
**SITE CHARACTERIZATION REPORT FOR THE
FORMER LUDLOW STREET WORKS SITE**

Yonkers, New York

Site Number V00562

Prepared For:



Consolidated Edison Company of New York, Inc.

**31-01 20th Avenue
Long Island City, NY 11105**

Prepared By:

PARSONS

Somerset, New Jersey

MARCH 2011

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200 Cottontail Lane
Somerset, New Jersey 08873
Phone: (732) 537-3500
Fax: (732) 868-3110

REVIEWED AND APPROVED BY:

Project Manager:	<u>Shane Blauvelt</u>	<u>3-2-2011</u> Date
Technical Manager:	<u>Dan Martoccia</u>	<u>3-2-2011</u> Date

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TABLE OF CONTENTS

	<u>Page</u>
SECTION 1 INTRODUCTION.....	1
1.1 Site Characterization Study Objectives	1
1.2 Report Organization	1
SECTION 2 SITE BACKGROUND	2
2.1 Site Overview	2
2.2 Adjoining Property Description	2
2.3 Site History	2
2.4 Topography, Regional Geology, and Hydrogeology	3
2.5 Previous Investigations/Remedial Measures	3
SECTION 3 SITE CHARACTERIZATION ACTIVITIES.....	5
3.1 Site Inspection and Preliminary Investigation Activities	5
3.2 Utility Clearance.....	5
3.3 Test Pit Excavation.....	6
3.4 Soil Boring Installation.....	7
3.5 Monitoring Well Installation/Development	8
3.6 Surveying.....	9
3.7 Groundwater Sampling.....	9
3.8 Management of Investigation-Derived Waste.....	10
3.9 Data Validation and Reporting.....	10
SECTION 4 SITE CHARACTERIZATION RESULTS.....	11
4.1 Site Geology	11

4.2 Former Gas Works Structures11

4.3 Site Hydrogeology13

4.4 Soil Sample Results13

4.5 Groundwater Sample Results15

SECTION 5 EXPOSURE ASSESSMENT17

SECTION 6 CONCLUSIONS AND RECOMMENDATIONS.....18

SECTION 7 REFERENCES.....1

LIST OF TABLES

Table 1	Summary of Samples
Table 2	Summary of Groundwater Elevations
Table 3	Summary of Soil Analytical Data – Detected Compound Summary
Table 4	Summary of Groundwater Analytical Data – Detected Compound Summary

LIST OF FIGURES

Figure 1	Site Location Map
Figure 2	Former MGP Structures
Figure 3	Sample Location Map
Figure 4	Summary of VOCs Exceedances in Soil
Figure 5	Summary of SVOCs Exceedances in Soil
Figure 6	Summary of Inorganic Exceedances in Soil
Figure 7	Summary of VOCs, SVOCs, and Inorganics Exceedances in Groundwater
Figure 8	Cross Section A-A', B-B', C-C'
Figure 9	Groundwater Contour Map

LIST OF APPENDICES

Appendix A	Test Pit Logs
Appendix B	Soil Boring and Monitoring Well Logs
Appendix C	Groundwater Sampling Logs
Appendix D	Data Usability Summary Report
Appendix E	Hydrocarbon Fingerprint Results

SECTION 1

INTRODUCTION

1.1 SITE CHARACTERIZATION STUDY OBJECTIVES

The specific objectives of this Site Characterization for the former Ludlow Street Works (a former manufactured gas plant (MGP) and holder station in Yonkers, New York) are to assess whether hazardous substances have been released to the environment and may be present onsite, if they may have migrated offsite, and whether they may have impacted human health or the environment. If no potential impacts are identified, a “no further action” conclusion may be warranted. If potential impacts are verified, additional sampling may be needed to determine the nature and extent of those impacts, or the need for remediation and interim measures to address the impacts. . These objectives are consistent with those of the New York State Department of Environmental Conservation’s (NYSDEC) comprehensive remedial investigation process, specifically Chapter 3 of the NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation.

1.2 REPORT ORGANIZATION

The Site Characterization was conducted by Parsons in June and July 2010. The field investigation activities and results are documented in this report in the following sections and appendices:

- Section 1: Introduction
- Section 2: Site Background
- Section 3: Site Characterization Activities
- Section 4: Site Characterization Results
- Section 5: Exposure Assessment
- Section 6: Conclusions and Recommendations
- Section 7: References

- Appendix A: Test Pit Logs
- Appendix B: Soil Boring and Monitoring Well Logs
- Appendix C: Groundwater Sampling Logs
- Appendix D: Data Usability Summary Report
- Appendix E: Hydrocarbon Fingerprint Results

SECTION 2

SITE BACKGROUND

2.1 SITE OVERVIEW

The Consolidated Edison Company of New York, Inc. (Con Edison) has entered into a Voluntary Cleanup Agreement with the NYSDEC to investigate, and if necessary, remediate potential impacts at former MGP properties. One of these facilities, the former Ludlow Street Works (Voluntary Cleanup Agreement Index No. D2-0003-02-08; Site ID No. V00562) a former MGP and holder station, was operated between 1879 and 1936 on a property formerly owned by predecessor companies of Con Edison. Currently, the former Ludlow Street Works Site (Site) is owned by the City of Yonkers and is part of the Yonkers Department of Public Works (DPW) storage yard in the neighborhood of Ludlow in Yonkers, NY (Figure 1).

The Site is located in a residential and commercial neighborhood at 162 Downing Street, Yonkers, New York. The Site consists of approximately 1.35 acres and is identified as Section 1, Block 171, Lot 1 (Figure 2). Currently there is only one small single-story concrete block structure located on the southeastern corner of the Site. The northern and southern portions of the Site are divided by a concrete block retaining wall. The southern portion of the Site, where the former MGP and holder station structures were located, is a parking lot consisting of gravel, dirt and bituminous asphalt which is in poor condition. The south-central portion of the Site is used for road salt storage. The northern portion of the Site is approximately 10 to 15 feet higher than the southern portion (GEI, 2003) and is overgrown with trees and covered by piles of asphalt, concrete, trash, soil, and other unidentifiable materials.

2.2 ADJOINING PROPERTY DESCRIPTION

The Site is located within an industrial district, bordered to the north by Downing Street; to the east by a commercial automobile repair garage, and a metal fabrication shop; and to the south by Knowles Street (formerly Fernbrook Street) and a Dunkin Donuts bakery. The New York Central Railroad is located west of the Site. The Site is located approximately 700 feet east of the Hudson River (GEI, 2003).

2.3 SITE HISTORY

Historical research was previously conducted and is documented in the *Manufactured Gas Plant History, Ludlow Street Work, Yonkers, New York* (GEI, 2003) which indicates that the Site was operated as an MGP and gas holder station by several predecessor companies of Con Edison on the southern portion of the Site between 1879 and 1936 and on the northern portion between 1923 and 1936. The Municipal Gas Company of Yonkers (i.e., Yonkers Municipal Gas Company) acquired the southern portion of the Site in 1879 from a private owner. The Westchester Lighting Company acquired the northern portion of the Site in 1923. The Municipal Gas Company constructed an MGP at the Site and began manufacturing gas around 1880.

In 1886, there were three buildings, two gas holders, and three underground naphtha storage tanks located on the Site (Figure 2). One holder was located on the southern portion of the Site

and had a 22,800 cubic feet (cu. ft.) capacity. The other holder was located on the northern portion of the Site and had a 50,000 cubic cu. ft. capacity. One building, which contained the lime house, purifying house, and meter room, was located at the southwest corner side of the Site. To the north of this building was the engine room and retorts building. A boiler house was located at the southeastern corner of the Site. The underground naphtha storage tanks were located approximately at the middle of the west side of the Site. An underground pipe was used to pump naphtha from boats on the Hudson River to the tanks. By 1898, the plant was no longer manufacturing gas.

A third larger gas holder (250,000 cu. ft.) was constructed before 1907, replacing the building that contained the lime house, purifying house, and meter room and a portion of the retorts and engine room building. The two smaller holders were removed from the Site between 1917 and 1931. By 1936, the Site was no longer used as a holder station. It is not known what the Site was utilized for between 1936 and 1946 (GEI, 2003). The Site was sold in 1946 and was owned by various bus companies for bus storage and parking until 1973 when the City of Yonkers acquired the Site. The City of Yonkers has used the Site as a DPW storage yard for vehicles and trucks, road salt, materials, street sweeping dumping, debris, fuel tanks, asbestos-containing materials, 55-gallon drums, and other unidentified waste materials since 1973.

2.4 TOPOGRAPHY, REGIONAL GEOLOGY, AND HYDROGEOLOGY

The Site is located in the southwestern corner of Yonkers, approximately 700 feet east of the Hudson River. Based on the Site survey performed in June 2010, the ground surface elevation of the southern portion of the Site is approximately 16 feet above mean sea level (MSL) and it is estimated that the northern portion of the Site is approximately 30 feet above MSL. The Site is located in the Manhattan Prong section of the New England Uplands physiographic region of New York and is near a northeast-trending geologic contact between the Fordham Gneiss and the Inwood Marble. It is estimated that the depth to the bedrock at the Site is greater than 30 feet below ground surface (ft bgs). The bedrock is most likely overlain by glacial till deposits, alluvium, and fill material (GEI, 2003). During the Site Characterization, in July 2010, the depth to groundwater at the Site was approximately 11 ft bgs. Groundwater flows to the northwest, toward the Hudson River. As indicated in earlier reports, it is believed that groundwater levels are most likely affected by tidal fluctuation (GEI, 2003).

2.5 PREVIOUS INVESTIGATIONS/REMEDIAL MEASURES

In 1993, Vollmuth & Brush of Blue Point, New York performed a two-phase sampling and analysis program on the Site and the adjacent lots (Vollmuth and Brush, 1997). A report entitled “Phase I and II Sampling and Analysis Program 151-154 Downing Street, DPW Garage, City of Yonkers, Yonkers, NY” was prepared for the Department of Planning and Development of City of Yonkers by Vollmuth & Brush in 1997 (Vollmuth and Brush, 1997). The first phase of the investigation was a soil gas survey and the second phase was a soil sampling, collection, and laboratory analysis program. Eleven soil samples were collected from inside the former DPW garage building on the eastern abutting property and on the Site. Soil samples were analyzed for volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs) from depths of 0 to 2 or 2 to 4 feet below grade. Soils samples were analyzed for metals from depths of 0 to 2, 2 to 4, 6 to 8, or 10 to 12 feet below grade. Vollmuth & Brush compared the detectable levels of VOCs and SVOCs to NYSDEC Soil Cleanup Objectives, and indicated that concentrations of

VOCs and SVOCs were below the recommended standards. Five total metals (copper, iron, lead, selenium, and zinc) were detected in various soil samples above NYSDEC soil cleanup objectives.

SECTION 3

SITE CHARACTERIZATION ACTIVITIES

The following sections describe the field investigation activities conducted as part of the Site Characterization. Parsons personnel mobilized to the Site on June 2, 2010, and the field investigation activities were conducted between June and July 2010 in accordance with the NYSDEC approved *Site Characterization Work Plan* (work plan) (Parsons, 2009, revised 2010). The scope of field investigation activities included the installation of test pits, soil borings, and monitoring wells. Soil, groundwater, and non-aqueous phase liquid (NAPL) samples were collected for laboratory analysis. Since historical information indicated that the former MGP structures were located at the southern portion of the Site, field investigation activities were conducted primarily on the southern portion of the property and adjacent sidewalk. Additionally, due to drastic topographic changes at the central portion of the Site, there is very limited access to the northern portion of the Site. During all intrusive activities, a Community Air Monitoring Plan (CAMP) was implemented in accordance with the approved work plan. Sampling locations are shown on Figure 3. Table 1 provides a summary of the samples and analyses.

3.1 SITE INSPECTION AND PRELIMINARY INVESTIGATION ACTIVITIES

On June 2, 2010, a Site inspection was conducted to refine the locations of the proposed investigation points. The proposed scope of work was reviewed with Con Edison and representatives of the Yonkers DPW. Proposed locations and proposed methods were altered in the field, as necessary, based on Site conditions, access, utilities, and safety. The modifications to the sampling locations are further discussed below. Sampling location changes were made in consultation with Con Edison and the NYSDEC.

3.2 UTILITY CLEARANCE

The geophysical surveys were conducted to identify potential/possible underground conduits/utilities in the area of the proposed boring, monitoring well, and test pit locations. A geophysical survey was completed at the Site by Diversified Geophysics, Inc. (DGI), of New Hyde Park, New York prior to start of Site work. A second geophysical survey was performed by NAEVA Geophysics of Congers, New York prior to installing several boring and well locations that were relocated due to Site conditions, after work had been started.

Once the initial geophysical survey was completed, utility clearance key hole test pits were hand or vacuum excavated at each proposed soil boring and monitoring well location for subsurface utilities. Utility clearance test pits were completed by Aquifer Drilling & Testing, Inc. (ADT) of New Hyde Park, New York in June and July 2010. The typical utility clearance test pit excavation consisted of saw-cutting and jack-hammering the surface pavement (as necessary), and excavating using a Vactron, an air knife, and hand tools (as necessary) to a minimum depth of 5 ft bgs. During these excavation activities, soils were screened for VOCs using a photoionization detector (PID), their physical characteristics (e.g., soil type, grain size, color, etc.) were described, and notes of any evidence of physical impacts observed (staining, odor, sheen, non-aqueous phase liquid (NAPL), etc.) were recorded. When a utility clearance test pit could not be completed to a depth of 5 ft bgs due to the presence of underground utilities

or subsurface obstructions, the location was moved approximately 5 to 10 feet away from the original location and re-excavated. Following completion of the utility clearance test pits, each test pit was backfilled prior to drilling or excavation.

