# REMEDIAL INVESTIGATION 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

**AUGUST 2014**

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**AUGUST 2014**

*"I ERIC GAULIN certify that I am currently a Qualified Environmental professional as defined in 6 NYCRR Part 375 and that this Remedial Investigation Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10)."*

4-30-2014

***Signature*** ***Date***

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# SECTION 1

# INTRODUCTION

This Remedial Investigation Report (RIR) presents the results of the remedial investigation (RI) of the former Ludlow Street Works former manufactured gas plant and holder station (MGP) located in Yonkers, New York. The RI was conducted between October 2012 and April 2013 by Parsons on behalf of Consolidated Edison Company of New York, Inc. (Con Edison). The goal of the RI was to determine the extent of impacts related to former MGP operations identified during the previous Site Characterization Study and summarized in the *Site Characterization Report* (Parsons, 2011). RI activities were completed in accordance with the New York State Department of Environmental Conservation's (NYSDEC) approved *Remedial Investigation Work Plan* (Parsons, 2011) and consistent with processes outlined in the NYSDEC Technical Guidance for Site Investigation and Remediation (NYSDEC DER-10, 2010).

## 1.1 REPORT ORGANIZATION

The RI was conducted by Parsons. T he field investigation activities and results are documented in the following sections:

- Section 1: Introduction
- Section 2: Site Background
- Section 3: Remedial Investigation Activities
- Section 4: Remedial Investigation Results
- Section 5: Extent of MGP NAPL Impacts
- Section 6: Exposure Assessment
- Section 7: Conclusions and Recommendations
- Section 8: References

# SECTION 2

# SITE BACKGROUND

## 2.1 SITE OVERVIEW

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 by predecessor companies of Con Edison.

The grounds of the former Ludlow Street MGP Works Site (Site) occupy present-day tax Block 171 Lot 17, which is owned by the City of Yonkers. This approximately 1.35-acre parcel is a roughly rectangular plot with the long axis trending north-south and is bound on the north by Downing Street, on the south by the western-end of Knowles Street and along the west side by a Metro North Railroad right-of-way (ROW). Two separate tax lots that are owned by others form the eastern Site boundary. These parcels include a vacant lot (Block 171 Lot 11) along the northern half of the eastern boundary. This parcel is owned by the City of Yonkers, but there are no apparent municipal operations there. The parcel along the southern half of the eastern boundary is used as a commercial metal fabrication shop.

Currently, there is only one small single-story concrete block structure located on the southeastern corner of the southern portion of the Site. The northern and southern portions of the Site are separated by a concrete block retaining wall. The southern portion of the Site, where the majority of the former MGP operations took place and where two of the former holder structures were located, is currently used by the City of Yonkers Department of Public Works (DPW) as a bulk storage and staging area for road salt and associated equipment (e.g., trucks, front-end loaders, etc.) (Figure 1). The surface of the active DPW yard consists of gravel and dirt. Although the surface of DPW yard was formerly covered with bituminous asphalt paving this surface is now generally absent, likely due to its inadvertent removal during salt load-out operations. The southeast corner of northern portion of the site contained the 50,000 cu ft holder and a portion of the former Retort house was located in its southwest area. The elevation of the northern or upper portion of the Site is approximately 10 to 26 feet higher than the southern or lower portion (Chazen, 2013) as a result of City of Yonkers' placement there of various debris. The City also removed trees and brush from the elevated northern portion of the site and subsequently leveled the surface there.

The Site is located within a mixed-use industrial district of Yonkers that also contains residential and commercial-use properties. The Site fronts two streets, at approximately 162 Downing Street and the intersection of Knowles and Bridge Streets in Yonkers, New York. The Site consists of approximately 1.35 acres and is identified as Section 1, Block 171, Lot 1 (Figure 2).

## 2.2 ADJOINING PROPERTY DESCRIPTION

The Site is bordered to the north by Downing Street; to the east by a metal fabrication shop (the Waverly property); to the south by Knowles Street (formerly Fernbrook Street) and a Dunkin Donuts bakery; and to the west by the Metropolitan Transportation Authority

(MTA)/New York Central Railroad railway. The Site is located approximately 700 feet east of the Hudson River (*GEI, 2003*). However, based on 1886 Sanborn Fire Insurance map for the area where the Site was located, the shore of the Hudson River when the former MGP first began operation was located along the west side of the railroad tracks. Accordingly, at that time, the Site was located less than 100 feet from the Hudson River shoreline.

## 2.3 SITE HISTORY

Historical research of the Site was previously conducted and is documented in the *Manufactured Gas Plant History, Ludlow Street Works, 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 southern portion of 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 (shown on the 1886 Sanborn Fire Insurance Map) was used to pump naphtha from boats on the Hudson River to the tanks. By 1898, the plant was no longer manufacturing gas, and became a holder station for the storage of natural 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. The Site use between 1936 and 1946 is unknown (*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 December 2012, the ground surface elevation of the southern (or lower) portion of the Site is approximately 16 feet above mean sea level (MSL) and the elevation of the surveyed northern (or upper) portion of the Site is between approximately 38 and 44 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. During the RI, bedrock

at the Site was encountered from approximately 39 to 50 feet below ground surface (feet bgs) which translates into approximately 3.4 feet below MSL at SB-14 and 23.2 feet below MSL at SB-12. The bedrock is overlain by glacial till deposits, alluvium, and fill material (*GEI, 2003*). Based on groundwater levels measured in monitoring wells during the RI between October 2012 and January 2013, the groundwater elevation at the Site ranged between 2.84 and 5.79 ft above MSL. Groundwater generally flows to the west-northwest, toward the Hudson River. As indicated in earlier reports and confirmed by the tidal study conducted during this RI, groundwater levels are minimally influenced by tidal fluctuation of water in the adjoining Hudson River.

## 2.5 PREVIOUS INVESTIGATIONS/REMEDIAL MEASURES

Two investigations were previously conducted on the Site. The first was completed between 1993 and 1997 and the second in 2010. These investigations are summarized below.

