and delivered to the laboratory as soon as possible. COC procedures are described in Section 5.

4.3 Sample Holding Times

The sample holding times for organic and inorganic parameters are listed in Tables 4-2 and must be in accordance with USEPA requirements. The USEPA holding times must be strictly adhered to by the laboratory. Holding time exceedances will be evaluated during data validation and reported to the SMP Entity.

Table 4-1
Field and Laboratory Quality Control Sample Analysis Summary

Analysis Type	Field Duplicate	Rinse Blanks	Trip Blanks	Initial Calibration[a]	Ongoing Calibration[b]	LCS	Laboratory Duplicates	Matrix Spikes	Matrix Spike Duplicates	Method Blanks	Surrogate Spikes
Cyanide	1 per 20 samples analyzed	1 per sampling event	N/A	Daily	Every 10 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	N/A	1 per 20 samples	N/A
Metals	1 per 20 samples analyzed	1 per sampling event	N/A	Daily	Every 10 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	N/A	1 per 20 samples	N/A
PAHs	1 per 20 samples analyzed	1 per sampling event	N/A	As needed	1 per 10 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	Every sample
VOCs	1 per 20 samples analyzed	1 per sampling event	1 per cooler	As needed	Every 12 hours	1 per 20 samples	N/A	1 per 20 samples	1 per 20 samples	1 per 20 samples	Every sample

Notes:
a. Initial calibration verification and calibration blank must be analyzed after initial calibration and before samples are analyzed.
b. Initial calibrations are considered valid until the ongoing continuing calibration no longer meets method specifications. At that point, a new initial calibration is performed.

Table 4-2
Aqueous Sample Containers, Preservation, and Holding Times

Analysis	Bottle Type[a]	Preservation[b]	Holding Time
VOCs	2 x 40 mL VOA vial	2°C to 6°C; HCl to pH< 2	14 days
PAHs	2 x 1L Amber glass	2°C to 6°C	7 days to extraction; 40 days to analysis
Metals	500 mL HDPE	2°C to 6°C; HNO_3 to pH < 2	180 days
Cyanide	500 mL HDPE	2°C to 6°C; NaOH to pH > 12	14 days

Notes:

a. Bottle type may vary depending on lab selection.
b. All samples to be preserved on ice during collection and transport.