After commencing Site work, a 54-inch New York State sewer drain/easement that intersects the southwest portion of the Site was discovered. Yonkers Engineering provided detailed drawings of the subsurface utility, and after review of the drawings and completion of additional geophysical work in the vicinity of the sewer drain, Con Edison, Yonkers Engineering, and Parsons met to identify acceptable boring locations in the vicinity of the sewer drain. The proposed locations near the drain were relocated to allow for a 15-foot clearance (tolerance zone), as agreed upon between Yonkers Engineering, Con Edison, and Parsons.

3.3 TEST PIT EXCAVATION

A total of five (5) investigation test pits were advanced including TP-1, TP-2, TP-3, TP-4A/B, and TP-5, to determine the presence of MGP structure remnants and/or impacted subsurface material from the MGP operations or other historic Site uses. Test pit excavations were completed from June 14, 2010 through June 18, 2010. Test pit excavation services were provided by Environmental Closures, Inc. (ECI) under the supervision of a Parsons geologist. The test pit locations are shown on [Figure 3](#). Test pits were advanced with a rubber-tired backhoe to the depth of the underground structures or until groundwater was encountered. Based on Site conditions and observations made during implementation of the Site characterization activities, the following additions and modifications were made to the work plan:

- TP-1 was proposed to be in the vicinity of the northern wall of the former lime house and intersection of the western portion of the former 250,000 cu. ft. holder. As per the agreement between Con Edison, Yonkers Engineering, NYSDEC, and Parsons concerning the 15-foot tolerance zone associated with the 54-inch New York State sewer/easement, TP-1 was moved north in an attempt to intersect the northwest curvature of the 250,000 cu. ft. holder.
- TP-3 was proposed to intersect the southeastern curvature of the 250,000 cu. ft. holder. As per the agreement between Con Edison, Yonkers Engineering, NYSDEC, and Parsons concerning the 15-foot tolerance zone associated with the 54-inch New York State sewer/easement, TP-3 was moved north in an attempt to intersect the northeast curvature of the 250,000 cu. ft. holder.
- TP-4 was split into TP-4A and TP-4B due to the presence of a large square brick subgrade structure abutting TP-4A to the north and TP-4B to the west was encountered.
- TP-4A was not extended deeper than 3 ft bgs due to the presence of the two 12-inch cast iron pipes extending out of the large square brick structure to the north.
- TP-4B was not extended deeper than 4.5 ft bgs due to health and safety concerns associated with heavy naphthalene and/or acetone odors and high PID readings in the vicinity; additionally, continuing further northward or deeper with the test-pit excavation could have compromised the integrity of the concrete block retaining wall to the north.

- The northern half of the 22,800 cu. ft. holder was exposed at surface grade, approximately 20 feet. TP-5 was therefore shifted north to intersect the southern curvature of this holder foundation wall.

During test pit excavation, the excavated soil and fill were temporarily placed on impervious plastic sheeting adjacent to the test pit and were put back into the excavation in reverse order from which they were removed. The test pit excavations were conducted in 6-inch lifts to their final depths. While backfilling, the lower portions of the test pits were backfilled in 12-inch lifts. The upper portions of the test pits (up to a depth of 4 ft bgs) were backfilled in 6-inch lifts using suitable excavated materials (e.g. material that did not contain deleterious materials, saturated/near saturated fill, or rocks/soils clumps bigger than 6 inches in size).

While the test pits remained open, subsurface conditions were logged and photographed, the test pit walls and floors were inspected for evidence of MGP-related impacts (e.g., odors, staining, sheens, NAPL, PID readings above background levels), soil samples were collected, and the dimensions of any subsurface features were measured. The soil characteristics, PID, and visual/odor inspection results (including photographs taken during the excavation) are summarized in the test pit logs provided in [Appendix A](#).

Soil samples were collected from the bottom and sidewalls of the test pits to confirm whether soil had been impacted by the MGP operations. The samples were submitted to Chemtech of Mountainside, NJ (NYS DOH, ELAP Certified) for laboratory analysis for Target Compound List (TCL) VOCs by EPA Method 8260, TCL SVOCs by EPA Method 8270, TAL metals by EPA Method 6000/7000 Series, and cyanide by EPA Method 9012. A summary of samples collected and analyzed can be found in [Table 1](#). A total of 11 soil samples were collected from the test pits and submitted for laboratory analysis. NAPL was not observed in any of the test pit excavations.

3.4 SOIL BORING INSTALLATION

A total of eight (8) soil borings (SB-1 through SB-8) were advanced during the Site characterization activities to characterize subsurface conditions. The soil borings were completed from June 14, 2010 through July 6, 2010. Soil borings were advanced by ADT under the supervision of a Parsons geologist. Soil borings were completed to depths ranging from approximately 13 to 35 ft bgs, depending on observed impacts and refusals. Soil boring locations are shown on [Figure 3](#) and the corresponding boring logs are presented in [Appendix B](#). Based on Site conditions and observations made during implementation of the Site characterization activities, the following additions/modifications were made to the work plan:

- SB-1 was moved north along the western property line due to the agreed upon 15-foot tolerance zone associated with the 54-inch New York State sewer/easement. This boring was advanced more easterly than planned, since the fence line was further east than anticipated.
- SB-2 was moved south due to the agreed upon 15-foot tolerance zone associated with the 54-inch New York State sewer/easement.
- No samples were collected from SB-3 due to poor recovery.
- SB-5 was shifted north approximately 20 feet in order to be positioned in the approximate center of the former 22,800 cu. ft. holder.

- SB-6 was proposed to be advanced within the former 50,000 cu. ft. holder; however, as indicated in Section 3.3, the southern edge of this holder foundation wall was encountered just under the concrete block retaining wall. Therefore, SB-6 was repositioned between the 50,000 cu. ft. and the 22,800 cu. ft. holder foundations to determine the presence and the nature and extent of MGP residues, NAPL, or other constituents in the area.
- SB-8 was added to the scope in order to determine the presence and the nature and extent of MGP residues, NAPL, or other constituents in the northern portion of the former 250,000 cu. ft. footprint. No samples were collected due to poor recovery at this location.

Soil borings were advanced using a track-mounted or truck-mounted drill rig, and 4.25-inch inner diameter hollow stem augers (HSAs). Soil samples were collected continuously to the bottom of the boring using a 2-foot long, 2-inch diameter stainless steel split spoon sampler. Each sample was screened for the presence of VOCs using a PID and was logged. Physical characteristics of each sample were recorded (e.g., soil type, color, texture, moisture content, etc.), along with physical evidence of any impacted material (e.g., oil-like or tar-like NAPL, staining, sheens, odors, etc).

Soil samples were submitted to Chemtech and analyzed for TCL VOCs, TCL SVOCs, cyanide, and TAL metals. A summary of the soil samples collected and analyses performed is provided in [Table 1](#). Soil samples were collected from selected zones within the borings (as described below) and were submitted for laboratory analysis:

- One sample was collected from the zone with the highest PID readings or visual impacts. If visual impacts or elevated PID readings were not observed, a sample was collected from the upper portion of the boring or directly above the water table (if present).
- One sample was collected below the impacted zone (if present) or near the base of the boring to identify the vertical extent of any impacts at the location.
- Where applicable, NAPL samples were collected and submitted to META Environmental, Inc. of Watertown, MA for hydrocarbon fingerprint analysis.

Upon completion, the boring locations were grouted with Portland cement and bentonite grout using a tremie pipe. Drilling equipment was decontaminated between each boring. Drill cuttings and decontamination water were containerized in 55-gallon steel drums and handled as described in Section 3.8.

3.5 MONITORING WELL INSTALLATION/DEVELOPMENT

A total of five (5) monitoring wells (MW-1 through MW-5) were installed during the Site characterization activities. Monitoring wells were installed between June 18, 2010 and June 28, 2010.

The monitoring well borings were advanced to a depth of 25 ft bgs with the exception of MW-3 which was completed to 33 ft bgs. Monitoring well borings were completed with 4.25-inch outside diameter hollow stem augers and a track-mounted and truck-mounted drill rig. The monitoring well screens were set at depths ranging from 5 to 27 ft bgs with the top of the screen approximately 2 feet above the observed groundwater table. Soil samples were collected from

monitoring well borings on a continuous basis and were screened for the presence of VOCs using a PID. Soil samples were selected for analysis as described above (Section 3.4).

The monitoring wells were constructed with 2-inch inner diameter, threaded, flush-joint, PVC casing and 10 to 20 feet lengths of 0.02-inch slot screen. The annular space around each well screen was backfilled with a No. 2 sand filter pack extending from the bottom of the well to at least 2 feet above the top of the screen. The annular space around the well riser was sealed with at least 2 feet of hydrated bentonite pellets on top of the sand pack. The remainder of the boring was backfilled with cement-bentonite grout to approximately 1 foot below grade. Monitoring wells MW-1 and MW-2 were finished with a locking, flush-mount box set in concrete. Monitoring wells MW-3, MW-4, and MW-5 were finished with a protective stick-up casing and bollards set in concrete.

Monitoring well development was conducted on June 28, 2010 and June 29, 2010 a minimum of 24 hours after installation. Monitoring wells were developed until reasonably free of sediment (less than 50 NTU if possible) or until the pH, temperature, Oxygen Reduction Potential (ORP), and conductivity stabilized. Monitoring well development was monitored approximately every 5 minutes by reviewing water quality indicator measurements. Well development continued until turbidity was less than 50 nephelometric turbidity units (NTUs) for three successive readings or until water quality indicators stabilized, whichever occurred first in each monitoring well with the exception of monitoring wells MW-1 and MW-4, which ran dry numerous times. The criteria for stabilization based on water quality indicators were three successive readings within 10%.

Non-disposable drilling equipment was decontaminated between monitoring well locations. Monitoring well drill cuttings, well development water, and decontamination water were containerized in 55-gallon steel drums and handled as described in Section 3.8.

3.6 SURVEYING

At the conclusion of drilling activities, Chazen, a licensed New York state land surveyor mobilized to the Site and identified the horizontal and vertical location of each new soil boring, monitoring well, and test pit location. Additionally, the survey included locating Site features such as manholes, the 54-inch sewer main, holder walls and the concrete block wall located at the north end of the Site. Two elevation measurements were taken at each well location to identify the top of the PVC casing and the grade elevation. The survey elevations were measured to an accuracy of 0.01 feet above the National Geodetic Vertical Datum of 1988 (NGVD 1988).

3.7 GROUNDWATER SAMPLING

On July 12 and 13, 2010, groundwater samples were collected from the five (5) monitoring wells (MW-1 through MW-5). Prior to collecting samples, the depth to groundwater and thickness of any free product (if present) was measured in the monitoring wells using an electronic oil/water interface probe attached to a measuring tape accurate to 0.01 foot. [Table 2](#) provides a summary of the groundwater level measurements and elevations.

Prior to purging, the headspace within each well was measured with a PID. Each well was purged using a submersible pump and low-flow purging techniques to remove a minimum of three times the volume of standing water in the well (to allow for collection of a representative

sample). As discussed in Section 4.5, monitoring well MW-4 ran dry numerous times before three well volumes had been removed. During the purging process, water quality parameters including temperature, conductivity, pH, dissolved oxygen, conductivity, oxidation reduction potential (ORP), and turbidity were measured approximately every 5 minutes.

Once three well volumes had been removed from a well, groundwater samples were collected using a low-flow submersible pump with dedicated tubing. Water quality parameter measurements and observations recorded during sampling activities are documented on the groundwater sampling records provided in [Appendix C](#). Groundwater samples were submitted to Chemtech laboratories for the following analysis: TCL VOCs, TCL SVOCs, TAL Metals and total cyanide. Non-dedicated sampling equipment (e.g., oil/water interface probe, submersible pump) was decontaminated between sampling locations. Decontamination water was placed in 55-gallon drums and handled as described in Section 3.8.

During purging and sampling of MW-2 and MW-4, the measured turbidity was greater than 50 NTU. As per the Ludlow Street SCWP and associated Field Sampling Plan (FSP), since the turbidity was greater than 50 NTU, samples were sent for analysis of both total and dissolved metals from this well.

3.8 MANAGEMENT OF INVESTIGATION-DERIVED WASTE

Investigation-derived waste (IDW), which included decontamination wash and rinse water, soil cuttings, purge water, debris, and used personal protective equipment (PPE), was containerized in Department of Transportation (DOT)-approved 55-gallon drums. The drums were sealed at the end of each work day and labeled with the date, the well or boring number(s), and the type of waste (e.g., drill cuttings, purge water). Parsons collected representative waste characterization samples of the IDW and coordinated transportation and disposal. Clean Earth of North Jersey, Inc. of Kearny, New Jersey disposed of the Site IDW at an offsite Con Edison-approved location in accordance with applicable local, state, and federal regulations.

3.9 DATA VALIDATION AND REPORTING

Data validation was performed in accordance with the USEPA Region II standard operating procedures (SOPs) for organic and inorganic data review. These validation guidelines are regional modifications to the National Functional Guidelines for organic and inorganic data review (USEPA, 1999 and 2004). Validation included the following:

- Verification of 100% of all quality control (QC) sample results (both qualitative and quantitative);
- Verification of the identification of 100% of all sample results (both positive hits and non-detects);
- Recalculation of 10% of all investigative sample results; and
- Preparation of a Data Usability Summary Report (DUSR).

The quality of the data has been assessed and is documented in the DUSR provided in [Appendix D](#). In summary, the results of the data usability assessment show that the collected analytical data for soil and groundwater are valid for the intended purposes of the Site Characterization.