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 entailed a soil gas survey, and the second phase entailed the sampling and analysis of subsurface soils. 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 detected concentrations of the VOCs and SVOCs to their corresponding NYSDEC Soil Cleanup Objectives (SCOs). Based on these comparisons, it was determined that concentrations of all VOCs and SVOCs detected were below their respective SCOs. Five metals, namely copper, iron, lead, selenium, and zinc, were detected at concentrations above their respective SCOs in at least one soil sample.

In 2010, Con Edison contracted Parsons to conduct a Site Characterization Study (SCS) of the site. The scope of Site Characterization activities included the excavation of five test pits (designated TP-01 through TP-05 and six soil borings (designated SB-1, SB-2, SB-4 through SB-7), and installation of five monitoring wells (designated MW-1 through MW-5). Since historical information indicated that operations of the former MGP were primarily located at the southern (or lower) portion of the Site, field investigation activities focused on these areas of the former site and the adjacent sidewalk. During the SCS, remnants of several former MGP structures were identified on the property. Where present, coal tar was generally detected as residue or at saturated levels as Non-Aqueous Phase Liquid (NAPL) in the vicinity of the former/remnant structures. Fingerprint analysis of coal tar NAPL samples verified that the tar residues were formed as a result of the production of manufactured coal gas. Contaminants potentially related to former MGP activities were also detected in soil samples collected during the SCS at concentrations exceeding their respective NYSDEC SCOs. These contaminants were generally encountered at or below the groundwater table (e.g., between 10.3 ft to 16.1 feet bgs) and extended to depths ranging from 30 ft to 32 feet bgs. The vertical extent of these contaminants was delineated at all sampling locations, with the exception of SB-02.

Contaminants potentially related to former MGP activities including VOCs, SVOCs and metals were also detected in groundwater at concentrations exceeding the NYSDOH Ambient Water Quality Standards, Criteria and Guidance Values (AWQSGV) for Class GA water.

Additionally, elevated concentrations of sodium, manganese, and magnesium were detected in Site soil and groundwater and are suspected to be associated with use of the Site as a road salt storage facility, or due to the presence of urban fill materials.

Based on the findings of the SCS, it was recommended by Parsons in the SCS Report (*March 2011*) that further investigation of the site be conducted to delineate the impacts identified. Subsequently, a Remedial Investigation Work Plan (Parsons, 2011) was then developed and approved by the NYSDEC.

# SECTION 3

# REMEDIAL INVESTIGATION ACTIVITIES

The following sections describe the field activities conducted by Parsons between October 2012 and April 2013 in accordance with the NYSDEC approved *Remedial Investigation Work Plan* (*Parsons, 2011*). The RI field investigation included a geophysical survey, utility clearance activities, excavation of a test pit, advancement of soil borings, installation and development of groundwater monitoring wells, sampling and laboratory analysis of soil, groundwater and soil vapor samples, tidal study, and surveying. During all intrusive activities, a Community Air Monitoring Plan (CAMP) was implemented in accordance with the approved work plan and associated site-specific Health and Safety Plan (HASP). Sampling locations are depicted on Figure 3. Table 1 provides a summary of the samples and analyses.

## 3.1 SITE INSPECTION AND PRELIMINARY INVESTIGATION ACTIVITIES

On October 15, 2012, a Site inspection was conducted with Con Edison, Parsons, representatives of the City of Yonkers DPW and Westchester County Sewer Department to review the proposed sampling locations (borings, wells, test pits, etc.). Proposed sampling locations were adjusted during the site inspection, as necessary, based on Site conditions, access, utilities, and or safety considerations. All changes were made in consultation with Con Edison and the NYSDEC. Specific modifications to sampling locations are further discussed below.

## 3.2 UTILITY CLEARANCE

The utility clearance was performed as follows:

- A Code 753 mark out was requested by Aquifer Drilling & Testing, Inc. (ADT) of Mineola, New York;
- Site reconnaissance was performed, followed by meetings with the Yonkers Department of Public Works, the Westchester County Department of Environmental Facilities, and the owners of the Waverly property;
- Utility maps were reconciled with the mark outs, and with the representatives from these parties;
- A subsurface geophysical survey was performed by Diversified Geophysics, Inc. (DGI), of Mineola, New York at all proposed boring, monitoring well and test pit locations;
- The 54-inch forced sewer main on the MTA parcel was exposed prior to boring advancement;
- Utility clearance key-hole test pits were excavated to 5 feet at each proposed soil boring, monitoring well, and soil vapor location for subsurface utilities.

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, NAPL, etc.) were recorded.

## 3.3 TEST PIT EXCAVATION

One investigation test pit (TP-6) was excavated in an effort to determine if the former 4-inch naphtha pipe shown on the 1886 Sanborn Fire Insurance map was still present, and, if so, determine if there are any potential impacts from this pipe to the surrounding soil and or groundwater. Test pit excavation was completed on November 7, 2012. Test pit excavation was conducted by ADT under the supervision of a Parsons geologist. The test pit location is depicted on Figure 3. Based on Site conditions and observations made during implementation of the RI, TP-6 was excavated 10 feet west of its originally proposed location due to the presence of a 54-inch diameter sanitary sewer force main. The test pit was advanced with a rubber-tired backhoe to six feet bgs, at which point, groundwater was encountered.

During test pit excavation, the excavated soil and fill were temporarily placed on impervious plastic sheeting adjacent to the test pit. The test pit excavation was conducted in 6-inch lifts to its final depth. The excavated material showed no apparent evidence of impacts and was placed back into the excavation in reverse order from which it was removed. The lower portion of the test pit was backfilled in 12-inch lifts. The upper portion of the test pit was backfilled in 6-inch lifts using suitable excavated materials (e.g. material that did not contain deleterious materials, saturated or near saturated fill, rocks, soils clumps bigger than 6 inches in size, etc.).