5 Sample Tracking and Custody

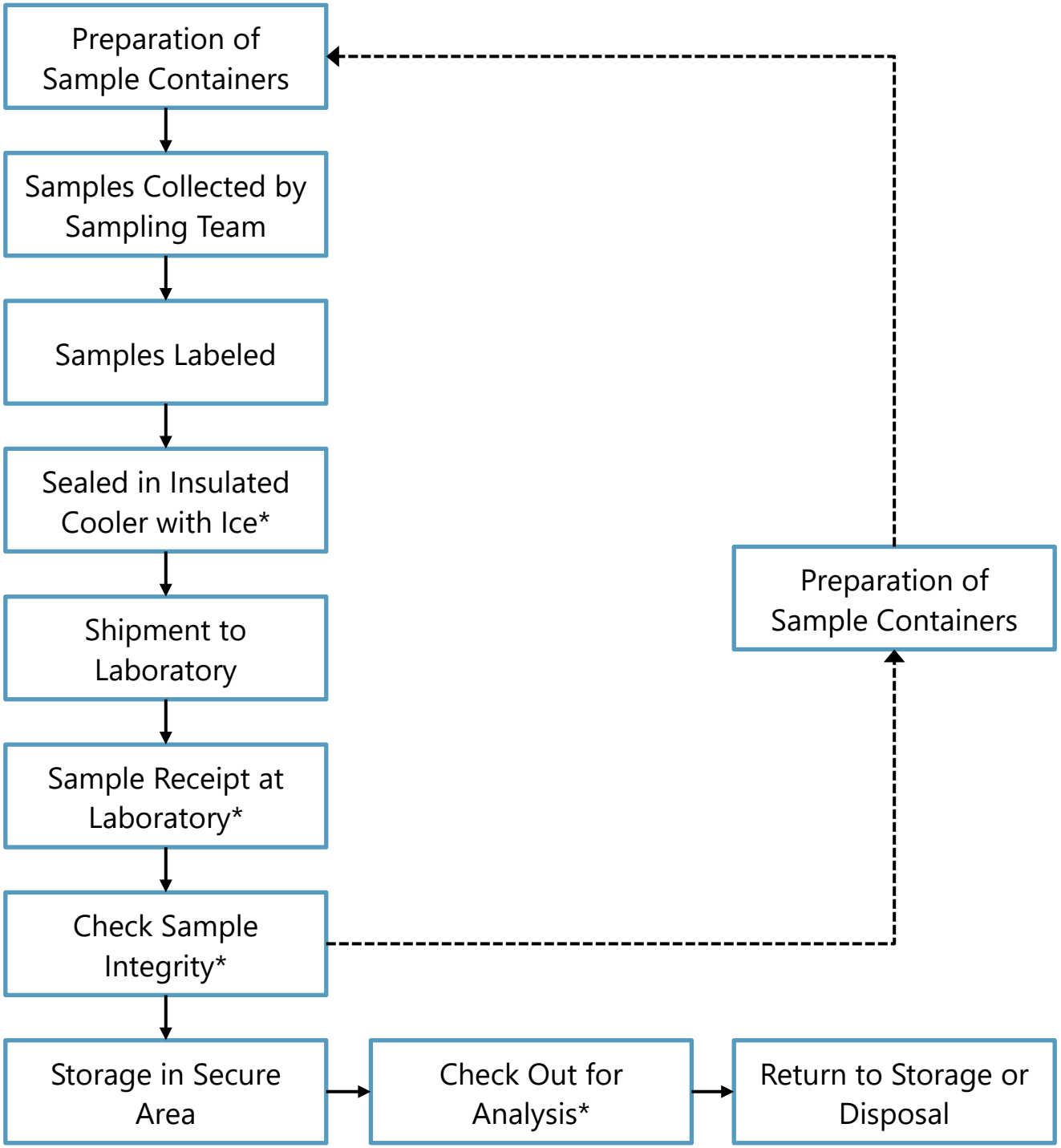
5.1 Introduction

This section presents sample custody procedures for the field and laboratory. Implementation of proper custody procedures for samples generated in the field is the responsibility of field personnel. Laboratory and field personnel involved in COC and transfer of samples will be trained as to the purpose and procedures prior to implementation.

COC procedures document sample traceability from the selection and preparation of the sample containers by the laboratory, sample collection, shipment, receipt, preparation, analysis, and through to disposal. The sample custody flowchart is shown in Figure 5-1. A sample is considered to be in a person's custody if the sample is:

- In a person's possession
- Maintained in view after possession is accepted and documented
- Locked and tagged with custody seals so no one can tamper with it after having been in physical custody
- In a secured area that is restricted to authorized personnel

Figure 5-1
Sample Custody



*Requires sign-off on COC Form

5.2 Field Sample Custody

A COC record accompanies the samples from collection to receipt at the laboratory. The COC lists the field personnel responsible for collecting samples, the project name and number, the name of the analytical laboratory to which the samples are sent, and the method of sample shipment. The COC also lists the sample identification (ID), number of bottles/jars for each sample and analyses requested. If samples are split and sent to different laboratories, a COC record will be sent with each sample.

The comments space on the COC is used to designate requested matrix duplicate (MD)/matrix spike (MS)/MSD analyses, or any other sample information for the laboratory. Once all bottles are properly accounted for on the form, the sample custodian will sign and write the date and time of transfer of samples to the laboratory or the shipper. The sample custodian will also write the method of shipment on the COC. If samples are hand delivered to the laboratory, the COC is signed and dated upon direct transfer. If the samples are shipped, the COC is signed upon sealing the cooler and custody seals are placed on the outside of each cooler for shipping and signed by the sample custodian. Mistakes will be crossed out with a single line in ink and initialed by the author.

One copy of the COC is retained by sampling personnel, and at least one copy is put into a sealable plastic bag and placed inside the shipping cooler. Custody seals must be broken to open the container. Breakage of the seals before receipt at the laboratory may indicate tampering. If tampering is apparent, the laboratory will contact the Project Manager, and the samples will not be analyzed until directed.

5.3 Laboratory Sample Custody

The Project Manager or Field Team Leader will notify the laboratory of upcoming field sampling activities and the subsequent shipment of samples to the laboratory. This notification will include information concerning the number and type of samples to be shipped as well as the anticipated date of arrival.

The following laboratory sample custody procedures will be used:

- The laboratory will designate a sample custodian who will be responsible for maintaining custody of the samples and for maintaining all associated records documenting that custody.
- Upon receipt of the samples, the custodian will sign the COC record and record the date and time received.
- The laboratory custodian will check cooler temperatures and check the original COC documents and compare them with the labeled contents of each sample container for correctness and traceability.