SECTION 4

SITE CHARACTERIZATION RESULTS

This section presents the results of the Site Characterization. Analytical results for the soil and groundwater samples collected during the Site Characterization have been summarized in [Tables 3 and 4](#) and on [Figures 4, 5, 6 and 7](#).

4.1 SITE GEOLOGY

The geology encountered in the soil borings and test pits during the Site Characterization is summarized in the logs provided in [Appendices A and B](#). The logs show that the upper 20 to 22 feet in the south and west portions and 13-15 feet in the central and north portions of the Site contained fill materials (generally sand, gravel and silt with cobbles, cement, brick, and wood fragments). Deposits of fine to coarse-grained sand with some silt were encountered beneath the fill. These deposits were approximately 3 to 20 feet in thickness. Clay was encountered from approximately 4 inches to 8 feet in thickness. During the Site Characterization activities, bedrock was not encountered. Soil boring logs generated during the Site Characterization were used to develop three representative cross sections. A west to east cross-section of the Site is shown on [Figure 8](#) (cross section A-A') and two north to south cross-sections are shown on [Figure 9](#) (cross sections B-B' and C-C').

4.2 FORMER GAS WORKS STRUCTURES

The test pitting and soil boring activities conducted during the Site Characterization confirmed that below-grade MGP structure remnants are present at the Site. Former MGP structures identified in the *Manufactured Gas Plant History Report* ([GEI, 2003](#)) are depicted on [Figure 2](#). A summary of below-grade structures encountered during the Site Characterization is provided below.

250,000 Cubic Foot Holder

- During the excavation of test pit TP-1, the holder foundation floor of the 250,000 cu. ft. holder was encountered at approximately 8.5 ft bgs. The former holder foundation wall was not encountered, at this location. Neither groundwater nor NAPL was encountered within the excavation of TP-1.
- During the excavation of test pit TP-2, the former 250,000 cu. ft. holder foundation wall was encountered from 3.5 to 8.5 ft bgs. The holder bottom was encountered at 8.5 ft bgs. Neither groundwater nor NAPL were encountered within the excavation of TP-2.
- During the excavation of test pit TP-3, the former 250,000 cu. ft. holder foundation wall was encountered from approximately 0.5 to 9.5 ft bgs. The former 250,000 cu. ft. holder foundation bottom was encountered at approximately 9.5 ft bgs. Neither groundwater nor NAPL were encountered within the excavation of TP-3.
- During the installation of soil boring SB-01, the former 250,000 cu. ft. holder foundation bottom was encountered at an approximate depth of 10' below ground surface. Stained wood was observed within this boring.

- During the installation of soil boring SB-04, the holder bottom was encountered at an approximate depth of 9 feet bgs. NAPL was observed in this boring at an approximate depth of 20 feet bgs.

Retort House

- During the excavation of test pit TP-2, the former Retort House concrete footings and the former 250,000 cu. ft. holder walls and foundation floor were encountered. This test pit initially extended eastward for 18 feet from the western property fence line; upon encountering the holder wall, the test pit was forked in a southeast trajectory to straddle the adjacent holder wall and extend to the holder bottom. Footings were encountered at approximately 4.5 ft bgs; Along the eastward test pit trajectory, the concrete Retort House footing continued to be exposed for 40 feet at which point, the northern edge of the a portion of the former 250,000 cu. ft. holder wall was exposed at approximately 1 ft bgs. Neither groundwater nor NAPL were encountered within the excavation of TP-2.

Former Suspected MGP Facility Piping

- During the excavation of test pit TP-4, two 12-inch cast iron pipes believed to be associated with former MGP operations were observed extending in a southwestern trajectory under a subsurface square brick structure encountered from approximately 0.5 to 2 ft bgs. The two pipes were exposed from 2 to 3 ft bgs. However, TP-4A was not advanced deeper to maintain the integrity of the piping. No staining or sheen was observed in the vicinity of the piping. Test pit TP-4 was then split into TP-4A and TP-4B as the excavation continued north and along the east side of the remnant square brick structure. Neither a holder wall or holder floor was encountered at TP-4B. Excavation at this test pit did not extend deeper than 4.5 ft bgs due to health and safety concerns associated with heavy naphthalene and/or acetone odors and high PID readings. Additionally, TP-4B was encroaching northward towards the concrete block retaining wall; therefore in order to maintain the integrity of the concrete wall, TP-4B did not extend further north. Neither groundwater nor NAPL were encountered within the excavation of TP-4.
- During Site clearing activities, two 12-inch cast iron pipe openings were uncovered north of TP-4A, adjacent to the concrete block retaining wall, south of the 50,000 cubic foot holder. These pipe openings were observed to be open-ended couplings to the two 12-inch cast iron pipes and are likely to be associated with the onsite former MGP structures, and likely the same piping observed in TP-4. Standing water was observed within these open ended pipes and black NAPL globules were observed floating on the water. A sample of this NAPL was collected and submitted to META Environmental for fingerprint analyses as per Con Edison. The laboratory report for this fingerprint analyses is provided in [Appendix E](#)

22,800 Cubic Foot Holder

- During the excavation of test-pit TP-5, the former 22,800 cu. ft. holder foundation wall was encountered from 1.5 to 9 ft bgs. Groundwater was encountered at 9 ft bgs; a

holder floor was not encountered during the installation of TP-5. NAPL was not encountered during the excavation of TP-5.

- During the installation of SB-05, NAPL was detected at a depth of 22 feet bgs. A holder floor was not encountered at SB-05.

50,000 Cubic Foot Holder

- During the removal of a salt pile adjacent to the concrete block retaining wall in the northern portion of the Site, the southern edge of the former 50,000 cu. ft. holder wall was uncovered. Approximately 1 foot of this holder wall was exposed and was observed to be extending underneath the concrete block retaining wall. Further excavation was not attempted in this location due to access issues and the integrity of the concrete block wall.

4.3 SITE HYDROGEOLOGY

Groundwater was encountered beneath the Site at elevations ranging from 2.99 to 7.10 feet above MSL (10.32 to 16.06 feet below ground surface). The depth to groundwater was gauged in the five new monitoring wells (MW-1 through MW-5) on July 12, 2010. The groundwater levels and corresponding elevations are summarized in [Table 2](#) and were used to produce a Site groundwater contour map ([Figure 9](#)). The groundwater contours based on the July 2010 gauging event indicate that the groundwater flow direction is predominantly to the northwest towards the Hudson River.

4.4 SOIL SAMPLE RESULTS

A total of 34 soil samples and 1 duplicate sample were collected from the test pits, soil borings, and monitoring well borings as part of the Site Characterization. Due to the poor recovery during the soil boring phase of the Site Characterization, only one duplicate sample was collected. Soil samples were submitted to Chemtech Laboratories and analyzed for TCL VOCs, TCL SVOCs, TAL metals, and cyanide as described in Section 3. The analytical results of the soil samples are summarized in [Table 3](#) and presented on [Figures 4, 5, and 6](#). The soil sample results have been compared to the Unrestricted Soil Cleanup Objectives (USCOs) provided by NYSDEC in 6 NYCRR Part 375 (NYSDEC, 2006). The USCOs assume there are no imposed restrictions on the use of the Site; however, the Site is used for commercial/industrial purposes, and Site access is restricted via a fence and gate at the entrance. Therefore, a comparison of soil sample results to the USCOs is conservative. PID readings, visual observation, and analytical results from the subsurface soil investigation are summarized below.

PID Readings/NAPL/Hydrocarbon Fingerprinting Results

PID readings for soil samples collected during soil boring/monitoring well installations ranged from 0.0 to 1,250 ppm above background. The highest PID reading from subsurface soil was 851 ppm in soil boring MW-3 at a depth interval of 9 to 11 ft bgs. The 1,250 ppm reading was detected from a black stained sample of wood that was extracted from the 18-20 ft bgs interval of SB-1. Non-aqueous-phase-liquid (NAPL) was observed in samples collected from MW-3 (9-13 ft bgs and 17-19 ft bgs) from SB-6 (7-9 ft bgs and 13-15 ft bgs), and from SB-7 (13-23 ft bgs). The presence of NAPL was also noted in SB-4 (20 to 23 ft bgs) and SB-5 (17-19 ft bgs and 22-25 ft bgs).

Samples of soil containing NAPL from soil borings MW-3 and SB-7 were collected and submitted to META Environmental, Inc. of Watertown, MA for forensic hydrocarbon fingerprint analysis. Additionally, LNAPL, which was observed floating on top of water within an abandoned pipe suspected to be associated with MGP operations to the north of test pit TP-4 (Exposed Pipe 1), and the stained wood sample from SB-1(18-20 ft bgs) were submitted to META for fingerprint analysis. The fingerprinting samples were analyzed by GC/FID (EPA 8100M) for fingerprinting and by GC/MS/SIM (EPA 8270M) for mono- and polycyclic aromatic hydrocarbons (MAHs and PAHs), alkyl PAH homologues and other selected compounds.

The laboratory reports for these fingerprint analyses are provided in [Appendix E](#). The reports indicate that the samples MW-3(9-11) and SB-7(17-19) contained pyrogenic material and exhibited fluoranthene to pyrene ratios indicative of tars formed from MGPs utilizing carbureted waste gas (CWG) processes. Sample Exposed Pipe 1 also contained pyrogenic material; however, it had substantially different characteristics than the samples from MW-3(9-11) and SB-7(17-19). Fingerprint analysis of the sample from Exposed Pipe 1 concluded that the NAPL is likely indicative of a coal tar distillate and/or the dissolved phase of the tarry material detected in MW-3(9-11) and SB-7(17-19). The results from the stained wood in sample SB-1(18-20) indicated the presence of a wide range distribution of pyrogenic PAHs consistent with CWG MGP tar residues and similar to the material found in the other samples at a lower relative concentration.

VOCs

A total of 16 VOCs were detected at least once in the soil samples collected during the Site Characterization. Of these, only six (acetone, benzene, ethyl benzene, toluene, o-xylene, and m/p-xylene) were detected at concentrations exceeding the USCOs in any soil sample. Acetone was detected above the USCO in four soil samples [SB-1(18-20), SB-1 (24-26), SB-2(20-22), and SB-7(15-17)]. Benzene was detected above the USCO in four soil samples [MW-3(9-11), SB-4(20-22), SB-6(13-15), and SB-7(15-17)]. Ethyl benzene, toluene, o-xylene, and m/p-xylene were detected at concentrations exceeding the USCOs in samples MW-3(9-11), SB-6(13-15), and SB-7(15-17). Toluene also exceeded the USCO in sample TP-4AFLOOR(3). Total VOC concentrations in all soil samples ranged from non-detect to 368.3 milligrams/kilogram (mg/kg), which was detected in soil sample SB-7(15-17) collected at a depth of 15 to 17 ft bgs.

The vertical extent of VOC impacts was delineated at each soil boring, monitoring well boring, and test pit sample location (i.e. no USCOs were exceeded in the deepest sample collected), with the exception of locations SB-2 and TP-4. At location SB-2 acetone, a common lab contaminant was detected above the USCO in the deepest soil sample (collected from depth of 20 to 22 ft bgs). At location TP-4A, toluene was detected above the USCO at a depth of 3 feet bgs. A deeper sample could not be collected from TP-4A; however, the results for the deepest sample (collected at a depth of 29 to 31 ft bgs) from location SB-6, which is adjacent to TP-4A, showed no concentrations above the USCOs.

SVOCs

A total of 26 SVOCs were detected in soil samples collected during the Site Characterization. Twelve PAHs [acenaphthene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, flourene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene] were detected at concentrations

exceeding the USCOS in at least one soil sample. Total SVOC concentrations ranged from non-detect to 2,277.2 mg/kg, which was detected at location MW-3 in a sample collected from 9 to 11 ft bgs.

The vertical extent of SVOC impacts was delineated at each soil boring, monitoring well boring, and test pit sample location, with the exception of location SB-4 where seven PAHs were detected at concentrations exceeding the USCOS in the deepest soil sample (collected from depth of 30 to 32 ft bgs).

Inorganics

A total of 24 inorganic constituents were detected in soil samples collected during the Site Characterization. Nine of these exceeded the USCOS (arsenic, barium, cadmium, copper, lead, mercury, selenium, zinc, and cyanide). The vertical extent of impacts from inorganics was delineated at each soil boring and monitoring well boring, with the exception of location SB-2 where lead was detected above the USCO in the deepest soil sample (collected from depth of 20 to 22 ft bgs). Inorganic constituents were detected at concentrations above USCOS in the bottom of the test pits. However, the test pits were typically terminated in the fill layer and metals are typically detected in soil used as fill in urban areas.

4.5 GROUNDWATER SAMPLE RESULTS

A total of five (5) groundwater samples and one duplicate were collected during the Site Characterization and analyzed for TCL VOCs, TCL SVOCs, TAL Metals, and total cyanide. Laboratory analytical results for constituents detected in the groundwater samples are summarized in [Table 4](#). For evaluation purposes, analytical results were compared with Class GA groundwater quality standards (GWQS) and guidance values contained in NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 (NYSDEC, 1998). These standards and guidance values are protective of groundwater quality assuming that groundwater is used as a source of drinking water. That assumption is not applicable to the Site because groundwater is not used as a source of drinking water. Thus, the use of Class GA standards and guidance values for comparison to Site groundwater is conservative. The analytical results of the groundwater samples collected from each well are presented on [Figure 7](#). Field measurements and observations as well as analytical results from the groundwater investigation are summarized below.