While the test pit 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, and or PID readings above background levels) and the dimensions of the test pit and any subsurface features were measured. All field observations and measurements are summarized in the test pit log provided in Appendix A.

The soil sample, designated TP-6 Floor(x-y) was collected from the test pit was submitted to Chemtech Consulting Group, Inc of Mountainside, NJ (Chemtech) (NYS DOH, ELAP Certified) for analysis of 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. The analytical results for this sample are summarized in Table 3.

## 3.4 SOIL BORING INSTALLATION

A total of eight soil borings (SB-9 through SB-14, SB-16, and SB-17) were advanced during the RI to further delineate the nature and extent of MGP impacts in subsurface soils. The soil borings were completed between October 25, 2012 and December 21, 2012. Soil borings were advanced by ADT under the supervision of a Parsons geologist. Soil borings were completed to depths ranging from approximately 25 to 53 feet bgs, depending on observed impacts and or 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 RI activities, the following additions/modifications were made to the work plan:

- SB-9/SV-1 was relocated approximately 10 feet east due to the presence of a 30-inch sewer line in the vicinity of its original location;
- SB-11 was relocated approximately 10 feet east due to the presence of a 54-inch forced sewer main in the vicinity of its original location;

- SB-12 was relocated approximately 5 feet south due to its proximity to an unstable debris pile slope;
- SB-13 was added to the scope in order to determine the presence, nature, and extent of NAPL impacts encountered at SB-10 from 27 to 42.5 feet bgs;
- SB-14 was added to the scope in order to determine the presence, nature, and extent of NAPL impacts encountered at SB-13 from 47 to 49 feet bgs;
- SB-16 was added to the scope in order to determine the presence, nature, and extent of NAPL impacts encountered at SB-10 and SB-12; and
- SB-17 was added to the scope in order to determine the presence, nature, and extent of NAPL impacts encountered at MW-7 from 35 to 40 and SB-13 from 47 to 49 feet bgs.

Soil borings were advanced using a track-mounted sonic drilling rig. Soil core was collected continuously to the bottom of the boring using 5-foot and 10-foot long, 4-inch diameter stainless steel soil core samplers. The soil core was screened for the presence of VOCs using a PID and 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).

Subsequent to characterizing the core, soil samples were collected from discrete intervals based on the criteria listed below. The samples were placed in clean sample jars which were stored in a cooler containing ice prior to shipment to Chemtech for analysis.

- One sample was collected from the zone with the highest PID readings or strong evidence of other physical impacts (e.g., odor, staining, sheen, etc.). If physical impacts or elevated PID readings were not detected, then 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.

The soil samples were submitted to Chemtech of Mountainside, NJ 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.

Upon completion, the soil borings were grouted with cement-bentonite grout using a tremie pipe. Drilling equipment was decontaminated between each boring. Drill cuttings and decontamination water were containerized in new USDOT approved 55-gallon steel drums and handled as described in Section 3.10.

## 3.5 MONITORING WELL INSTALLATION AND DEVELOPMENT

A total of three monitoring wells (MW-7, MW-8, and MW-9) were installed during the RI activities to further delineate the nature and extent of MGP impacts in groundwater. Monitoring wells were installed from October 26, 2012 through December 19, 2012. Monitoring wells were advanced by ADT under the supervision of a Parsons geologist. Monitoring wells were advanced to depths ranging from approximately 25 to 53 feet bgs, depending on observed impacts and refusals; monitoring wells were constructed at depths ranging from 14 to 50 feet bgs. Monitoring well locations are shown on Figure 3 and the corresponding boring/well logs

are presented in Appendix B. Based on Site conditions and observations made during implementation of the RI activities, the following additions/modifications were made to the work plan:

- MW-2 was added to the scope in order to provide a replacement of the original MW-2 which was believed to be destroyed by DPW site activities;
- MW-5 was added to the scope in order to provide a replacement of the original MW-5 which was believe to be destroyed by DPW site activities;
- MW-6/SV-2 was not installed due to the presence of a 30-inch sewer line in the vicinity of its original location. Due to Site conditions and safety concerns, it was determined that there was no relocation option for this monitoring well/soil vapor location; and
- MW-9 was relocated approximately 18 feet southeast due to the presence of a 54-inch forced sewer main in the vicinity of its original location;

Monitoring well borings were completed as described above in Section 3.4. The monitoring well screens were installed at depths ranging from 4 to 50 feet bgs. Soil samples were not collected from the replacement wells MW-2 and MW-5.

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 clean 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-2, MW-5, MW-8 and MW-9 were finished with a locking, flush-mount box set in concrete. Monitoring well MW-7 was finished with a protective stick-up casing set in concrete.

Monitoring well development was conducted on November 9, 2012, December 26, 2012, and January 3, 2012 a minimum of 24 hours after installation. Each new monitoring well was developed until reasonably free of sediment and until turbidity measurements were less than 50 nephelometric turbidity units (NTUs), if possible, and/or until the measurements of water quality parameters [i.e., pH, temperature, and conductivity] stabilized. The water quality parameters were measured and recorded approximately every 5 minutes until stabilization was achieved. Stabilization is considered to be achieved when three successive measurements of the water quality parameters were within 10%. It is noted that stabilization was not achieved at monitoring well MW-2 as it ran dry numerous times. Non-disposable drilling equipment was decontaminated between well locations. Monitoring well drill cuttings, well development water, and decontamination water were containerized in new 55-gallon steel drums and handled as described in Section 3.10.

## 3.6 SURVEYING

At the conclusion of drilling activities, Chazen, a licensed New York state land surveyor mobilized to the Site and surveyed the horizontal and vertical location of each new soil boring, monitoring well, and test pit location. Other pertinent planimetric features of the Site, such as manholes, building walls, etc. were also surveyed. Two elevation measurements were taken at each well location to identify the top of the PVC casing and the grade elevation, respectively.