- Care will be exercised to annotate any labeling or descriptive errors. In the event of discrepancies in documentation, the laboratory will immediately contact the Project Manager or Field Team Leader as part of the corrective action process. A qualitative assessment of each sample container will be performed to note any anomalies, such as broken or leaking bottles. This assessment will be recorded as part of the incoming COC procedure.
- The samples will be stored in a secured area at a temperature of approximately 4°C until analyses commence.
- A laboratory tracking record will accompany the sample or sample fraction through final analysis for control.

A copy of the tracking record will accompany the laboratory report and will become a permanent part of the project records.

6 Calibration Procedures

6.1 Field Instruments

All field analytical equipment will be calibrated prior to each sampling event according to the manufacturer's recommendations, and a calibration check will be conducted at the beginning of each day. The frequency of calibration is dependent on the type and stability of the equipment, the methods used, the intended use of the equipment, and the recommendations of the manufacturer. Detailed information regarding the calibration and frequency of equipment calibration is provided in specific manufacturer's instruction manuals. This calibration will document that the equipment is functioning within the allowable tolerances established by the manufacturer and required by the project. Records of all instrument calibration will be maintained by the Field Team Leader. Copies of all the instrument manuals will be maintained on Site by the Field Team Leader.

Equipment that fails calibration or becomes inoperable during use will be removed from service and tagged (time and date of action) to prevent inadvertent use. Such equipment will be satisfactorily recalibrated or repaired and tagged (date and time of return to service) prior to use.

6.2 Laboratory Instruments

As part of its QC program, the chemistry laboratory will perform two types of calibrations. A periodic calibration is performed at prescribed intervals (i.e., balances, drying ovens, refrigerators, and thermometers), and operational calibrations are performed daily, at a specified frequency, or prior to analysis (i.e., initial calibrations) according to method requirements. Calibration procedures and frequency are discussed in the methods and the laboratory standard operating procedures (SOPs) for analyses.

The laboratory QA/QC manager will be responsible for ensuring the laboratory instrumentation is calibrated in accordance with specifications. Implementation of the calibration program shall be the responsibility of the respective laboratory Group Supervisors. Recognized procedures (USEPA, American Society for Testing and Materials, or manufacturer's instructions) shall be used when available.

Physical standards (i.e., weights or certified thermometers) shall be traceable to nationally recognized standards such as the NIST. Chemical reference standards shall be NIST Standard Reference Materials (SRMs) or vendor-certified materials traceable to these standards.

The calibration requirements for each method and respective corrective actions shall be accessible, either in the laboratory SOPs or the laboratory's QA Plan, for each instrument or analytical method in use. All calibration results shall be recorded on electronic media.

7 Analytical Procedures

Samples will be analyzed according to the USEPA SW-846 Test Methods for Evaluating Solid Waste, November 1986, third edition and subsequent updates (USEPA 1986) and Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air (USEPA 1999). Laboratories conducting analyses for this project will have current NYSDEC Environmental Laboratory Approval Program (ELAP) certification for all applicable method. The methods to be used for the laboratory analyses of water, soil, and air samples are presented in Tables 7-1 and 7-2. These methods were selected because they are promulgated USEPA methods that achieve the required quantitation limits listed in Tables 7-1 and 7-2.

Table 7-1
Project Required Quantitation Limits – Water Samples

	Analysis/Compound	Method	Practical Quantitation Limits
			Water (µg/L)
1	1,1,1-Trichloroethane	SW8260C	1
2	1,1,2,2-Tetrachloroethane	SW8260C	1
3	1,1,2-Trichloroethane	SW8260C	1
4	1,1-Dichloroethane	SW8260C	1
5	1,1-Dichloroethene	SW8260C	1
6	1,2-Dichloroethane	SW8260C	1
7	1,2-Dichloroethene(total)	SW8260C	1
8	1,2-Dichloropropane	SW8260C	1
9	2-Butanone (MEK)	SW8260C	10
10	2-Hexanone	SW8260C	10
11	4-Methyl-2-pentanone(MIBK)	SW8260C	5
12	Acetone	SW8260C	10
13	Benzene	SW8260C	1
14	Bromodichloromethane	SW8260C	1
15	Bromoform	SW8260C	1
16	Bromomethane	SW8260C	2
17	Carbon Disulfide	SW8260C	1
18	Carbon Tetrachloride	SW8260C	1
19	Chlorobenzene	SW8260C	1
20	Chloroethane	SW8260C	2
21	Chloroform	SW8260C	1