Field Measurements

Each monitoring well was sampled upon reaching parameter stability and turbidity levels below 50 NTU with the exception of MW-4 and MW-2; MW-4 had very slow recharge and ran dry numerous times before three well volumes were able to be purged and MW-2 was very turbid and did not clear up after 2 hours of purging. During groundwater sampling activities, each monitoring well was monitored for the presence of NAPL. No NAPL or sheens were noted in any of the wells with the exception of MW-3 where NAPL globules and sheens were observed. Visual descriptions and observations made during the groundwater sampling activities are presented on the groundwater sampling records provided in [Appendix C](#).

VOCs

A total of fourteen VOCs were detected at least once in the groundwater samples collected during the Site Characterization. Of these, eight VOCs (acetone, benzene, chloromethane, ethyl

benzene, styrene, toluene, o-xylene, and m/p-xylene) were detected at concentrations exceeding the Class GA GWQS. No VOCs were detected above the Class GA GWQS in MW-1. Groundwater analytical results are summarized in [Table 4](#) and on [Figure 7](#).

SVOCs

Nine PAHs and four other SVOCs were detected at least once in the groundwater samples collected during the Site Characterization. Of these, four were detected at concentrations exceeding the Class GA GWQS (1,1-Biphenyl in MW-3; phenol in MW-3 and MW-5; acenaphthene in MW-3; and naphthalene in MW-3 and MW-5). No other SVOCs were detected above the Class GA GWQS in any of the monitoring wells.

Inorganics

Analytical results indicate the presence of eight metals (arsenic, cadmium, iron, lead, magnesium, manganese, mercury, and sodium) and cyanide in groundwater samples that exceeded their respective Class GA GWQS.

SECTION 5

EXPOSURE ASSESSMENT

Information collected during the Site Characterization at the former Ludlow Street Works Site has been used to qualitatively assess potential exposure pathways for the various detected compounds in Site soils and groundwater. The Site is located within an industrial district of a residential and commercial neighborhood and is currently used as a public works storage yard.

Analytical results from the soil samples collected during the Site characterization activities indicate the presence of possible MGP-related contaminants in the soil. VOCs, PAHs, and inorganic constituents were detected at concentrations above the USCOs at the Site in soil ranging from 3 to 32 ft bgs. The highest total VOC and SVOC concentrations were detected in the soil samples collected downgradient of the former gas holders; from 9 to 11 ft bgs at location MW-3 (on the north edge of the former 22,800 cu. ft. holder near the concrete block retaining wall) and from 15 to 17 ft bgs at location SB-7 (just north of the edge of the former 250,000 cu. ft. holder).

Shallow impacted soils on the Site may be encountered during intrusive maintenance activities (e.g., repair of underground utilities); however, it is unlikely that these materials would be encountered during day-to-day Site operations (i.e., use as a DPW storage yard). It should be noted that the Site soils are covered with gravel and bituminous pavement, and for most of the year, the southern portion of the Site is covered by a pile of road salt.

Groundwater analytical results indicated the presence of VOCs, PAHs, and inorganic concentrations in the monitoring wells at the Site above the Class GA GWQS and guidance values. Four monitoring wells (MW-2, MW-3, MW-4, and MW-5) exceeded GWQS for possible MGP-related VOCs or SVOCs. Analytical results indicate that no VOCs or SVOCs were detected in Monitoring well MW-1 (offsite area).

Groundwater at the Site is currently not used for a potable water source and there are no plans for future use of potable or commercial/industrial groundwater at the Site. Groundwater flow direction is predominantly to the northwest towards the Hudson River. The depth to groundwater at the Site is approximately 10 to 16 feet bgs. Therefore, there is limited potential for exposure to groundwater during intrusive subsurface activities (e.g., repair of underground utilities) at the Site. Surface water and sediment are not present at the Site.

It should be noted that several inorganic analytes were detected at the Site (sodium, magnesium, and manganese) at concentrations exceeding Class GA Groundwater Standards. These analytes are not typically associated with MGP related operations. Their presence at high concentrations in both Site soils and in Site ground water is believed to be due to use of the Site for road salt storage.

SECTION 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

The following conclusions have been made based on the results of the Site Characterization presented herein:

- Remnants of the former MGP structures are present on the property.
- NAPL encountered onsite was sampled and submitted for forensic hydrocarbon fingerprint analysis. The results indicate that the samples contained materials indicative of tars formed from MGP processes. NAPL, when encountered, was in close proximity to former MGP structures.
- Contaminants potentially related to former MGP activities were encountered in Site soil at concentrations exceeding the USCOs during the Site Characterization. These contaminants were generally encountered at or below the ground water table (10.32 ft to 16.06 ft bgs) and extended to depths of 30 ft to 32 ft bgs. Vertical extent of these contaminants was delineated at all sampling locations, with the exception of SB-02. Contaminants potentially related to former MGP activities were encountered in groundwater at concentrations exceeding the Class GA GWQS and guidance values at the Site.
- Elevated concentrations of sodium, manganese, and magnesium detected in Site soil and ground water are believed to be associated with use of the Site for a road salt storage facility.

6.2 RECOMMENDATIONS

Based on the Site Characterization activities, further investigation is recommended to delineate the impacts identified within the Site. To accomplish this objective, a Remedial Investigation Work Plan will be developed and submitted to the NYSDEC under separate cover.

SECTION 7

REFERENCES

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TABLES

Table 1
Sample Summary
Former Ludlow Street Works
Consolidated Edison Company of New York
Site Characterization - June and July 2010

Location	Sample ID	Depth (bgs)	TCL VOCs	TCL SVOCs	TAL Metals	Cyanide	Hydrocarbon Fingerprint	Dissolved Metals
SOIL SAMPLES								
MW-1	MW-1(11-13)	11-13'	X	X	X	X		
	MW-1(23-25)	23-25'	X	X	X	X		
MW-2	MW-2(13-15)	13-15'	X	X	X	X		
	MW-2(23-25)	23-25'	X	X	X	X		
MW-3	MW-3 (9-11)	9-11'	X	X	X	X	X	
	MW-3(31-33)	31-33'	X	X	X	X		
MW-4	MW-4 (5-7)	5-7'	X	X	X	X		
	MW-4(23-25)	23-25'	X	X	X	X		
MW-5	MW-5 (4-6)	4-6'	X	X	X	X		
	MW-5 (7-9)	7-9'	X	X	X	X		
	MW-5(23-25)	23-25'	X	X	X	X		
SB-1	SB-1(18-20)	18-20'	X	X	X	X	X	
	SB-1(24-26)	24-26'	X	X	X	X		
	SB-1(32-34)	32-34'	X	X	X	X		
SB-2	SB-2(20-22)	20-22'	X	X	X	X		
SB-4	SB-4(20-22)	20-22'	X	X	X	X		
	SB-4(30-32)	30-32'	X	X	X	X		
SB-5	SB-5(21-23)	21-23'	X	X	X	X		
	SB-5(29-31)	29-31'	X	X	X	X		
SB-6	SB-6(13-15)	13-15'	X	X	X	X		
	SB-16(13-15)*	13-15'	X	X	X	X		
	SB-6(29-31)	29-31'	X	X	X	X		
SB-7	SB-7(15-17)	15-17'	X	X	X	X		
	SB-7(17-19)	17-19'					X	
	SB-7(33-35)	33-35'	X	X	X	X		
TP-1	TP-1FLOOR(8.5)	8.5'	X	X	X	X		
	TP-1WALL(7.5)	7.5'	X	X	X	X		
TP-2	TP-2FLOOR(8.5)	8.5'	X	X	X	X		
	TP-2FOOTING(4.5)	4.5'	X	X	X	X		
	TP-2WELL(7.5)	7.5'	X	X	X	X		
TP-3	TP-3FLOOR(9.5)	9.5'	X	X	X	X		
	TP-3WALL(8.5)	8.5'	X	X	X	X		
TP-4A	TP-4AFLOOR(3)	3'	X	X	X	X		
	TP-4AWALL(2.5)	2.5'	X	X	X	X		
	Exposed Pipe	n/a					X	
TP-5	TP-5FLOOR(9)	9'	X	X	X	X		
	TP-5WALL(8)	8'	X	X	X	X		

Table 1
Sample Summary
Former Ludlow Street Works
Consolidated Edison Company of New York
Site Characterization - June and July 2010

Location	Sample ID	Depth (bgs)	TCL VOCs	TCL SVOCs	TAL Metals	Cyanide	Hydrocarbon Fingerprint	Dissolved Metals
GROUNDWATER SAMPLES								
MW-1	MW-1	NA	X	X	X	X		
MW-2	MW-2	NA	X	X	X	X		X
MW-3	MW-3	NA	X	X	X	X		
MW-4	MW-4	NA	X	X	X	X		X
MW-5	MW-5	NA	X	X	X	X		
MW-5	MW-15*	NA	X	X	X	X		

X - Indicates sample was analyzed

* - Indicates a duplicate sample.

Table 2
Summary of Groundwater Elevations
Former Ludlow Street Works
Consolidated Edison Company of New York
Site Characterization - June and July 2010

Monitoring Well Number	Total Well Depth (feet)	Top of Casing Elevation (feet AMSL)	Depth to Water (feet)⁽¹⁾	Groundwater Elevation (feet AMSL)
MW-1	21.90	20.35	13.25	7.10
MW-2	25.04	16.28	10.32	5.96
MW-3	23.25	19.35	16.06	3.29
MW-4	24.18	18.82	13.40	5.42
MW-5	22.98	17.37	14.38	2.99

Notes:

(1) Measured from top of PVC on July 12, 2010

AMSL = Above Mean Sea Level

Elevations are based on the North American Vertical Datum of 1988 (NAVD88).

Table 3
 Summary of Soil Analytical Data
 Former Ludlow Street Works
 Consolidated Edison Company of New York
 Site Characterization - June and July 2010

Consolidated Edison Ludlow Street Site Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID:	MW-1(11-13)	MW-1(23-25)	MW-2(13-15)	MW-2(23-25)	MW-3 (9-11)	MW-3(31-33)	MW-4 (5-7)	MW-4(23-25)	MW-5 (4-6)	MW-5 (7-9)
CAS NO.	COMPOUND		Lab Sample Id	B2787-11	B2787-12	B2787-06	B2787-07	B2787-01	B2787-05	B2787-09	B2787-10	B2787-08	B2787-01
		UNITS:	11-13'	23-25'	13-15'	23-25'	9-11'	31-33'	5-7'	23-25'	4-6'	7-9'	
		Source:	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	
		SDG:	B2787	B2787	B2787	B2787	B2787	B2787	B2787	B2787	B2787	B2845	
		Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
		Sampled:	6/22/2010	6/22/2010	6/21/2010	6/21/2010	6/18/2010	6/21/2010	6/23/2010	6/23/2010	6/23/2010	6/25/2010	
		Validated:	8/27/2010	8/27/2010	8/27/2010	8/27/2010	8/27/2010	8/27/2010	8/27/2010	8/27/2010	8/27/2010	8/29/2010	
VOLATILES													
67-64-1	Acetone	0.05	mg/Kg	ND	ND	ND	0.01 J	ND	ND	ND	0.0067 J	ND	ND
71-43-2	Benzene	0.06	mg/Kg	ND	ND	ND	ND	16	ND	ND	0.0011 J	ND	ND
78-93-3	2-Butanone	0.12	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
75-15-0	Carbon Disulfide	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
74-87-3	Chloromethane	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
100-41-4	Ethyl Benzene	1	mg/Kg	ND	ND	ND	ND	62	ND	ND	ND	ND	ND
98-82-8	Isopropylbenzene	NS	mg/Kg	ND	ND	0.016 J	ND	3.5	ND	ND	ND	ND	ND
108-10-1	4-Methyl-2-Pentanone	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1634-04-4	Methyl tert-butyl Ether	0.93	mg/Kg	ND	ND	ND	ND	ND	ND	ND	0.0018 J	ND	ND
108-87-2	Methylcyclohexane	NS	mg/Kg	ND	ND	0.064	ND	0.28 J	ND	ND	ND	ND	ND
75-09-2	Methylene Chloride	0.05	mg/Kg	ND	ND	ND	ND	ND	ND	ND	0.0019 J	0.0026 J	ND
100-42-5	Styrene	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
127-18-4	Tetrachloroethene	1.3	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
108-88-3	Toluene	0.7	mg/Kg	ND	ND	ND	ND	66	ND	ND	ND	ND	ND
1330-20-7	o-Xylene	0.26	mg/Kg	ND	ND	0.034	ND	54	ND	ND	ND	ND	ND
136777-61-2	m/p-Xylenes	0.26	mg/Kg	ND	ND	ND	ND	110	ND	ND	ND	ND	ND
Total VOCs		NS	mg/Kg	ND	ND	0.114	0.01	311.78	ND	ND	0.0096	0.0019	0.0026
SEMI-VOLATILES													
98-86-2	Acetophenone	NS	mg/Kg	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
92-52-4	1,1-Biphenyl	NS	mg/Kg	ND	ND	0.13 J	ND	37	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
85-68-7	Butylbenzylphthalate	NS	mg/Kg	ND	ND	ND	ND	2.9 J	ND	ND	ND	ND	ND
86-74-8	Carbazole	NS	mg/Kg	ND	ND	ND	ND	2.7 J	ND	1.9 J	ND	ND	ND
132-64-9	Dibenzofuran	NS	mg/Kg	ND	ND	ND	ND	11	ND	1 J	ND	ND	ND
131-11-3	Dimethylphthalate	NS	mg/Kg	0.24 J	0.29 J	0.36 J	0.33 J	ND	0.39	0.5 J	0.33 J	ND	ND
87-86-5	Pentachloropheno	0.8	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PAHS													
83-32-9	Acenaphthene	20	mg/Kg	ND	ND	ND	ND	51	ND	1.3 J	ND	ND	ND
208-96-8	Acenaphthylene	100	mg/Kg	ND	ND	ND	ND	76	ND	ND	1.3 J	ND	ND
120-12-7	Anthracene	100	mg/Kg	ND	ND	ND	ND	81	ND	3.2	ND	ND	0.75 J
120-12-7	Benzo(a)anthracene	1	mg/Kg	ND	ND	ND	ND	48	ND	7.3	ND	ND	1.5 J
50-32-8	Benzo(a)pyrene	1	mg/Kg	ND	ND	ND	ND	35	ND	6.3	ND	ND	1.1 J
205-99-2	Benzo(b)fluoranthene	1	mg/Kg	ND	ND	ND	ND	28	ND	8.9	ND	ND	1.5 J
191-24-2	Benzo(g,h,i)perylene	100	mg/Kg	ND	ND	ND	ND	12	ND	4.2	ND	ND	0.69 J
207-08-9	Benzo(k)fluoranthene	0.8	mg/Kg	ND	ND	ND	ND	8.8	ND	2.1	ND	ND	0.56 J
218-01-9	Chrysene	1	mg/Kg	ND	ND	ND	ND	41	ND	7	ND	ND	1.3 J
53-70-3	Dibenz(a,h)anthracene	0.33	mg/Kg	ND	ND	ND	ND	3.8 J	ND	0.6 J	ND	ND	ND
206-44-0	Fluoranthene	100	mg/Kg	ND	ND	ND	ND	78	ND	18	ND	ND	3.2 J
86-73-7	Fluorene	30	mg/Kg	ND	ND	0.081 J	ND	100	ND	1.3 J	ND	ND	ND
193-39-5	Indeno(1,2,3-cd)pyrene	0.5	mg/Kg	ND	ND	ND	ND	11	ND	3.7	ND	ND	0.64 J
91-57-6	2-Methylnaphthalene	NS	mg/Kg	ND	ND	0.66	ND	450	ND	0.68 J	ND	ND	ND
91-20-3	Naphthalene	12	mg/Kg	ND	ND	0.066 J	ND	820	ND	1.5 J	ND	ND	ND
85-01-8	Phenanthrene	100	mg/Kg	ND	ND	0.19 J	ND	270	0.094 J	15	ND	ND	3.2 J
129-00-0	Pyrene	100	mg/Kg	ND	ND	ND	ND	110	ND	15	ND	ND	2.6 J
Total PAHs		NS	mg/Kg	ND	ND	0.997	ND	2223.6	0.094	96.08	ND	1.3	17.04
Total SVOCs		NS	mg/Kg	0.24	0.29	1.487	0.33	2277.2	0.484	99.48	0.33	1.3	17.04