The survey elevations were measured to an accuracy of 0.01 feet above the National Geodetic Vertical Datum of 1988 (NGVD 1988). Horizontal coordinates were surveyed relative to the New York State Plane North American Datum of 1983 (NAD83).

## 3.7 GROUNDWATER SAMPLING

On November 26 and 27, 2012, groundwater samples were collected from six monitoring wells (MW-1, MW-3, MW-4, MW-7 through MW-9). Monitoring wells MW-2 and MW-5 were sampled during the second round of groundwater sampling based on their date of installation.

On April 5 and 8, 2013, groundwater samples were collected from seven monitoring wells (MW-1 through MW-5, MW-7, and MW-9). Monitoring well MW-8 was not sampled during the second round of groundwater sampling due to access issues.

Groundwater sampling was conducted in accordance with the January 19, 2010 *USEPA Region 1 Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells*. Prior to collecting samples, the depths to groundwater, top of coal tar NAPL (if any) and bottom of well were measured relative to the top of well casing using an electronic oil/water interface probe accurate to 0.01 foot. Table 2 provides a summary of groundwater level measurements and elevations taken on November 19, 2012, January 3 and April 5, 2013.

Prior to purging and immediately after removing the locking well cap, the concentration of total VOCs concentrations in the headspace air of each well was measured using a PID. Each well was purged using a submersible pump and low-flow purging techniques with dedicated tubing until stabilization of water quality parameters (including temperature, conductivity, pH, dissolved oxygen, ORP, and turbidity was achieved, and thus allow for the collection of a representative groundwater sample. As discussed in Section 3.7, monitoring well MW-4 ran dry a number of times prior to the stabilization of water quality parameters. During the purging process, water quality parameters were measured approximately every 5 minutes.

Water quality parameter measurements and observations were recorded on groundwater sampling field forms, which are provided in Appendix C. Groundwater samples were submitted to Chemtech Laboratories for analysis of TCL VOCs, TCL SVOCs, TAL Metals and total cyanide. During the April 2013 sampling event, groundwater samples MW-1 and MW-4 were filtered and analyzed for dissolved TAL metals, due to the high turbidity observed in groundwater from these wells. Non-dedicated sampling equipment (e.g., oil/water interface probe, submersible pump) was decontaminated between wells. Water generated during well purging and equipment decontamination was placed in 55-gallon drums and handled as described in Section 3.10.

## 3.8 SOIL GAS INVESTIGATION ACTIVITIES

To evaluate potential presence of VOCs in soil gas at the site and adjacent parcels, soil gas samples were collected from two locations (designated SV-3 and SV-4) adjacent to the one-story building bordering the southern boundary of the former site and one location, (designated SV-1) adjacent to the one story metal building located on the adjoining property along the eastern Site boundary. The soil gas sampling locations are shown on Figure 3. Soil gas samples were collected in accordance with the New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion (NYSDOH, 2006).

Prior to soil gas sampling, the approximate depth of the bottom of the basement adjacent to the SV-3 and SV-4 locations (Dunkin Donuts Bakery), and the approximate depth of the building foundation slab adjacent to the SV-1 (Waverly Property) locations relative to the ambient ground surface were determined. The slab bottom was estimated to be 6 feet at the eastern building and the basement was estimated to be at 7 feet bgs at the southern building. Soil gas samples were collected from one foot below the bottom of each slab or basement bottom. Accordingly, the sample from the eastern (Waverly) property (i.e., SV-1) was collected from a depth of seven feet bgs and the samples from the southern (Dunkin Donuts Bakery) property (i.e., SV-3 and SV-4) were collected from a depth of eight feet bgs.

Soil gas samples were collected using a probe/sampling assembly comprised of stainless steel tubing fitted with an expendable steel probe point. Prior to soil gas sampling, the sampling probe was driven into the sub-slab soil via a direct push method to the desired sampling depth. The expendable point was released into the soil and the sampler was withdrawn approximately 0.5 feet to create a void space. The space between the probe rod and the concrete slab was filled with granular bentonite, which was then hydrated to form an airtight seal to prevent aboveground ambient air from influencing the quality of a subsurface soil gas sample. A minimum of one implant volume (the volume of the sample probe and tube) was purged prior to sample collection.

A tracer gas (helium) was utilized in the field to verify the integrity and effectiveness of the hydrated-bentonite seal prior to sample collection at select locations. An enclosure (inverted plastic pail) was placed on the concrete slab over the location where the probe intersected the ground and the atmosphere within the enclosure was enriched with helium gas. After the atmosphere within the enclosure had been enriched, a vapor sample from the probe was collected and screened in the field with a helium detector to ensure the tracer gas was absent (reading of 0 PPM). The soil gas samples were collected into laboratory-prepared 6-liter Summa canisters equipped with calibrated flow regulators and vacuum gauge. The vacuum gauge was used to measure the initial and final vacuum in the canisters. Flow rates for both purging and sample collection did not exceed 0.2 liters per minute. All soil gas samples were submitted to Air Toxics LTD of Folsom, CA for laboratory analysis of VOCs using modified EPA Method TO-15. A summary of the soil gas samples collected and analyses performed is provided in Table 1. Soil gas laboratory results are provided in Appendix E.

### 3.9 TIDAL STUDY

A study was conducted at five monitoring wells to evaluate the potential influence of tidal fluctuations in the nearby Hudson River on groundwater elevations at and down gradient from the Site.

The tidal study involved the installation of Micro-Diver™ pressure transducer/data loggers in monitoring wells MW-1, MW-4, MW-7, MW-8, and MW-9. The transducers were set to record groundwater levels every 10 second intervals over a 72-hour period. The data was downloaded from the transducers and converted to elevation values. Graphs summarizing the groundwater elevation data were prepared and are provided in Appendix D.

## 3.10 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.

## 3.11 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 which were in effect at the time of data validation (USEPA 2006; 2008a.2008b). 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 F. In summary, the results of the data usability assessment show that the collected analytical data for soil, groundwater and soil gas are valid for the intended purposes of the RI.