	Analysis/Compound	Method	Practical Quantitation Limits Water (µg/L)
22	Chloromethane	SW8260C	2
23	cis-1,3-Dichloropropene	SW8260C	1
24	Dibromochloromethane	SW8260C	1
25	Ethyl Benzene	SW8260C	1
26	Methylene Chloride	SW8260C	1
27	Styrene	SW8260C	1
28	Tetrachloroethene	SW8260C	1
29	Toluene	SW8260C	1
30	trans-1,3-Dichloropropene	SW8260C	1
31	Trichloroethene	SW8260C	1
32	Vinyl Chloride	SW8260C	2
33	Xylenes(total)	SW8260C	1
1	1,2,4-Trichlorobenzene	SW8270D	10
2	1,2-Dichlorobenzene	SW8270D	10
3	1,3-Dichlorobenzene	SW8270D	10
4	1,4-Dichlorobenzene	SW8270D	10
5	2,2'-oxybis(1-chloropropane)	SW8270D	10
6	2,4,5-Trichlorophenol	SW8270D	25
7	2,4,6-Trichlorophenol	SW8270D	10
8	2,4-Dichlorophenol	SW8270D	10
9	2,4-Dimethylphenol	SW8270D	10
10	2,4-Dinitrophenol	SW8270D	25
11	2,4-Dinitrotoluene	SW8270D	10
12	2,6-Dinitrotoluene	SW8270D	10
13	2-Chloronaphthalene	SW8270D	10
14	2-Chlorophenol	SW8270D	10
15	2-methyl-4,6-Dinitrophenol	SW8270D	25
16	2-Methylnaphthalene	SW8270D	10
17	2-Methylphenol	SW8270D	10
18	2-Nitrolaniline	SW8270D	25
19	2-Nitrophenol	SW8270D	10
20	3,3'-Dichlorobenzidine	SW8270D	10
21	3-Nitroaniline	SW8270D	25
22	4-Bromophenyl-phenyl ether	SW8270D	10

	Analysis/Compound	Method	Practical Quantitation Limits Water (µg/L)
23	4-Chloro-3-methylphenol	SW8270D	10
24	4-Chloroaniline	SW8270D	10
25	4-Chlorophenyl-phenyl ether	SW8270D	10
26	4-Methylphenol	SW8270D	10
27	4-Nitroaniline	SW8270D	25
28	4-Nitrophenol	SW8270D	25
29	Acenaphthene	SW8270D	10
30	Acenaphthylene	SW8270D	10
31	Anthracene	SW8270D	10
32	Benzo(a)anthracene	SW8270D	10
33	Benzo(a)pyrene	SW8270D	10
34	Benzo(b)fluoranthene	SW8270D	10
35	Benzo(g,h,i)perylene	SW8270D	10
36	Benzo(k)fluoranthene	SW8270D	10
37	bis(2-Chloroethoxy) methane	SW8270D	10
38	bis(2-Chloroethyl) ether	SW8270D	10
39	bis(2-ethylhexyl)phthalate	SW8270D	10
40	Butylbenzylphthalate	SW8270D	10
41	Carbazole	SW8270D	10
42	Chrysene	SW8270D	10
43	Di-n-butylphthalate	SW8270D	10
44	Di-n-octylphthalate	SW8270D	10
45	Dibenz(a,h)anthracene	SW8270D	10
46	Dibenzofuran	SW8270D	10
47	Diethylphthalate	SW8270D	10
48	Dimethylphthalate	SW8270D	10
49	Fluoranthene	SW8270D	10
50	Fluorene	SW8270D	10
51	Hexachlorobenzene	SW8270D	NA (8081A)
52	Hexachlorobutadiene	SW8270D	10
53	Hexachlorocyclopentadiene	SW8270D	10
54	Hexachloroethane	SW8270D	10
55	Indeno(1,2,3-cd)pyrene	SW8270D	10
56	Isophorone	SW8270D	10

	Analysis/Compound	Method	Practical Quantitation Limits Water (µg/L)
57	N-Nitroso-di-n-propylamine	SW8270D	10
58	N-nitrosodiphenylamine	SW8270D	10
59	Naphthalene	SW8270D	10
60	Nitrobenzene	SW8270D	10
61	Pentachlorophenol	SW8270D	25
62	Phenanthrene	SW8270D	10
63	Phenol	SW8270D	10
64	Pyrene	SW8270D	10
1	Aroclor-1016	SW8082A	1.0
2	Aroclor-1221	SW8082A	2.0
3	Aroclor-1232	SW8082A	1.0
4	Aroclor-1242	SW8082A	1.0
5	Aroclor-1248	SW8082A	1.0
6	Aroclor-1254	SW8082A	1.0
7	Aroclor-1260	SW8082A	1.0
1	Antimony	SW6010C	0.006
2	Arsenic	SW6010C	0.01
3	Barium	SW6010C	0.01
4	Beryllium	SW6010C	0.005
5	Cadmium	SW6010C	0.005
6	Chromium	SW6010C	0.01
7	Copper	SW6010C	0.03
8	Lead	SW6010C	0.01
9	Mercury	SW7470A/7471A	0.0002
10	Nickel	SW6010C	0.04
11	Selenium	SW6010C	0.01
12	Silver	SW6010C	0.01
13	Thallium	SW6010C	0.002
14	Zinc	SW6010C	0.02
*15	Vanadium	SW6010C	0.05
*16	Cobalt	SW6010C	0.05
*17	Aluminum	SW6010C	0.2
*18	Calcium	SW6010C	5
*19	Iron	SW6010C	0.1