Notes:

- (1) 6NYCRR Part 375 Environmental Remediation Programs (December 14, 2006)
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- (5) Shaded values exceed 6NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives

Table 3
 Summary of Soil Analytical Data
 Former Ludlow Street Works
 Consolidated Edison Company of New York
 Site Characterization - June and July 2010

Consolidated Edison Ludlow Street Site Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID:	MW-1(11-13)	MW-1(23-25)	MW-2(13-15)	MW-2(23-25)	MW-3 (9-11)	MW-3(31-33)	MW-4 (5-7)	MW-4(23-25)	MW-5 (4-6)	MW-5 (7-9)
CAS NO.	COMPOUND		Lab Sample Id	B2787-11	B2787-12	B2787-06	B2787-07	B2787-01	B2787-05	B2787-09	B2787-10	B2787-08	B2845-01
		UNITS:	Depth:	23-25'	23-25'	13-15'	23-25'	9-11'	31-33'	5-7'	23-25'	4-6'	7-9'
			Source:	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech
			SDG:	B2787	B2787	B2787	B2787	B2787	B2787	B2787	B2787	B2787	B2845
			Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampled:	6/22/2010	6/22/2010	6/21/2010	6/21/2010	6/18/2010	6/21/2010	6/23/2010	6/23/2010	6/23/2010	6/25/2010
			Validated:	8/27/2010	8/27/2010	8/27/2010	8/27/2010	8/27/2010	8/27/2010	8/27/2010	8/27/2010	8/27/2010	8/29/2010
INORGANICS													
7429-90-5	Aluminum	NS	mg/Kg	5080	2760	4770	9550	3010	1090	2760	5360	3290	6560
7440-36-0	Antimony	NS	mg/Kg	ND	ND	ND	ND	ND	ND	0.61 J	ND	ND	1.14 J
7440-38-2	Arsenic	13	mg/Kg	ND	ND	ND	0.33 J	ND	ND	4.57	ND	2.33	4.19
7440-39-3	Barium	350	mg/Kg	31.1	15.4	21.5	57.1	28.1	12.8	77.9	39.5	68.7	128
7440-41-7	Beryllium	7.2	mg/Kg	0.31 J	0.19 J	0.39	0.66	0.24	0.12 J	0.26 J	0.49	0.29	0.37
7440-43-9	Cadmium	2.5	mg/Kg	0.56	0.26 J	1.21	1.44	0.75	0.13 J	0.72	0.8	0.73	1.66
7440-70-2	Calcium	NS	mg/Kg	3800	367	722	672	299	445	12000	1240	12900	16700
7440-47-3	Chromium	NS	mg/Kg	10.8	7.14	9.69	20.2	8.04	4.11	7.83	10.9	22.2	17.4
7440-48-4	Cobalt	NS	mg/Kg	4.38	2.32	6.65	8.38	1.58	1.37	2.63	6.13	3.73	5.67
7440-50-8	Copper	50	mg/Kg	7.25	2.86	27.4	14.1	10.6	3.46	34.6	9	21.9	44.9
7439-89-6	Iron	NS	mg/Kg	11000	5930	11000	20200	6650	3620	7820	14900	10200	17600
7439-92-1	Lead	63	mg/Kg	11.7	3.67	255	10.1	183	2.09	310	7.99	70.8	144
7439-95-4	Magnesium	NS	mg/Kg	3730	1220	2120	3810	1110	770	4230	2380	6020	8270
7439-96-5	Manganese	1600	mg/Kg	244	67.2	199	561	46.2	117	133	343	95.2	249
7439-97-6	Mercury	0.18	mg/Kg	0.024	0.008 J	0.222	0.006 J	0.014	0.002 J	0.44	0.003 J	0.467	0.194
7440-02-0	Nickel	30	mg/Kg	9.53	5.23	14.1	19.7	4.79	3.82	8.43	13.7	9.72	17.3
7440-09-7	Potassium	NS	mg/Kg	665	471	956	2000	680	271	447	1420	403	933
7782-49-2	Selenium	3.9	mg/Kg	2.15	1.02	1.87	2.88	1.23	0.54 J	1.63	2.29	1.65	2.7
7440-22-4	Silver	2	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7440-23-5	Sodium	NS	mg/Kg	279	133	7430	7090	10200	186	593	5260	2410	4850
7440-28-0	Thallium	NS	mg/Kg	0.37 J	ND	0.51 J	0.42 J	0.62 J	ND	ND	0.42 J	0.54 J	0.61 J
7440-62-2	Vanadium	NS	mg/Kg	13.8	8.01	14.2	23.2	9.21	4.01	18	16.1	18.6	25.5
7440-66-6	Zinc	109	mg/Kg	26	12.6	47.6	46.4	15.5	9.84	178	32.6	81.9	196 J
57-12-5	Cyanide	27	mg/Kg	ND	ND	ND	ND	12	ND	1.86	ND	70	15

Notes:

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Table 3
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 Former Ludlow Street Works
 Consolidated Edison Company of New York
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Consolidated Edisor Ludlow Street Site Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID:	MW-5(23-25)	SB-1(18-20)	SB-1(24-26)	SB-1(32-34)	SB-2(20-22)	SB-4(20-22)	SB-4(30-32)	SB-5(21-23)	SB-5(29-31)	SB-6(13-15)
CAS NO.	COMPOUND		Lab Sample Id	B2845-02	B2899-07	B2899-01	B2899-04	B2899-08	B2886-02	B2886-03	B2886-11	B2886-10	B2886-04
		UNITS:	Depth:	23-25'	18-20'	24-26'	32-34'	20-22'	20-22'	30-32'	21-23'	29-31'	13-15'
			Source:	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech
			SDG:	B2845	B2899	B2899	B2899	B2899	B2886	B2886	B2886	B2886	B2886
			Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampled:	6/28/2010	7/2/2010	7/2/2010	7/2/2010	7/1/2010	6/30/2010	6/30/2010	7/1/2010	7/1/2010	6/30/2010
			Validated:	8/29/2010	8/31/2010	8/31/2010	8/31/2010	8/31/2010	8/30/2010	8/30/2010	8/30/2010	8/30/2010	8/30/2010
VOLATILES													
67-64-1	Acetone	0.05	mg/Kg	0.029 J	4.2	0.11	0.0085 J	0.077	ND	ND	ND	ND	ND
71-43-2	Benzene	0.06	mg/Kg	0.0022 J	0.0027 J	ND	ND	0.0014 J	0.12 J	ND	ND	ND	7 J
78-93-3	2-Butanone	0.12	mg/Kg	ND	0.041	0.0038 J	ND	ND	ND	ND	ND	ND	ND
75-15-0	Carbon Disulfide	NS	mg/Kg	ND	0.33 J	ND	ND	ND	ND	ND	ND	ND	ND
74-87-3	Chloromethane	NS	mg/Kg	0.0058 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
100-41-4	Ethyl Benzene	1	mg/Kg	0.014	0.062	ND	ND	ND	ND	ND	ND	ND	16
98-82-8	Isopropylbenzene	NS	mg/Kg	0.0021 J	0.0094	ND	ND	0.17 J	ND	ND	ND	ND	2.8 J
108-10-1	4-Methyl-2-Pentanone	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1634-04-4	Methyl tert-butyl Ether	0.93	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
108-87-2	Methylcyclohexane	NS	mg/Kg	0.011	ND	ND	ND	ND	ND	ND	ND	ND	ND
75-09-2	Methylene Chloride	0.05	mg/Kg	ND	0.0017 J	ND	ND	ND	0.0017 J	0.0017 J	0.0017 J	0.0017 J	ND
100-42-5	Styrene	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.38 J
127-18-4	Tetrachloroethene	1.3	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
108-88-3	Toluene	0.7	mg/Kg	0.0032 J	0.008	ND	ND	ND	ND	ND	ND	ND	2.7 J
1330-20-7	o-Xylene	0.26	mg/Kg	0.0061	0.038	ND	ND	ND	ND	ND	ND	ND	10
136777-61-2	m/p-Xylenes	0.26	mg/Kg	0.0088 J	0.032	ND	ND	ND	ND	ND	ND	ND	22 J
Total VOCs		NS	mg/Kg	0.0822	4.7248	0.1138	0.0085	0.0784	0.29	0.0017	0.0017	0.0017	60.88
SEMI-VOLATILES													
98-86-2	Acetophenone	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
100-52-7	Benzaldehyde	NS	mg/Kg	ND	0.57	ND	ND	0.11 J	ND	ND	ND	ND	ND
92-52-4	1,1-Biphenyl	NS	mg/Kg	0.1 J	ND	ND	ND	0.41	ND	0.3 J	0.52 J	0.052 J	2
117-81-7	Bis(2-ethylhexyl)phthalat	NS	mg/Kg	ND	0.35 J	0.17 J	ND	ND	ND	ND	ND	ND	ND
85-68-7	Butylbenzylphthalat	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
86-74-8	Carbazole	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.15 J
132-64-9	Dibenzofuran	NS	mg/Kg	ND	ND	ND	ND	0.22 J	ND	0.098 J	ND	ND	0.54
131-11-3	Dimethylphthalat	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
87-86-5	Pentachloropheno	0.8	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PAHs													
83-32-9	Acenaphthene	20	mg/Kg	0.21 J	ND	ND	ND	ND	1.2	1.3 J	1.2	0.21 J	7.1
208-96-8	Acenaphthylene	100	mg/Kg	0.64	ND	ND	ND	ND	1.1	12	0.73	0.1 J	4
120-12-7	Anthracene	100	mg/Kg	0.28 J	ND	ND	ND	ND	2.4	3.6	1.1	0.18 J	4.7
120-12-7	Benzo(a)anthracene	1	mg/Kg	0.95	ND	ND	0.051 J	ND	1.3	21	0.95	0.13 J	2.3
50-32-8	Benzo(a)pyrene	1	mg/Kg	0.7	ND	ND	ND	ND	0.85	14	0.63	0.076 J	1.5
205-99-2	Benzo(b)fluoranthene	1	mg/Kg	0.57	ND	ND	0.059 J	ND	0.65	11	0.48	0.058 J	1.2
191-24-2	Benzo(g,h,i)perylene	100	mg/Kg	0.29 J	ND	ND	ND	ND	0.29 J	4.8	0.21 J	ND	0.51
207-08-9	Benzo(k)fluoranthene	0.8	mg/Kg	0.18 J	ND	ND	ND	ND	0.24 J	3.6	0.19 J	ND	0.33 J
218-01-9	Chrysene	1	mg/Kg	0.78	ND	ND	0.061 J	ND	1.2	20	0.85	0.1 J	2
53-70-3	Dibenz(a,h)anthracene	0.33	mg/Kg	0.068 J	ND	ND	ND	ND	0.099 J	1.6 J	0.075 J	ND	0.17 J
206-44-0	Fluoranthene	100	mg/Kg	1.4	0.06 J	ND	ND	ND	2.3	39	1.4	0.2 J	5
86-73-7	Fluorene	30	mg/Kg	0.2 J	ND	ND	ND	ND	2.8	1.1 J	1	0.17 J	6.8
193-39-5	Indeno(1,2,3-cd)pyrene	0.5	mg/Kg	0.24 J	ND	ND	ND	ND	0.26 J	4.2	0.19 J	ND	0.44
91-57-6	2-Methylnaphthalene	NS	mg/Kg	0.33 J	0.074 J	ND	ND	0.06 J	ND	ND	1.7	0.29 J	27
91-20-3	Naphthalene	12	mg/Kg	0.9	0.36 J	ND	ND	0.21 J	1.9	ND	1.9	0.31 J	63
85-01-8	Phenanthrene	100	mg/Kg	0.48	0.12 J	0.077 J	ND	0.095 J	10	0.38 J	3.6	0.62	18
129-00-0	Pyrene	100	mg/Kg	2	0.075 J	ND	ND	0.11 J	3.6	52	2	0.3 J	6.6
Total PAHs		NS	mg/Kg	10.218	0.689	0.077	ND	0.766	30.189	189.58	18.205	2.744	150.65
Total SVOCs		NS	mg/Kg	10.318	1.609	0.247	ND	0.876	30.819	189.58	18.603	2.796	153.34