# SECTION 4

# REMEDIAL INVESTIGATION RESULTS

This section presents the results of the RI. The goal of the RIis to determine the extent of impacts related to former MGP operations identified during the previous Site Characterization Study. Field observations are summarized followed by a review of the analytical data for the soil, groundwater, and soil gas samples.

## 4.1 SITE GEOLOGY

The geology encountered in the soil borings and test pits during the RI is summarized in the logs provided in Appendices A and B, and are interpreted in cross sections presented on Figures 7A, 7B, and 7C. The logs show that soil in the upper 5 feet (MW-8) to 12 feet (SB-11) west of the railway, upper 15 to 23 feet in the south and central portions and upper 26 to 38 feet in the north portions of the Site is characterized as urban fill. This material generally consists of sand, gravel and silt with various debris including cobbles, cement, brick, metal, wood fragments, etc. Natural deposits of fine to coarse-grained sand with some silt were encountered beneath the fill. These deposits were ranged from approximately 5 to 35 feet thick. Bedrock at the Site was encountered at depths ranging from approximately 39 to 50 feet bgs, which translates into approximately 3.4 feet below MSL at SB-14 (i.e., upper / northern portion of the site) and 23.2 feet below MSL at SB-12 (i.e., central portion of the site)

## 4.2 SITE HYDROGEOLOGY

A complete site-wide gauging event was conducted on January 3, 2013. The groundwater levels and corresponding elevations are summarized in Table 2. The January 3, 2013 groundwater elevations were used to produce a Site groundwater contour map (Figure 8). Groundwater contours based on the January 2013 gauging event indicate that the groundwater flow direction is predominantly to the west-northwest towards the Hudson River.

Additionally, the results of the tidal study indicate that groundwater elevations in monitoring wells MW-7, MW-8, and MW-9 are minimally influenced by tidal fluctuations in the Hudson River. The groundwater elevations in these wells showed coincident changes with the tides of less than 0.1 feet per tidal cycle. Such a small influence is not suspected to cause a change in groundwater flow directions in this area. With the exception of MW-7, response of groundwater elevations to tidal fluctuations were not detected in any of the on-site wells. Tidal study data and graphs are provided in Appendix D.

## 4.3 FORMER MGP STRUCTURES

The test pit 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 and RI is provided below.

**250,000 Cubic Foot Holder**

A total of three test pits (TP-01, TP-02 and TP-03) and three soil borings (SB-01, SB-04 and SB-08) were excavated in the footprint of the former 250,000 cubic foot holder. Based on field observations in these test pits and borings the bottom of the holder was encountered in all the test pits at depths ranging from 8.5 feet below grade (TP-01) to 9.5 feet below grade (TP-03). Similarly, the apparent holder bottom was encountered at depths ranging from approximately 9 feet below grade (SB-04) to 10 feet below grade (SB-01). It should be noted that wood debris was encountered at 15 to 18 feet below grade in SB-01, suggesting a deeper holder bottom.

Remnants of the walls for the former 250,000 cubic foot holder were encountered at depths ranging from 3.5 to 8.5 feet below grade (TP-02) to o.5 to 9.5 feet below grade (TP-03). Wood debris was encountered

Groundwater and or NAPL were not detected in any of the test pits or soil boring completed within the former 250,000 holder. Coal tar NAPL was detected approximately 20 feet below grade (i.e., approximately 10 feet below the holder bottom) in soil boring SB-04.

Based on the cross-sections (Figures 7A to 7C), it is estimated that the bottom of the 250,000 cubic foot holder was located at depth of 18 feet below the lower portion of the site.

**Retort House**

A total of one test pit (TP-02) and one soil boring (SB-12) were excavated in the footprint of the former retort house.

Based on field observations in this test pit and boring remnants of the former retort house were encountered at depths of 4.5 to 6.5 feet bgs. It is likely that the remnants encountered represent the bottom of the structure,

Groundwater was detected in soil boring SB-12 at a depth of 7 feet bgs in soil boring SB-12. Coal tar NAPL was detected at approximately 11.5 feet bgs to 14 feet bgs, and 36 feet bgs to 38 feet bgs in soil boring SB-12.

Based on the cross-sections (Figures 7A to 7C), it is estimated that the bottom of the retorts were located at depth of 14 feet below the lower portion of the Site.

**Former Suspected MGP Facility Piping**

During Site clearing activities, two 12-inch vertical cast iron pipe openings were uncovered north of test pit 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, likely the 50,000 cubic foot holder. It is believed these pipes formerly serviced the 50,000 cubic foot holder. NAPL was observed floating on the water. A sample of this NAPL (Exposed Pipe 1) was collected and submitted to META Environmental located in Watertown, MA for fingerprint analyses for MGP related residuals.

A total of two test pits (TP-4A and TP-4B) and one soil boring (SB-06) were excavated near these pipes. During excavation of TP-4A, the two pipes were exposed from 2 to 3 feet bgs. These pipes were observed extending in a southwestern trajectory under a subsurface square brick structure encountered from approximately 0.5 to 2 feet bgs. The pipes were not

encountered in TP-4B. Neither groundwater nor NAPL were encountered within the excavation of TP-4A or TP-4B. Due to the limited depth of these test pits, SB-06 was advanced in this area to identify any impacts related to the two pipes. NAPL was observed from 7 to 9 feet bgs.

Additionally, per NYSDEC's request, test pit TP-06 was excavated west of the railroad tracks along Federal Street in efforts to locate remnants of the "4" NAPHTHA PIPE", asshown on the 1886 Sanborn Fire Insurance Map. No evidence of the former 4-inch naphtha pipe was detected during the test pit excavation.

**22,800 Cubic Foot Holder**

A total of one test pit (TP-05) and one soil boring (SB-05) were excavated in the footprint of the 22,800 cubic foot holder. Based on field observations in the test pit, the holder wall was encountered from 1.5 to 9 feet bgs.