	Analysis/Compound	Method	Practical Quantitation Limits
			Water (µg/L)
*20	Magnesium	SW6010C	5
*21	Manganese	SW6010C	0.015
*22	Potassium	SW6010C	5
*23	Sodium	SW6010C	5
1	Cyanide	SW9010C	0.01

Notes:

a. Practical quantitation limits may vary based on laboratory selection, sample aliquot size, moisture content, and/or matrix interference.

N/A: not applicable

Table 7-2
Practical Quantitation Limits (PQLs) – TCLP Samples

TCLP Volatile	Method	PQL (µg/L)
Benzene	SW1311/SW8260C	5
Carbon Tetrachloride	SW1311/SW8260C	5
Chloroform	SW1311/SW8260C	5
1,2-Dichlorethane	SW1311/SW8260C	5
1,1-Dichloroethene	SW1311/SW8260C	5
2-Butanone	SW1311/SW8260C	100
Tetrachloroethene	SW1311/SW8260C	5
Trichloroethene	SW1311/SW8260C	5
Vinyl Chloride	SW1311/SW8260C	100

TCLP Semivolatile	Method	PQL (µg/L)
2-Methylphenol	SW1311/SW8270D	10
3 & 4-Methylphenol	SW1311/SW8270D	10
1,4-Dichlorobenzene	SW1311/SW8270D	10
2,4-Dinitrotoluene	SW1311/SW8270D	10
Hexachlorobutadiene	SW1311/SW8270D	10
Hexachloroethane	SW1311/SW8270D	10
Hexachlorobenzene	SW1311/SW8270D	10
Nitrobenzene	SW1311/SW8270D	10
Pentachlorophenol	SW1311/SW8270D	50
Pyridine	SW1311/SW8270D	ND
2,4,5-Trichlorophenol	SW1311/SW8270D	10
2,4,6-Trichlorophenol	SW1311/SW8270D	10

TCLP Metals	Method	PQL (mg/L)
Arsenic	SW1311/SW6010C	0.05
Barium	SW1311/SW6010C	0.002
Cadmium	SW1311/SW6010C	0.004
Chromium	SW1311/SW6010C	0.007
Lead	SW1311/SW6010C	0.04
Selenium	SW1311/SW6010C	0.07
Silver	SW1311/SW6010C	0.007
Mercury	SW1311/7470A	0.0002

8 Quality Assurance/Quality Control

8.1 Field Quality Assurance/Quality Control

Field personnel will identify and label samples in a consistent manner to provide traceability of collected field samples. Labels should be used in conjunction with the COC, the FSP, and this QAPP to provide all information necessary for the laboratory to conduct required analyses properly. QA samples will be collected in the field to demonstrate project DQOs are met. Samples will be placed in appropriate containers and preserved for shipment to the laboratory in accordance with the requirements presented in Table 4-2.

8.1.1 Field Quality Assurance Sampling

Field QA procedures will consist of following procedures for acceptable practices for sample collection and handling. This also includes periodic and routine equipment inspection.

Field QA samples will be collected along with the environmental samples. Field QA samples are useful in identifying possible problems resulting from sample collection or sample processing in the field. The collection of field QA samples includes the collection of the following:

- Field duplicates – One field duplicate will be collected per event or per 20 samples per matrix. Field duplicates are prepared by collecting additional homogenized sample volume or mass and collecting it as a separate sample. The field duplicate will be a labeled as a blind duplicate, so that the laboratory will not be able to readily identify the parent sample.
- Rinse blanks – Rinse blanks will be collected at a rate of one per sampling event per matrix (as required) to verify decontamination procedures are adequate. If there are significant detections in the rinse blank that are determined to impact sample results, decontamination procedures will be modified and additional rinse blanks collected until decontamination procedures are determined adequate.
- Trip blanks – Trip blanks will be prepared by the laboratory and sent with the sample containers for water and soil analyses. Trip blanks are 40-mL VOA vial containing VOC-free water and they accompany sample bottles into the field and collected samples back to the laboratory. Trip blanks will be included in each cooler containing sample aliquots for VOC analyses and will be analyzed for the same set of VOC analytes as the samples. Trip blanks assess any contamination introduced during sample collection, storage, and transport.
- Matrix QC – Field QA samples will also include the collection of additional sample mass or volume as required to provide the laboratory with sufficient sample volume to run the matrix-specific analytical QA/QC (MD/MS/MSD) samples for analyses. Additional sample mass to meet this requirement will be collected at a frequency of one per matrix per sampling event or 1 in 20 samples collected, whichever is more frequent. The samples designated for

MD/MS/MSD analyses will be clearly marked on the COC form. No matrix QC samples will be analyzed in association with air analyses.

Field QA samples will be documented on the field forms and verified by the QA/QC Manager or designee.

8.2 Laboratory Quality Assurance/Quality Control

Laboratory QC procedures, where applicable, include initial and continuing instrument calibrations, SRMs, laboratory control samples, matrix replicates, MSs, surrogate spikes (for organic analyses), and method blanks.

The analyst will review the results of the QC samples from each sample batch immediately after a batch has been analyzed. The QC sample results will then be evaluated to determine if control limits have been exceeded. If control limits are exceeded in the sample group, the QA/QC Manager will be contacted, and corrective action (e.g., method modifications followed by reprocessing the affected samples) will be initiated prior to processing a subsequent group of samples.

8.2.1 Laboratory Instrument Calibration and Frequency

An initial calibration will be performed on each laboratory instrument to be used prior to the start of the project, after each major interruption to the analytical instrument, and when any ongoing calibration does not meet method control criteria. An initial calibration verification will be analyzed following each initial calibration and will meet method criteria prior to analyses of samples. Continuing calibration verifications (CCV) will be analyzed at method-required frequencies to track instrument performance. The frequency of CCVs varies with method. For gas chromatography (GC)/mass spectrometer methods, one will be analyzed every 12 or 24 hours, depending on method requirements. For GC, metals, and inorganic methods, one will be analyzed for every 10 field samples analyzed and at the end of each run. If the continuing calibration is out of control, the analysis will be terminated until the source of the control failure is eliminated or reduced to meet control specifications, which may include analyzing a new initial calibration. Any project samples analyzed while the instrument calibration was out of control will be reanalyzed.

Instrument blanks or continuing calibration blanks provide information on the stability of the baseline established. Continuing calibration blanks will be analyzed immediately prior to or immediately following the CCV analysis for each applicable method.

8.2.2 Laboratory Duplicates/Replicates

Analytical duplicates provide information on the precision of the analysis and are useful in assessing potential sample heterogeneity and matrix effects. Analytical duplicates and replicates are subsamples of the original sample that are prepared and analyzed as a separate sample.

8.2.3 Matrix Spikes and Matrix Spike Duplicates

Analyses of MS samples provide information on the extraction efficiency of the method on the sample matrix, as well as any interferences introduced by the sample matrix. By analyzing MS samples in duplicate, information on the precision of the method is also provided.

8.2.4 Method Blanks

Method blanks are prepared and analyzed in the same manner as project samples to assess possible laboratory contamination at all stages of sample preparation and analysis. The method blank for all analyses must be less than the method reporting limit of any single target analyte. If a laboratory method blank exceeds this criterion for any analyte and the concentration of the analyte in any of the samples is less than five times the concentration found in the blank (10 times for common contaminants), analyses must stop and the source of contamination must be eliminated or reduced. Affected samples should be reprepared and reanalyzed, if possible.

8.2.5 Laboratory Control Samples

Laboratory control samples are analyzed to assess possible laboratory bias at all stages of sample preparation and analysis. The laboratory control sample is a matrix-dependent spiked sample prepared at the time of sample extraction along with the preparation of the sample, MD, MS, and method blank. The laboratory control sample will provide information on the accuracy of the analytical process and, when analyzed in duplicate, will provide precision information as well.

8.2.6 Data Reduction and Reporting

Data collected during the field investigation will be reduced, reviewed, and validated. A validation report will be prepared following USEPA's National Functional Guidelines (NFG; USEPA 2017a, 2017b) and qualifiers applied will be tabulated. The criteria used to identify and quantify the analytes will be those specified for the applicable analytical methods.