- Notes:
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CAS NO.	COMPOUND		Lab Sample Id	B2845-02	B2899-07	B2899-01	B2899-04	B2899-08	B2886-02	B2886-03	B2886-11	B2886-10	B2886-04
			Depth:	23-25'	18-20'	24-26'	32-34'	20-22'	20-22'	30-32'	21-23'	29-31'	13-15'
			Source:	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech
			SDG:	B2845	B2899	B2899	B2899	B2899	B2886	B2886	B2886	B2886	B2886
			Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampled:	6/28/2010	7/2/2010	7/2/2010	7/2/2010	7/1/2010	6/30/2010	6/30/2010	7/1/2010	7/1/2010	6/30/2010
			Validated:	8/29/2010	8/31/2010	8/31/2010	8/31/2010	8/31/2010	8/30/2010	8/30/2010	8/30/2010	8/30/2010	8/30/2010
			UNITS:										
INORGANICS													
7429-90-5	Aluminum	NS	mg/Kg	2170	5580	1540	2850	10900	3050	1590	4140	1540	6070
7440-36-0	Antimony	NS	mg/Kg	ND	0.55 J	ND	ND	ND	ND	ND	ND	ND	ND
7440-38-2	Arsenic	13	mg/Kg	ND	ND	0.51 J	0.49 J	0.98 J	0.45 J	ND	ND	ND	ND
7440-39-3	Barium	350	mg/Kg	10.2	42.8	7.53	15.3	67.7	20.5	19.7	38.9	23.4	29.2
7440-41-7	Beryllium	7.2	mg/Kg	0.19 J	0.29	0.14 J	0.2 J	0.41	0.25 J	0.16 J	0.28	0.11 J	0.45
7440-43-9	Cadmium	2.5	mg/Kg	0.2 J	1.46	0.19 J	0.34 J	1.03	0.57	0.22 J	0.56	0.2 J	0.78
7440-70-2	Calcium	NS	mg/Kg	540	46100	1990 J	1610 J	37300	12200	631	7260	627	547
7440-47-3	Chromium	NS	mg/Kg	5.72	16.6 J	6.85	6.73	11.3 J	8.32	4.3	9.02	7.36	11.2
7440-48-4	Cobalt	NS	mg/Kg	2.02	8.8	2.27	4.26	3.37	3.69	1.52	4.92	2.34	5.67
7440-50-8	Copper	50	mg/Kg	4.48	19.1	3.76	10.9	11.7	10	3.41	6.36	7.23	9.28
7439-89-6	Iron	NS	mg/Kg	4940	17500	5570 J	7180 J	10300	8140	3940	8770	4520	11600
7439-92-1	Lead	63	mg/Kg	9.81	42	5.35	4	125	15	4.21	9.66	2.99	6.85
7439-95-4	Magnesium	NS	mg/Kg	1190	14000	1110 J	2030 J	4020	6860	923	3960	1360	2730
7439-96-5	Manganese	1600	mg/Kg	51.1	197	44.4 J	80.9 J	190	602	45.8	524	229	133
7439-97-6	Mercury	0.18	mg/Kg	0.011 J	0.058	0.055	0.021	0.105	0.004 J	ND	0.005 J	ND	ND
7440-02-0	Nickel	30	mg/Kg	5.98	24.6	6.32	9.63	9.12	7.9	4.27	11.5	6.27	13
7440-09-7	Potassium	NS	mg/Kg	594	890	443	740	1640	834	546	981	399	1440
7782-49-2	Selenium	3.9	mg/Kg	0.89 J	0.7 J	0.56 J	0.75 J	ND	0.45 J	0.65 J	0.63 J	0.58 J	0.74 J
7440-22-4	Silver	2	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7440-23-5	Sodium	NS	mg/Kg	1440	8340	3220 J	1620 J	4160	7330	1690	7320	708	7650
7440-28-0	Thallium	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7440-62-2	Vanadium	NS	mg/Kg	6.82	14	7.84	7.83	19.9	10.1	5.02	10.4	5.79	16.6
7440-66-6	Zinc	109	mg/Kg	13.7 J	38.9	13.1	17.9	63.2	18.3	10.2	22.1	10.8	25.3
57-12-5	Cyanide	27	mg/Kg	ND	7.18 J	2.16	ND	6.22 J	ND	13	1.05	ND	0.717 J

Notes:

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Consolidated Edisor Ludlow Street Site Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID: Lab Sample Id Depth: Source: SDG: Matrix: Sampled: Validated:	Dup of SB-6(13-15)							TP-1FLOOR(8.5)	TP-1WALL(7.5)	TP-2FLOOR(8.5)	TP-2FOOTING(4.5)	TP-2WELL(7.5)
				SB-16 (13-15)	SB-6(29-31)	SB-7(15-17)	SB-7(33-35)	TP-1FLOOR(8.5)	TP-1WALL(7.5)	TP-2FLOOR(8.5)					
CAS NO.	COMPOUND		UNITS:	SB-16 (13-15)	SB-6(29-31)	SB-7(15-17)	SB-7(33-35)	TP-1FLOOR(8.5)	TP-1WALL(7.5)	TP-2FLOOR(8.5)	TP-2FOOTING(4.5)	TP-2WELL(7.5)			
VOLATILES															
67-64-1	Acetone	0.05	mg/Kg	ND	ND	11 J	ND	ND	ND	ND	ND	ND	ND		
71-43-2	Benzene	0.06	mg/Kg	11	ND	2.2	ND	ND	ND	ND	ND	ND	0.0027 J		
78-93-3	2-Butanone	0.12	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
75-15-0	Carbon Disulfide	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
74-87-3	Chloromethane	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
100-41-4	Ethyl Benzene	1	mg/Kg	27	0.0017 J	99 J	ND	ND	ND	ND	ND	ND	ND		
98-82-8	Isopropylbenzene	NS	mg/Kg	3.8	ND	19 J	ND	ND	ND	ND	ND	ND	ND		
108-10-1	4-Methyl-2-Pentanone	NS	mg/Kg	ND	ND	16	ND	ND	ND	ND	ND	ND	ND		
1634-04-4	Methyl tert-butyl Ether	0.93	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
108-87-2	Methylcyclohexane	NS	mg/Kg	0.5 J	ND	11	ND	ND	ND	ND	ND	ND	ND		
75-09-2	Methylene Chloride	0.05	mg/Kg	ND	0.0018 J	ND	0.0018 J	ND	ND	0.0019 J	ND	ND	0.0032 J		
100-42-5	Styrene	NS	mg/Kg	0.67	ND	2.7	ND	ND	ND	ND	ND	ND	ND		
127-18-4	Tetrachloroethene	1.3	mg/Kg	ND	ND	ND	ND	ND	0.0014 J	ND	ND	ND	0.0012 J		
108-88-3	Toluene	0.7	mg/Kg	10 J	0.0013 J	8.4	ND	ND	ND	ND	0.0033 J	ND	0.0016 J		
1330-20-7	o-Xylene	0.26	mg/Kg	15	0.0012 J	69 J	ND	ND	ND	ND	ND	ND	ND		
136777-61-2	m/p-Xylenes	0.26	mg/Kg	30	ND	130 J	ND	ND	ND	ND	0.011 J	ND	ND		
Total VOCs		NS	mg/Kg	97.97	0.006	368.3	0.0018	ND	0.0014	0.0019	0.0143	ND	0.0087		
SEMI-VOLATILES															
98-86-2	Acetophenone	NS	mg/Kg	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		
92-52-4	1,1-Biphenyl	NS	mg/Kg	3	ND	30	ND	ND	ND	ND	ND	ND	ND		
117-81-7	Bis(2-ethylhexyl)phthalat	NS	mg/Kg	ND	ND	ND	ND	0.2 J	ND	ND	ND	ND	ND		
85-68-7	Butylbenzylphthalat	NS	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
86-74-8	Carbazole	NS	mg/Kg	0.22 J	ND	0.85 J	ND	ND	ND	ND	ND	ND	ND		
132-64-9	Dibenzofuran	NS	mg/Kg	0.83	ND	8.9	ND	ND	ND	ND	ND	ND	ND		
131-11-3	Dimethylphthalat	NS	mg/Kg	ND	ND	ND	ND	ND	ND	0.5 J	ND	ND	0.42		
87-86-5	Pentachloropheno	0.8	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.44 J		
PAHs															
83-32-9	Acenaphthene	20	mg/Kg	9.3	0.065 J	46	ND	ND	ND	ND	ND	ND	ND		
208-96-8	Acenaphthylene	100	mg/Kg	6.7	0.061 J	90	ND	ND	ND	ND	ND	ND	ND		
120-12-7	Anthracene	100	mg/Kg	7.4	ND	58	ND	ND	ND	ND	ND	ND	ND		
120-12-7	Benzo(a)anthracene	1	mg/Kg	4	ND	35	ND	ND	ND	ND	ND	ND	0.091 J		
50-32-8	Benzo(a)pyrene	1	mg/Kg	2.5	ND	22	ND	ND	ND	ND	ND	ND	0.075 J		
205-99-2	Benzo(b)fluoranthene	1	mg/Kg	2	ND	18	ND	ND	ND	ND	ND	ND	0.11 J		
191-24-2	Benzo(g,h,i)perylene	100	mg/Kg	0.85	ND	7.5	ND	ND	ND	ND	ND	ND	ND		
207-08-9	Benzo(k)fluoranthene	0.8	mg/Kg	0.62	ND	5.9	ND	ND	ND	ND	ND	ND	ND		
218-01-9	Chrysene	1	mg/Kg	3.9	ND	29	ND	ND	ND	ND	ND	ND	0.11 J		
53-70-3	Dibenz(a,h)anthracene	0.33	mg/Kg	0.29 J	ND	2.6 J	ND	ND	ND	ND	ND	ND	ND		
206-44-0	Fluoranthene	100	mg/Kg	8.2	0.054 J	60	ND	ND	0.065 J	ND	ND	ND	0.19 J		
86-73-7	Fluorene	30	mg/Kg	11	0.081 J	92	ND	ND	ND	ND	ND	ND	ND		
193-39-5	Indeno(1,2,3-cd)pyrene	0.5	mg/Kg	0.75	ND	6.8	ND	ND	ND	ND	ND	ND	ND		
91-57-6	2-Methylnaphthalene	NS	mg/Kg	25	0.26 J	130	ND	ND	ND	ND	ND	ND	ND		
91-20-3	Naphthalene	12	mg/Kg	75	0.48	250	ND	ND	ND	1 J	ND	ND	0.33 J		
85-01-8	Phenanthrene	100	mg/Kg	28	0.21 J	220	ND	ND	ND	ND	ND	ND	0.11 J		
129-00-0	Pyrene	100	mg/Kg	10	0.083 J	80	0.057 J	ND	ND	ND	ND	ND	0.2 J		
Total PAHs		NS	mg/Kg	195.51	1.294	1152.8	0.057	ND	0.065	1	ND	ND	1.216		
Total SVOCs		NS	mg/Kg	199.56	1.294	1192.55	0.057	0.2	0.065	1.5	ND	ND	2.076		

Notes:

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Table 3
 Summary of Soil Analytical Data
 Former Ludlow Street Works
 Consolidated Edison Company of New York
 Site Characterization - June and July 2010