Groundwater was encountered at 9 feet bgs within soil boring (SB-05). NAPL was detected at a depth of 22 feet bgs within soil boring SB-05.

Based on the cross-sections (Figures 7A to 7C), it is estimated that the bottom of the 22,800 cubic foot holder was located at a depth of 20 feet below the lower portion of the site.

**50,000 Cubic Foot Holder**

During the City of Yonkers' removal of its salt pile from the area of the Site adjacent to the concrete block retaining wall in the northern boundary of the lower (southern) 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 could not be attempted in this location due to the presence of the retaining wall.

During excavation of soil boring SB-10, concrete and wood, which are interpreted to be remnants of the bottom of the former holder, were encountered in the 20 to 22 feet bgs interval. NAPL was observed in this boring at approximate depths of 27 feet bgs to 42.5 feet bgs.

Based on cross-sections (Figures 7A to 7C), it is estimated that the bottom of the 50,000 cubic foot holder was located 18 feet below grade of lower portion of the Site.

## 4.4 ANALYTICAL RESULTS AND FIELD OBSERVATIONS

### 4.4.1 SUBSURFACE SOIL

A total of 22 subsurface soil samples were collected from the test pit and soil borings as part of the RI. In addition, a total of six QA/QC samples that included four matrix spike/matrix spike duplicate and two field duplicate samples were also collected. Soil samples were submitted to Chemtech and analyzed for TCL VOCs, TCL SVOCs, TAL metals, and cyanide as described in Section 3. The analytical results of the soil samples collected during the SCS and RI are summarized in Table 3 and presented on Figures 4, 5, and 6. The soil sample analytical data in the tables and figures are compared Soil Cleanup Objectives (USCOs) per 6 NYCRR Part 375 (NYSDEC, 2006) for unrestricted site use. Use of unrestricted SCOs is considered to be conservative since the Site is currently and will be used for commercial/industrial purposes in the

forseeable future. The subsurface soil analytical data and field observations of NAPL and total VOCs measured in the field using PID are summarized below.

**Headspace VOCs (PID Measurements)**

PID readings for soil samples collected during soil boring/monitoring well installations ranged from not detected to 2,254 ppm. The highest total-VOCs concentration measured using the PID of 2,254 ppm was detected in soil sample soil SB-10 (30 - 32 ft bgs). This elevated PID reading is attributable to the presence of residual NAPL observed between 27 and 42.5 feet bgs in this boring. In general, high PID readings were detected in soil associated with residual NAPL and or staining.

**NAPL Observations**

During the RI, NAPL was observed in soils collected from:

- SB-10 (approximately 27 to 42.5 feet bgs). This boring was located within the footprint of the 50,000 cubic foot holder. NAPL was observed above and below the concrete and brick debris assumed to be related to the holder wall at this location. As shown on Figures 7B and 7C), the NAPL is occurs above the assumed holder bottom;

- SB-12 (approximately 11.5 - 14 and 36 - 38 feet bgs). This boring was located within the footprint of the former retort house. NAPL was observed shallow, within a sand layer at the approximate depth of the bottom of the retort house (Figure 7A). NAPL was also observed deeper within this boring, within weathered bedrock;

- SB-13 (approximately 47 to 49 feet bgs). This boring was located down gradient of the 50,000 cubic foot holder. NAPL was observed within weathered bedrock;

- SB-16 (approximately 30 to 36 feet bgs). This boring was located down gradient of the 50,000 c ubic foot holder. NAPL was observed within layers of bricks, presumably related to the former holder; and,

- MW-7 (approximately 35 to 40 feet bgs). This boring was located down gradient of the 50,000 c ubic foot holder. NAPL was observed within a clay layer, corresponding to the approximate depth of the former holder bottom (Figure 7C).

**VOCs**

A total of 22 VOCs were detected at least once in the soil samples collected during the RI. Of these, seven VOC, namely acetone, benzene, ethyl benzene, methylene chloride, toluene, o-xylene, and m/p-xylene) were detected at concentrations exceeding their respective USCOs. Acetone and methylene chloride are common laboratory artifacts and are not considered as COI.

- Benzene was detected above its SCO in four soil samples [MW-7 (36-38), SB-10 (30-32), SB-13 (47-49), SB-16 (30-33)].

Ethylbenzene, toluene, o-xylene, and m/p-xylene were detected at concentrations exceeding their respective SCOs in four soil samples [MW-7 (36-38), SB-10 (30-32), SB-12 (12-14), SB-16

(30-33)]. Total VOCs concentrations in all soil samples ranged from non-detect to 1,986 milligrams/kilogram (mg/kg), which was detected in subsurface soil sample SB-10 (30 -32).

Exceedances of VOCs and or total VOCs were only detected in soil samples from borings where corresponded to the presence of NAPL was observed, namely SB-10, SB-12, SB-13, SB-16 and or SB-MW-7 within the respective soil borings. The vertical extent of VOCs impacts was delineated at each soil boring and test pit sample location (i.e. no USCOs were exceeded in the deepest sample collected), with the exception of locations SB-13 and SB-16.

In soil boring SB-13, benzene was detected above its USCO in the 47-49 ft bgs sample. However, the benzene concentration detected at SB-13 (0.085 mg/kg) was considerably lower than the Commercial SCO of 44 mg/kg. This was the interval directly above the weathered bedrock and contained NAPL.

In soil boring SB-16, acetone, a common laboratory contaminant was detected above its USCO in the 45-47 ft bgs sample. However, the acetone concentration detected at SB-16 (0.071 mg/kg) was considerably lower than the Commercial SCO of 500 mg/kg.

No other VOCs were detected above their respective USCOs in this sample.

**SVOCs**

A total of 23 SVOCs were detected in soil samples collected during the RI. Of these, fifteen Polycyclic Aromatic Hydrocarbons (PAHs) (acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, fluoranthene, flourene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene) were detected at concentrations exceeding their respective USCOs in soil samples MW-7 (36-38), SB-10 (30-32), SB-12 (12-14), and SB-16 (30-33).