9 Data Reduction, Validation, and Reporting

Data collected during the field investigation will be reduced, reviewed, and validated. A validation report will be prepared following USEPA's NFGs (USEPA 2017a, 2017b) and qualifiers applied will be tabulated. The criteria used to identify and quantify the analytes will be those specified for the applicable methods

The completed copies of external and internal COC records accompanying each sample from time of initial bottle preparation to completion of analysis shall be attached to the analytical reports.

9.1 Data Reduction

Laboratory analytical reports will be provided in electronic format, including the PDF of the report and the Electronic Data Deliverable (EDD) in the format requested by the SMP Entity or its qualified environmental professional. Tables will be generated from data entered into the database. These tables will assist in the assessment of the Site contamination condition.

The data package provided by the laboratory will contain the following, where applicable:

- **Project Narrative.** This summary, in the form of a cover letter, will discuss problems, if any, encountered during any aspect of analysis. This summary should discuss, but is not limited to, QC, sample shipment, sample storage, and analytical difficulties. Any problems encountered—actual or perceived—and their resolutions will be documented in as much detail as appropriate.
- **COC Records.** Legible copies of the COC forms will be provided as part of the data package. This documentation will include the time of receipt and condition of each sample received by the laboratory. Additional internal tracking of sample receipt by the laboratory will also be documented on a sample receipt form. The form must include all sample shipping container temperatures measured at the time of sample receipt and any non-conformances encountered during login.
- **Sample Results.** The data package will summarize the results for each sample analyzed. The summary will include the following information when applicable:
  - Field sample ID code and the corresponding laboratory ID code
  - Sample matrix
  - Date of sample preparation
  - Date and time of analysis
  - Weight and/or volume used for preparation/analysis
  - Final dilution or concentration factor for the analysis
  - ID of the instrument used for analysis
  - Method detection limits and method reporting limits accounting for sample-specific factors (e.g., dilution, total solids)

  - Analytical results with reporting units identified
  - Data qualifiers and their definitions
- **QA/QC Summaries.** This section will contain the results of the laboratory QA/QC analyses. Each QA/QC sample analysis will be documented with the same information required for the sample results (see previous bullet point). No recovery or blank corrections will be made by the laboratory. The required summaries are listed below and additional information may be requested:
  - **Internal Standard Area Summary.** Internal standard areas will be reported and compared to method criteria.
  - **Method Blank Results.** Method blank results associated with each sample and analysis and the concentration of all target analytes will be included.
  - **Surrogate Spike Recovery.** Surrogate spike recovery data associate with organic analyses will be reported. The name and concentration of all compounds added, percent recoveries, and control limits will be included.
  - **Matrix Spike Recovery.** Name and concentration of all matrix spike compounds added, percent recoveries, and control limits will be included, as well as recoveries and RPD for all MSD analyses.
  - **Matrix Duplicate.** Parent and duplicate results and calculated RPD values for all matrix duplicate analyses will be included.
  - **Laboratory Control Sample.** The name and concentration of all analytes added, percent recoveries, and control limits will be included, as well as recoveries and RPD values for all laboratory control sample duplicate analyses.
  - **Relative Retention Time.** A report of the relative retention time of each analyte detected in the sample for primary and confirmation analyses for applicable methods will be included.

10 Quality Assurance Performance Audits and System Audits

QA audits may be performed by the project QA group under the direction and approval of the project Quality Assurance Officer (QAO). These audits will be implemented to evaluate the capability and performance of project and subcontractor personnel, items, activities, and documentation of the measurement system(s). Functioning as an independent body and reporting directly to corporate QA management, the QAO may plan, schedule, and approve system and performance audits based on procedures customized to the project requirements. At times, the QAO may request additional personnel with specific expertise from the managing company, client groups, or subcontractors to assist in conducting performance audits. However, these personnel will not have responsibility for the project work associated with the performance audit.

10.1 System Audits

System audits may be performed by the QAO or designated auditors, and encompass a qualitative evaluation of measurement system components to ascertain their appropriate selection and application. In addition, field and laboratory QC procedures and associated documentation may be system audited. These audits may be performed once during the performance of the project. However, additional audits may occur if conditions adverse to quality arise or if the Project Manager requests them.

10.2 Performance Audits

The laboratory may be required to provide results of the performance evaluation samples submitted by USEPA or NYSDOH that have been analyzed within the past 12 months.

10.3 Formal Audits

Formal audits refer to any system or performance audit that is documented and implemented by the QA group. These audits encompass documented activities performed by qualified lead auditors to a written procedure or checklists to objectively verify that QA requirements have been developed, documented, and instituted in accordance with contractual and project criteria. Formal audits are not planned for this project but may be performed on project and subcontractor work if the QAO determines them necessary.