Consolidated Edison Ludlow Street Site Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID: Lab Sample Id Depth: Source: SDG: Matrix: Sampled: Validated:	Dup of SB-6(13-15)							TP-1FLOOR(8.5)	TP-1WALL(7.5)	TP-2FLOOR(8.5)	TP-2FOOTING(4.5)	TP-2WELL(7.5)
				SB-16 (13-15)	SB-6(29-31)	SB-7(15-17)	SB-7(33-35)	TP-1FLOOR(8.5)	TP-1WALL(7.5)	TP-2FLOOR(8.5)					
CAS NO.	COMPOUND		UNITS:												
INORGANICS															
7429-90-5	Aluminum	NS	mg/Kg	3220	1380	5480	2510	1580	1930	2840	6170	2480			
7440-36-0	Antimony	NS	mg/Kg	ND	ND	ND	ND	ND	ND	0.51 J	ND	ND			
7440-38-2	Arsenic	13	mg/Kg	ND	ND	0.67 J	0.37 J	2.13	3.58	4.53	ND	3.46			
7440-39-3	Barium	350	mg/Kg	13.7	15.5	23.4	19.6	52.3	67.5	436	63.5	387			
7440-41-7	Beryllium	7.2	mg/Kg	0.27	0.14 J	0.42	0.2 J	0.18 J	0.2 J	0.25	0.42	0.24 J			
7440-43-9	Cadmium	2.5	mg/Kg	0.38	0.16 J	0.95	0.3	0.32 J	0.75	1.63	0.78	1.56			
7440-70-2	Calcium	NS	mg/Kg	549	515	634	2640	19300	5700	31600	3000	31900			
7440-47-3	Chromium	NS	mg/Kg	7.65	5.51	11.4	7.01	4.2	6.78	8.31	11	6.72			
7440-48-4	Cobalt	NS	mg/Kg	3.43	1.46	5.93	2.65	2.87	3.39	2.71	5.6	2.32			
7440-50-8	Copper	50	mg/Kg	5.75	4.96	8.5	6.84	16.7	17.8	8.58	10.3	8.98			
7439-89-6	Iron	NS	mg/Kg	6580	4450	11500	6610	3450	5500	10900	11800	9260			
7439-92-1	Lead	63	mg/Kg	4.04	2.51	185	3.25	77.8	203	303	62.3	339			
7439-95-4	Magnesium	NS	mg/Kg	1340	1040	2190	2830	7490	1720	3870	2150	3570			
7439-96-5	Manganese	1600	mg/Kg	63.2	148	94.2	249	62	98.3	203	296	216			
7439-97-6	Mercury	0.18	mg/Kg	ND	ND	0.276	ND	0.231 J	0.227 J	0.214	0.07	0.258			
7440-02-0	Nickel	30	mg/Kg	8.34	4.92	12.2	7.78	6.57	9.55	9.24	12.4	6.27			
7440-09-7	Potassium	NS	mg/Kg	752	412	1260	753	227	377	448	1030	487			
7782-49-2	Selenium	3.9	mg/Kg	0.58 J	0.57 J	1.84	0.56 J	0.88 J	0.95 J	1.52	1.75	1.54			
7440-22-4	Silver	2	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND			
7440-23-5	Sodium	NS	mg/Kg	4410	175	12200	786	5960	6240	6960	7550	7350			
7440-28-0	Thallium	NS	mg/Kg	ND	ND	ND	ND	ND	ND	0.42 J	0.29 J	0.29 J			
7440-62-2	Vanadium	NS	mg/Kg	10.3	4.83	13.9	7.66	9.74	20.2	19.7	20.7	17.1			
7440-66-6	Zinc	109	mg/Kg	16.7	9.93	27.7 J	15.6	81.1	243	784	134	634			
57-12-5	Cyanide	27	mg/Kg	ND	ND	6.3	ND	8.97	7.14	38	21	40			

Notes:

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Table 3
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 Former Ludlow Street Works
 Consolidated Edison Company of New York
 Site Characterization - June and July 2010

Consolidated Edisor Ludlow Street Site Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID:	TP-3FLOOR(9.5)
CAS NO.	COMPOUND		Lab Sample Id	B2731-05
			Depth:	9.5'
			Source:	Chemtech
			SDG:	B2731
			Matrix:	SOIL
			Sampled:	6/17/2010
			Validated:	8/26/2010
			UNITS:	
VOLATILES				
67-64-1	Acetone	0.05	mg/Kg	0.043
71-43-2	Benzene	0.06	mg/Kg	0.034
78-93-3	2-Butanone	0.12	mg/Kg	0.0084 J
75-15-0	Carbon Disulfide	NS	mg/Kg	ND
74-87-3	Chloromethane	NS	mg/Kg	ND
100-41-4	Ethyl Benzene	1	mg/Kg	0.03
98-82-8	Isopropylbenzene	NS	mg/Kg	0.0018 J
108-10-1	4-Methyl-2-Pentanone	NS	mg/Kg	ND
1634-04-4	Methyl tert-butyl Ether	0.93	mg/Kg	ND
108-87-2	Methylcyclohexane	NS	mg/Kg	ND
75-09-2	Methylene Chloride	0.05	mg/Kg	ND
100-42-5	Styrene	NS	mg/Kg	0.011
127-18-4	Tetrachloroethene	1.3	mg/Kg	ND
108-88-3	Toluene	0.7	mg/Kg	0.047
1330-20-7	o-Xylene	0.26	mg/Kg	0.017
136777-61-2	m/p-Xylenes	0.26	mg/Kg	0.041
	Total VOCs	NS	mg/Kg	0.2332
SEMIVOLATILES				
98-86-2	Acetophenone	NS	mg/Kg	ND
100-52-7	Benzaldehyde	NS	mg/Kg	0.06 J
92-52-4	1,1-Biphenyl	NS	mg/Kg	ND
117-81-7	Bis(2-ethylhexyl)phthalate	NS	mg/Kg	ND
85-68-7	Butylbenzylphthalate	NS	mg/Kg	ND
86-74-8	Carbazole	NS	mg/Kg	ND
132-64-9	Dibenzofuran	NS	mg/Kg	ND
131-11-3	Dimethylphthalate	NS	mg/Kg	ND
87-86-5	Pentachloropheno	0.8	mg/Kg	ND
PAHs				
83-32-9	Acenaphthene	20	mg/Kg	ND
208-96-8	Acenaphthylene	100	mg/Kg	ND
120-12-7	Anthracene	100	mg/Kg	ND
120-12-7	Benzo(a)anthracene	1	mg/Kg	0.088 J
50-32-8	Benzo(a)pyrene	1	mg/Kg	0.084 J
205-99-2	Benzo(b)fluoranthene	1	mg/Kg	0.11 J
191-24-2	Benzo(g,h,i)perylene	100	mg/Kg	0.059 J
207-08-9	Benzo(k)fluoranthene	0.8	mg/Kg	ND
218-01-9	Chrysene	1	mg/Kg	0.11 J
53-70-3	Dibenz(a,h)anthracene	0.33	mg/Kg	ND
206-44-0	Fluoranthene	100	mg/Kg	0.16 J
86-73-7	Fluorene	30	mg/Kg	ND
193-39-5	Indeno(1,2,3-cd)pyrene	0.5	mg/Kg	0.054 J
91-57-6	2-Methylnaphthalene	NS	mg/Kg	0.1 J
91-20-3	Naphthalene	12	mg/Kg	0.53
85-01-8	Phenanthrene	100	mg/Kg	0.073 J
129-00-0	Pyrene	100	mg/Kg	0.16 J
	Total PAHs	NS	mg/Kg	1.528
	Total SVOCs	NS	mg/Kg	1.588

Notes:

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Table 3
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 Former Ludlow Street Works
 Consolidated Edison Company of New York
 Site Characterization - June and July 2010

Consolidated Edisor Ludlow Street Site Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID:	TP-3FLOOR(9.5)
CAS NO.	COMPOUND		Lab Sample Id	B2731-05
			Depth:	9.5'
			Source:	Chemtech
			SDG:	B2731
			Matrix:	SOIL
			Sampled:	6/17/2010
			Validated:	8/26/2010
			UNITS:	
INORGANICS				
7429-90-5	Aluminum	NS	mg/Kg	6160
7440-36-0	Antimony	NS	mg/Kg	7.11
7440-38-2	Arsenic	13	mg/Kg	35.2
7440-39-3	Barium	350	mg/Kg	1340
7440-41-7	Beryllium	7.2	mg/Kg	0.62
7440-43-9	Cadmium	2.5	mg/Kg	57.3
7440-70-2	Calcium	NS	mg/Kg	7610
7440-47-3	Chromium	NS	mg/Kg	66.7
7440-48-4	Cobalt	NS	mg/Kg	6.44
7440-50-8	Copper	50	mg/Kg	32.7
7439-89-6	Iron	NS	mg/Kg	70900
7439-92-1	Lead	63	mg/Kg	19900
7439-95-4	Magnesium	NS	mg/Kg	4640
7439-96-5	Manganese	1600	mg/Kg	426
7439-97-6	Mercury	0.18	mg/Kg	0.17 J
7440-02-0	Nickel	30	mg/Kg	15.1
7440-09-7	Potassium	NS	mg/Kg	755
7782-49-2	Selenium	3.9	mg/Kg	12.7 J
7440-22-4	Silver	2	mg/Kg	ND
7440-23-5	Sodium	NS	mg/Kg	26000
7440-28-0	Thallium	NS	mg/Kg	ND
7440-62-2	Vanadium	NS	mg/Kg	25.5
7440-66-6	Zinc	109	mg/Kg	8230
57-12-5	Cyanide	27	mg/Kg	26

Notes:

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 Former Ludlow Street Works
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Consolidated Edisor Ludlow Street Site Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID:	TP-3WALL(8.5)	TP-4AFLOOR(3)	TP-4AWALL(2.5)	TP-5FLOOR(9)	TP-5WALL(8)
CAS NO.	COMPOUND		Lab Sample Id	B2731-06 8.5'	B2731-01 3'	B2731-02 2.5'	B2731-03 9'	B2731-04 8'
			Source:	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech
			SDG:	B2731	B2731	B2731	B2731	B2731
			Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampled:	6/17/2010	6/14/2010	6/14/2010	6/15/2010	6/15/2010
			Validated:	8/26/2010	8/26/2010	8/26/2010	8/26/2010	8/26/2010
			UNITS:					
VOLATILES								
67-64-1	Acetone	0.05	mg/Kg	0.022 J	ND	ND	0.0098 J	ND
71-43-2	Benzene	0.06	mg/Kg	0.0047 J	ND	ND	ND	ND
78-93-3	2-Butanone	0.12	mg/Kg	ND	ND	ND	ND	ND
75-15-0	Carbon Disulfide	NS	mg/Kg	ND	ND	ND	ND	ND
74-87-3	Chloromethane	NS	mg/Kg	ND	ND	ND	ND	ND
100-41-4	Ethyl Benzene	1	mg/Kg	0.0017 J	0.015	0.0042 J	ND	ND
98-82-8	Isopropylbenzene	NS	mg/Kg	ND	0.00066 J	ND	ND	ND
108-10-1	4-Methyl-2-Pentanone	NS	mg/Kg	ND	0.03	ND	ND	ND
1634-04-4	Methyl tert-butyl Ether	0.93	mg/Kg	ND	ND	ND	ND	ND
108-87-2	Methylcyclohexane	NS	mg/Kg	ND	ND	ND	ND	ND
75-09-2	Methylene Chloride	0.05	mg/Kg	ND	0.0022 J	ND	ND	ND
100-42-5	Styrene	NS	mg/Kg	ND	ND	ND	ND	ND
127-18-4	Tetrachloroethene	1.3	mg/Kg	ND	ND	ND	ND	ND
108-88-3	Toluene	0.7	mg/Kg	0.004 J	L8	0.078	ND	ND
1330-20-7	o-Xylene	0.26	mg/Kg	0.00099 J	0.021	0.0058	ND	ND
136777-61-2	m/p-Xylenes	0.26	mg/Kg	0.0023 J	0.073 J	0.021	ND	ND
Total VOCs		NS	mg/Kg	0.03569	1.94186	0.109	0.0098	ND
SEMIVOLATILES								
98-86-2	Acetophenone	NS	mg/Kg	0.09 J	ND	ND	ND	ND
100-52-7	Benzaldehyde	NS	mg/Kg	0.14 J	ND	ND	ND	ND
92-52-4	1,1-Biphenyl	NS	mg/Kg	ND	ND	ND	ND	ND
117-81-7	Bis(2-ethylhexyl)phthalate	NS	mg/Kg	ND	ND	ND	ND	ND
85-68-7	Butylbenzylphthalate	NS	mg/Kg	ND	ND	ND	ND	ND
86-74-8	Carbazole	NS	mg/Kg	ND	ND	ND	0.059 J	ND
132-64-9	Dibenzofuran	NS	mg/Kg	ND	ND	ND	0.11 J	ND
131-11-3	Dimethylphthalate	NS	mg/Kg	ND	ND	ND	ND	ND
87-86-5	Pentachloropheno	0.8	mg/Kg	ND	ND	ND	ND	ND
PAHs								
83-32-9	Acenaphthene	20	mg/Kg	ND	ND	ND	ND	ND
208-96-8	Acenaphthylene	100	mg/Kg	ND	ND	ND	0.57	0.21 J
120-12-7	Anthracene	100	mg/Kg	ND	ND	ND	0.29 J	0.1 J
120-12-7	Benzo(a)anthracene	1	mg/Kg	0.1 J	0.11 J	0.054 J	0.95	0.43
50-32-8	Benzo(a)pyrene	1	mg/Kg	0.08 J	0.11 J	0.055 J	0.68	0.34 J
205-99-2	Benzo(b)fluoranthene	1	mg/Kg	0.12 J	0.14 J	0.078 J	0.83	0.47
191-24-2	Benzo(g,h,i)perylene	100	mg/Kg	0.061 J	0.081 J	0.047 J	0.43	0.26 J
207-08-9	Benzo(k)fluoranthene	0.8	mg/Kg	ND	ND	ND	0.3 J	0.14 J
218-01-9	Chrysene	1	mg/Kg	0.15 J	0.1 J	0.054 J	0.99	0.46
53-70-3	Dibenz(a,h)anthracene	0.33	mg/Kg	ND	ND	ND	0.14 J	0.073 J
206-44-0	Fluoranthene	100	mg/Kg	0.21 J	0.15 J	0.091 J	1.2	0.56
86-73-7	Fluorene	30	mg/Kg	ND	ND	ND	0.12 J	ND
193-39-5	Indeno(1,2,3-cd)pyrene	0.5	mg/Kg	0.061 J	0.078 J	ND	0.44	0.27 J
91-57-6	2-Methylnaphthalene	NS	mg/Kg	0.2 J	ND	ND	0.14 J	ND
91-20-3	Naphthalene	12	mg/Kg	0.97	ND	ND	0.19 J	0.093 J
85-01-8	Phenanthrene	100	mg/Kg	0.1 J	ND	ND	0.91	0.34 J
129-00-0	Pyrene	100	mg/Kg	0.23 J	0.13 J	0.089 J	1.2	0.6
Total PAHs		NS	mg/Kg	2.282	0.899	0.468	9.38	4.346
Total SVOCs		NS	mg/Kg	2.512	0.899	0.468	9.549	4.346