Total SVOC concentrations ranged from non-detect to 13,716 mg/kg, which was detected at SB-10 (30-32) in a sample collected at a depth of 30 to 32 feet bgs.

Exceedances of SVOCs and or total SVOCs were only detected in soil samples from borings where NAPL was observed, namely SB-10, SB-12, SB-13, SB-16 and or SB-MW-7. The vertical extent of SVOC impacts were delineated at each soil boring, monitoring well boring, and test pit sample location.

**Inorganics**

A total of 23 inorganic constituents were detected in soil samples collected during the RI. Of these, seven inorganics (arsenic, chromium, copper, lead, mercury, nickel, and zinc) were detected at concentrations exceeding their respective USCOs in soil samples TP-6 Floor (5), MW-8 (9.5-10), MW-9 (9-9.5), SB-9 (5-8), SB-9 (28-30), SB-10 (30-32), SB-11 (5-5.5).

The vertical extent of impacts from inorganics was delineated at each soil boring and monitoring well boring, with the exception of location SB-9 where nickel was detected above the USCO in the deepest soil sample (collected from depth of 28 to 30 feet bgs). Additionally, inorganic constituents were detected at concentrations above USCOs in the bottom of test pit TP-06.

It should be noted that the majority of inorganic present above their respective USCO's are within soils encountered at MW-8, MW-9, SB-11, and TP-06, which are all located down gradient and off-site from the historical extent of the former MGP site (Figure 6). Sanborn Fire

Insurance Maps indicate that this offsite area was formerly in an area formerly identified as "open water" on historic maps of this area of Yonkers. Accordingly, this entire off-site area consists of fill material, which typically contains inorganics above USCOs. Metals are commonly detected in soil used as fill in urban areas.

### 4.4.2 GROUNDWATER

Two rounds of groundwater sampling were conducted as part of the RI during November 2012 and April 2013.

During the November 2012 sampling event, six groundwater monitoring wells (MW-1, MW-3, MW-4, MW-7, MW-8, MW-9) were sampled. MW-2 and MW-5 were not sampled during this round because they had been inadvertently destroyed by current site operations. These wells were replaced in December 2012.

During the April 2013 sampling event eight monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9) were sampled. Groundwater samples were analyzed for TCL VOCs, TCL SVOCs, TAL Metals, and total cyanide. Due to the high turbidity observed at monitoring wells MW-1 and MW-4 during the April 2013 sampling event, unfiltered and laboratory filtered samples for metals analysis were collected from these wells.

Laboratory analytical results for constituents detected in the groundwater samples are summarized in Table 4. Analytical results were compared with Ambient Water Quality Standards and Guidance Values (AWQSGV) 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 Figures 9, 10, and 11. Field measurements and observations as well as analytical results from the groundwater investigation are summarized below.

**November 2012 Sampling Round**

Groundwater analytical results are summarized in Table 4 and on Figures 9, 10, and 11.

Field Measurements

With the exception of monitoring well MW-4, each monitoring well was sampled after purging and water quality parameters stabilized as described in Section 3.7. Monitoring well MW-4 exhibited a very slow recharge rate and ran dry several times prior to stabilization of water quality parameters. Accordingly, due to the small volume of water produced in this well a dissolved metal sample was not collected during this round of sampling.

During groundwater sampling activities, each well was monitored for the presence of NAPL. No NAPL or sheen was detected in any of the wells, with the exception of monitoring well MW-3 where NAPL globules and sheen were observed and monitoring well MW-7 where sheen was observed. Visual descriptions and observations made during the groundwater sampling activities are presented in the groundwater sampling records provided in Appendix C.

VOCs

A total of 12 VOCs were detected at least once in the groundwater samples collected during the November 2012 sampling event.

- Of these, seven VOCs (isopropylbenzene, styrene, benzene, ethylbenzene, toluene, o-xylene, and m/p-xylene) were detected at concentrations exceeding their respective AWQSGVs in groundwater samples collected from MW-3 and MW-7.

- Of the VOCs, the highest concentrations were detected for benzene, which was detected in groundwater monitoring wells MW-3 (NAPL observed within well) and MW-7 (screened through the interval where NAPL was observed in soil from 35 to 40 feet bgs). No VOCs were detected above their AWQSGVs in any other samples collected during the initial round of groundwater sampling.

SVOCs

Nine PAHs and five other SVOCs were detected at least once in the groundwater samples collected during the November 2012 sampling event. Of these, three SVOCs (biphenyl (diphenyl), bis(2-ethylhexyl)phthalate, and naphthalene) were detected at concentrations exceeding their respective AWQSGVs.

- bis(2-ethylhexyl)phthalate is a common laboratory artifact and is not considered to be present. Biphenyl (diphenyl) and naphthalene were detected above their respective AWQSGV in groundwater samples collected from MW-3 and MW-7.

- Naphthalene was the most commonly detected SVOC, was detected above the Class GA AWQSGV in both MW-3 (NAPL observed within well) and MW-7 (screened through the interval where NAPL observed in soil, 35 to 40 feet bgs).

No other SVOCs were detected above their AWQSGVs in any of the monitoring wells during the first round of sampling.

Inorganics

A total of 24 inorganics were detected at least once in groundwater samples collected during the November 2012 sampling event. Of these, eighteen inorganics (antimony, arsenic, barium, beryllium, cadmium, chromium, copper, iron, lead, magnesium, manganese, mercury, nickel, selenium, sodium, thallium, zinc, and cyanide) were detected at concentrations exceeding their respective AWQSGVs.

- Antimony was detected above its AWQSGV in groundwater collected from four monitoring wells (MW-1, MW-3, MW-7, and MW-8).

- Iron was detected above its AWQSGV in groundwater collected from five monitoring wells (MW-1, MW-3, MW-4, MW-8, and MW-9).