Audit reports will be written by auditors who have performed the Site audit after gathering and evaluating all data. Equipment, activities, and documents determined by lead auditors to be in noncompliance shall be identified at exit interviews conducted with the involved management. Noncompliances will be logged, and documented through audit findings that are attached to and are a part of the integral audit report. These audit finding forms are directed to management to satisfactorily resolve the noncompliance in a specified and timely manner.

The Project Manager has overall responsibility to confirm all corrective actions necessary to resolve audit findings are acted upon promptly and satisfactorily. Audit reports must be submitted to the Project Manager within 30 days of completion of the audit. Serious deficiencies will be reported to the Project Manager within 24 hours. All audit checklists, audit reports, audit findings, and acceptable resolutions are approved by the QAO prior to issue. Verification of acceptable resolutions may be determined by re-audit or documented surveillance of the item or activity. Upon verification acceptance, the QAO will close out the audit report and findings.

11 Preventive Maintenance Procedures and Schedules

11.1 Preventive Maintenance Procedures

Equipment, instruments, tools, gauges, and other items requiring preventive maintenance will be serviced in accordance with the manufacturer's specified recommendations and written procedures developed by the operators.

A list of critical spare parts will be established by the operator. These spare parts will be available for use in order to reduce downtime. A service contract for rapid instrument repair or backup instruments may be substituted for the spare part inventory.

11.2 Schedules

Written procedures will establish the schedule for servicing critical items in order to minimize the downtime of the measurement system. The laboratory will adhere to the maintenance schedule and arrange any necessary and prompt service. Required service will be performed by qualified personnel.

11.3 Records

Logs shall be established to record and control maintenance and service procedures and schedules. All maintenance records will be documented and traceable to the specific equipment, instruments, tools, and gauges. Records produced shall be reviewed, maintained, and filed by the operators at the laboratories. The QAO may audit these records to verify complete adherence to these procedures.

12 Corrective Action

12.1 Introduction

The following procedures have been established to identify potential scenarios and quality-adverse conditions, such as malfunctions, deficiencies, deviations, and errors, are promptly investigated, documented, evaluated, and corrected.

12.2 Procedure Description

When a significant condition adverse to quality is noted at the project Site, laboratory, or subcontractor location, the cause of the condition will be determined and corrective action will be taken to preclude repetition. Condition ID, cause, reference documents, and corrective action planned to be taken will be documented and reported to the QAO, Project Manager, Field Team Leader and involved contractor management, at a minimum. Implementation of corrective action is verified by documented follow-up action.

All project personnel have the responsibility, as part of the normal work duties, to promptly identify, solicit approved correction, and report conditions adverse to quality. Corrective actions will be initiated as follows:

- When predetermined acceptance standards are not attained
- When procedure or data compiled are determined to be deficient
- When equipment or instrumentation is found to be faulty
- When samples and analytical test results are not clearly traceable
- When QA requirements have not been followed
- When designated approvals have been circumvented
- As a result of system and performance audits
- As a result of a management assessment
- As a result of laboratory/field comparison studies

Project management and staff, such as field investigation teams, remedial response planning personnel, and laboratory groups, monitor ongoing work performance in the normal course of daily responsibilities. Work may be audited at the sites, laboratories, or contractor locations. Activities, or documents ascertained to be noncompliant with QA requirements will be documented. Corrective actions will be mandated through audit finding sheets attached to the audit report. Audit findings are logged, maintained, and controlled by the Task Manager.

Personnel assigned to QA functions will prepare corrective action reports, as necessary.

These reports identify out-of-compliance conditions, reference document(s), and recommended corrective action(s) to be administered. The report is issued to the personnel responsible for the

affected item or activity. A copy is also submitted to the Project Manager. The individual to whom the report is addressed will respond to the report, stating the cause of the conditions, corrective action to be taken, and signing and dating the report in the appropriate location. The QA personnel will maintain a log for the status of corrective action reports issued, confirm the adequacy of the intended corrective action, and verify its implementation. Corrective action reports will be retained in the project file.

Any project personnel may identify noncompliance issues; however, the designated QA personnel are responsible for documenting, numbering, logging, and verifying the close-out action. The Project Manager will be responsible for ensuring all recommended corrective actions are implemented, documented, and approved.

13 References

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APPENDIX L

REMEDIAL SYSTEM OPTIMIZATION TABLE OF CONTENTS

REMEDIAL SYSTEM OPTIMIZATION FOR CEDAR STREET FORMER MANUFACTURED GAS PLANT

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