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Former Ludlow Street Works
Consolidated Edison Company of New York
Site Characterization - June and July 2010

Consolidated Edison Ludlow Street Site Validated Soil Analytical Data Detected Compound Summary		Unrestricted Use Soil Cleanup Objectives	Sample ID:	TP-3WALL(8.5)	TP-4AFLOOR(3)	TP-4AWALL(2.5)	TP-5FLOOR(9)	TP-5WALL(8)
CAS NO.	COMPOUND		Lab Sample Id	B2731-06	B2731-01	B2731-02	B2731-03	B2731-04
			Depth:	8.5'	3'	2.5'	9'	8'
			Source:	Chemtech	Chemtech	Chemtech	Chemtech	Chemtech
			SDG:	B2731	B2731	B2731	B2731	B2731
			Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampled:	6/17/2010	6/14/2010	6/14/2010	6/15/2010	6/15/2010
			Validated:	8/26/2010	8/26/2010	8/26/2010	8/26/2010	8/26/2010
			UNITS:					
INORGANICS								
7429-90-5	Aluminum	NS	mg/Kg	4970	6020	6260	2880	2610
7440-36-0	Antimony	NS	mg/Kg	2.56	ND	ND	5.39	3.33
7440-38-2	Arsenic	13	mg/Kg	9.95	1.36	0.61 J	51.1	98.4
7440-39-3	Barium	350	mg/Kg	680	46.2	55.9	57.4	92.9
7440-41-7	Beryllium	7.2	mg/Kg	0.31	0.33	0.37	0.38	0.36
7440-43-9	Cadmium	2.5	mg/Kg	15.5	0.62	0.69	2.26	1.52
7440-70-2	Calcium	NS	mg/Kg	6990	4380	2340	10400	283
7440-47-3	Chromium	NS	mg/Kg	27.1	12.3	14.5	7.95	8.28
7440-48-4	Cobalt	NS	mg/Kg	5.26	6.05	6.51	7.34	7.77
7440-50-8	Copper	50	mg/Kg	17.7	18.3	21.5	809	50.4
7439-89-6	Iron	NS	mg/Kg	26900	10100	11500	25900	29700
7439-92-1	Lead	63	mg/Kg	7250	28	38	692	317
7439-95-4	Magnesium	NS	mg/Kg	4850	4920	3880	726	611
7439-96-5	Manganese	1600	mg/Kg	351	264	296	95.2	76.5
7439-97-6	Mercury	0.18	mg/Kg	0.438 J	0.208 J	0.439 J	0.33 J	0.256 J
7440-02-0	Nickel	30	mg/Kg	12.1	16.7	18.1	21.7	27
7440-09-7	Potassium	NS	mg/Kg	723	891	968	496	573
7782-49-2	Selenium	3.9	mg/Kg	4.96 J	1.32 J	1.78 J	10.9 J	9.99 J
7440-22-4	Silver	2	mg/Kg	ND	ND	ND	0.92 J	ND
7440-23-5	Sodium	NS	mg/Kg	12500	32500	12500	8300	18400
7440-28-0	Thallium	NS	mg/Kg	ND	0.39 J	ND	0.4 J	0.67 J
7440-62-2	Vanadium	NS	mg/Kg	15	17.2	21.8	12.7	12.1
7440-66-6	Zinc	109	mg/Kg	2150	94.4	88.1	107	75.9
57-12-5	Cyanide	27	mg/Kg	7.33	25	64	11	6.09

Notes:

- (1) 6NYCRR Part 375 Environmental Remediation Programs (December 14, 2006)
- (2) NS indicates no cleanup objective or background level is available
- (3) ND indicates compound was not detected
- (4) J indicates an estimated concentration
- (5) Shaded values exceed 6NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives

Table 4
Summary of Groundwater Analytical Data
Former Ludlow Street Works
Consolidated Edison Company of New York
Site Characterization - June and July 2010

Consolidated Edison Ludlow Street Site 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	MW-2	MW-3	MW-4	MW-5	Dup of MW-5
CAS NO.	COMPOUND			B2963-01 Chemtech B2963 WATER 7/12/2010 9/1/2010	B2963-03/13 Chemtech B2963 WATER 7/12/2010 9/1/2010	B2963-08 Chemtech B2963 WATER 7/13/2010 9/1/2010	B2963-02/11/15 Chemtech B2963 WATER 7/12-13/2010 9/1/2010	B2963-04 Chemtech B2963 WATER 7/13/2010 9/1/2010	MW-15 B2963-07 Chemtech B2963 WATER 7/13/2010 9/1/2010
			UNITS:						
VOLATILES									
67-64-1	Acetone	5	ug/L	ND	13 J	ND	ND	88 J	140 J
71-43-2	Benzene	1	ug/L	ND	1.7 J	95	1.3 J	7.8	9.6
74-83-9	Bromomethane	5	ug/L	ND	ND	ND	ND	ND	9.8 J
78-93-3	2-Butanone	50 (G)	ug/L	ND	ND	ND	ND	ND	9.2 J
74-87-3	Chloromethane	5	ug/L	ND	ND	ND	ND	69	64
100-41-4	Ethyl Benzene	5	ug/L	ND	1.4 J	64	ND	6	7.1
98-82-8	Isopropylbenzene	5	ug/L	ND	ND	2.4 J	ND	0.52 J	ND
108-10-1	4-Methyl-2-Pentanone	--	ug/L	ND	ND	ND	ND	15 J	18 J
1634-04-4	Methyl tert-butyl Ether	10 (G)	ug/L	ND	ND	1.6 J	ND	1.9 J	2.1 J
108-87-2	Methylcyclohexane	--	ug/L	ND	ND	2.4 J	ND	2.2 J	1.6 J
100-42-5	Styrene	5	ug/L	ND	ND	7	ND	ND	ND
108-88-3	Toluene	5	ug/L	ND	ND	120	ND	5.2	5.9
136777-61-2	m/p-Xylenes	5	ug/L	ND	ND	160	ND	3.2 J	3.5 J
1330-20-7	o-Xylene	5	ug/L	ND	3.7 J	77	ND	2.4 J	2.8 J
Total VOCs		--	ug/L	ND	19.8	529.4	1.3	201.22	273.6
SEMIVOLATILES									
92-52-4	1,1-Biphenyl	5	ug/L	ND	1.9 J	25	ND	2.8 J	3.6 J
86-74-8	Carbazole	--	ug/L	ND	ND	3.5 J	ND	ND	ND
132-64-9	Dibenzofuran	--	ug/L	ND	ND	5.5 J	ND	ND	ND
108-95-2	Phenol	1	ug/L	ND	ND	3.2 J	ND	1.4 J	ND
PAHs									
83-32-9	Acenaphthene	20 (G)	ug/L	ND	ND	31	ND	11	14
208-96-8	Acenaphthylene	--	ug/L	ND	ND	48	ND	3.6 J	4.8 J
120-12-7	Anthracene	50 (G)	ug/L	ND	ND	9.9 J	ND	3.1 J	4.3 J
206-44-0	Fluoranthene	50 (G)	ug/L	ND	ND	4.2 J	1.5 J	3.7 J	5.1 J
86-73-7	Fluorene	50 (G)	ug/L	ND	ND	43	ND	5.8 J	7.6 J
91-57-6	2-Methylnaphthalene	--	ug/L	ND	11	380	ND	12	15
91-20-3	Naphthalene	10	ug/L	ND	4.7 J	1300	ND	53	66
85-01-8	Phenanthrene	50 (G)	ug/L	ND	ND	48	ND	14	19
129-00-0	Pyrene	50 (G)	ug/L	ND	ND	5.2 J	1.4 J	4.5 J	5.9 J
Total PAHs		--	ug/L	ND	15.7	1869.3	2.9	110.7	141.7
Total SVOCs		--	ug/L	ND	17.6	1906.5	2.9	114.9	145.3

Notes:

- (1) NYSDEC TOGS 1:1:1 Class GA Ambient Water Quality Standards and Guidance Values (October 1998)
- Indicates concentration exceeds standard or guidance value
- (G) Indicates guidance value.
- NS No standard or guidance value available
- ND Indicates compound was not detected.
- J Indicates an estimated concentration.
- NA Not Analyzed
- ug/L Micrograms per liter

Table 4
 Summary of Groundwater Analytical Data
 Former Ludlow Street Works
 Consolidated Edison Company of New York
 Site Characterization - June and July 2010

Consolidated Edison Ludlow Street Site 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	MW-2	MW-3	MW-4	MW-5	Dup of MW-5 MW-15
CAS NO.	COMPOUND			B2963-01 Chemtech B2963	B2963-03/13 Chemtech B2963	B2963-08 Chemtech B2963	B2963-02/11/15 Chemtech B2963	B2963-04 Chemtech B2963	B2963-07 Chemtech B2963
			UNITS:						
INORGANICS									
7429-90-5	Aluminum	--	ug/L	814	4840	284	13400	137	105
7440-38-2	Arsenic	25	ug/L	5.98 J	16.2	ND	30.1	ND	ND
7440-39-3	Barium	1000	ug/L	139	630	228	221	157	149
7440-41-7	Beryllium	3 (G)	ug/L	ND	ND	ND	0.98 J	ND	ND
7440-43-9	Cadmium	5	ug/L	ND	1.63 J	ND	8.57	ND	ND
7440-70-2	Calcium	--	ug/L	79300	62200	82900	23700	122000	117000
7440-47-3	Chromium	50	ug/L	ND	4.96 J	ND	19.3	ND	ND
7440-48-4	Cobalt	--	ug/L	ND	ND	ND	12.5 J	ND	ND
7440-50-8	Copper	200	ug/L	ND	12.3	ND	61.5	ND	ND
7439-89-6	Iron	300	ug/L	2040	11700	453	20400	2390	2230
7439-92-1	Lead	25	ug/L	10.4	97	13.4	559	9.5	12.2
7439-95-4	Magnesium	35000 (G)	ug/L	16400	10300	29900	6360	36900	35800
7439-96-5	Manganese	300	ug/L	2960	2010	3150	927	4100	3890
7439-97-6	Mercury	0.7	ug/L	ND	9.7	ND	43.1	ND	ND
7440-02-0	Nickel	100	ug/L	ND	8.77 J	13.3 J	36.8	5.53 J	6.42 J
7440-09-7	Potassium	--	ug/L	8360	22700	8830	7840	19500	18700
7782-49-2	Selenium	10	ug/L	ND	ND	ND	5.7 J	ND	ND
7440-23-5	Sodium	20000	ug/L	240000	1080000	2450000	1500000	5250000	5170000
7440-62-2	Vanadium	--	ug/L	ND	10.6 J	ND	48.2	ND	ND
7440-66-6	Zinc	2000 (G)	ug/L	ND	ND	ND	327	ND	ND
57-12-5	Cyanide	200	ug/L	13	126	127	299	24	27
METALS, DISSOLVED									
7429-90-5	Aluminum	--	ug/L	NA	409	NA	16900	NA	NA
7440-38-2	Arsenic	25	ug/L	NA	5.81 J	NA	34.4	NA	NA
7440-39-3	Barium	1000	ug/L	NA	442	NA	211	NA	NA
7440-41-7	Beryllium	3 (G)	ug/L	NA	ND	NA	0.89 J	NA	NA
7440-43-9	Cadmium	5	ug/L	NA	ND	NA	7.5	NA	NA
7440-70-2	Calcium	--	ug/L	NA	60800	NA	22400	NA	NA
7440-47-3	Chromium	50	ug/L	NA	ND	NA	25.3	NA	NA
7440-48-4	Cobalt	--	ug/L	NA	ND	NA	12.9 J	NA	NA
7440-50-8	Copper	200	ug/L	NA	ND	NA	83.9	NA	NA
7439-89-6	Iron	300	ug/L	NA	1410	NA	25000	NA	NA
7439-92-1	Lead	25	ug/L	NA	15	NA	480	NA	NA
7439-95-4	Magnesium	35000 (G)	ug/L	NA	9180	NA	6320	NA	NA
7439-96-5	Manganese	300	ug/L	NA	1770	NA	908	NA	NA
7439-97-6	Mercury	0.7	ug/L	NA	0.93	NA	13.8	NA	NA
7440-02-0	Nickel	100	ug/L	NA	4.39 J	NA	39.9	NA	NA
7440-09-7	Potassium	--	ug/L	NA	23200	NA	8650	NA	NA
7782-49-2	Selenium	10	ug/L	NA	ND	NA	4.97 J	NA	NA
7440-23-5	Sodium	20000	ug/L	NA	10900000	NA	1490000	NA	NA
7440-62-2	Vanadium	--	ug/L	NA	ND	NA	52.4	NA	NA
7440-66-6	Zinc	2000 (G)	ug/L	NA	ND	NA	322	NA	NA

Notes: (1) NYSDEC TOGS 1:1:1 Class GA Ambient Water Quality Standards and Guidance Values (October 1998)
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