- Lead was detected above its AWQSGV in groundwater collected from two monitoring wells (MW-4 and MW-8(dup)).

- Magnesium was detected above its AWQSGV in groundwater collected from three monitoring wells (MW-4, MW-7, and MW-9).

- Manganese was detected above its AWQSGV in groundwater collected from six monitoring wells (MW-1, MW-3, MW-4, MW-7, MW-8, and MW-9).

- Sodium was detected above its AWQSGV in groundwater collected from five monitoring wells (MW-1, MW-3, MW-4, MW-7, and MW-8).

- Monitoring well MW-4 exhibited an additional twelve inorganic constituents (arsenic, barium, beryllium, cadmium, chromium, copper, mercury, nickel, selenium, thallium, zinc, and cyanide) which were detected above their respective AWQSGVs.

- It is noted that of these; iron, manganese, magnesium and sodium are naturally-occurring inorganics commonly detected in groundwater. Additionally, many other metals are commonly present in rock salt including lead and zinc. Iron cyanide is also often added to rock salt used for roadway de-icing as an anti-caking agent. The presence of many these inorganics in groundwater appear to be related to the storage of road salts at the lower portion of the site or in the case of offsite monitoring wells MW-8 and MW-9, the presence of historic fill containing these analytes.

**April 2013 Sampling Round**

Groundwater analytical results are summarized in Table 4 and on Figures 9, 10, and 11.

Field Measurements

Each monitoring well was sampled upon reaching parameter stability and turbidity levels below 50 NTU with the exception of MW-1 and MW-4; both had very slow recharge and ran dry several times prior to stabilization of water quality parameters. A sample for dissolved metals was collected from both wells.

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 and MW-7 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 14 VOCs were detected at least once in the groundwater samples collected during the April 2013 sampling event.

- Of these, eight (8) VOCs (acetone, isopropylbenzene, styrene, benzene, ethylbenzene, toluene, o-xylene, and m/p-xylene) were detected at concentrations exceeding their respective AWQSGVs.

- Isopropylbenzene was detected above its AWQSGV in groundwater collected from monitoring well MW-7.

- Styrene was detected above its AWQSGV in groundwater collected from monitoring well MW-3.

- Benzene, ethylbenzene, toluene, o-xylene, and m/p-xylene were detected above their respective AWQSGVs in three (3) monitoring wells (MW-3, MW-5, and MW-7).

No VOCs were detected above their AWQSGVs in any other sampled monitoring wells.

SVOCs

Thirteen PAHs and six other SVOCs were detected at least once in the groundwater samples collected during the April 2013 sampling event. Of these, nine (9) were detected at concentrations exceeding their AWQSGVs (biphenyl (diphenyl), acenaphthene, benzo(a)anthracene, benzo(a)pyrene,benzo(b)fluoranthene, chrysene, fluorene, naphthalene, and phenanthrene).

- Biphenyl (diphenyl), acenaphthene, benzo (a) anthracene, benzo (a) pyrene, benzo (b) fluoranthene, chrysene, and naphthalene were detected above their respective AWQSGVs in three (3) monitoring wells (MW-3, MW-5, and MW-7).

- Fluorene was detected above its AWQSGV in the duplicate groundwater sample collected from monitoring well MW-3.

- Phenanthrene was detected above its AWQSGV in groundwater collected from monitoring wells MW-3 and MW-7.

No other SVOCs were detected above their AWQSGVs in any of the monitoring wells.

Inorganics

A total of 23 inorganics were detected at least once in groundwater samples collected during the April 2013 sampling event. Of these, 16 inorganics (antimony, arsenic, barium, beryllium, chromium, copper, iron, lead, magnesium, manganese, mercury, nickel, selenium, sodium, thallium, and cyanide) were detected at concentrations exceeding their respective AWQSGVs.

- Antimony was detected above its AWQSGV in groundwater collected from two monitoring wells (MW-2 and MW-5).

- Arsenic, chromium, copper, mercury, nickel, selenium, and thallium were detected above their respective AWQSGVs in groundwater collected from monitoring well MW-4.

- Barium was detected above its AWQSGV in groundwater collected from monitoring well MW-2.

- Iron, manganese and sodium were detected above their respective AWQSGVs in each of the seven monitoring wells sampled (MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, and MW-9).

- Lead was detected above its AWQSGV in groundwater collected from three monitoring wells (MW-3, MW-4, and MW-5).

- Magnesium was detected above its AWQSGV in groundwater collected from three monitoring wells (MW-5, MW-7, and MW-9).

- Thallium was detected above its AWQSGV in groundwater collected from monitoring well MW-9.

- Cyanide was detected above its AWQSGV in groundwater collected from monitoring well MW-2.

No other inorganics were detected above their AWQSGVs in any of the monitoring wells.

A total of 15 dissolved inorganics were detected at least once in groundwater samples collected during the RI. Of these, four inorganics (antimony, manganese, selenium, and sodium) were detected at concentrations exceeding their respective AWQSGVs. Manganese and sodium were detected above their respective AWQSGVs in groundwater collected from monitoring well MW-1 (up gradient well). Antimony, manganese, selenium, and sodium were detected above their respective AWQSGVs in groundwater collected from monitoring well MW-4. Dissolved organics sampling was limited to MW-1 and MW-4.

### 4.4.3 SOIL GAS SAMPLE RESULTS

The NYSDOH Guidance does not provide screening values for VOCs in soil vapor for comparison. A total of 15 VOCs were detected at least once in the soil gas samples collected during the RI. The detected compounds are characterized into three general categories: chlorinated VOCs (CVOCs), non-MGP related compounds, and possibly MGP related compounds.

CVOCs

1,1,1-Trichloroethane (TCA) and tetrachloroethene (PCE) were the only two CVOCs detected in the soil gas samples collected from the site. PCE was detected in all three samples, with the highest concentration present in SV-3. CVOCs are not soil gas contaminants associated with former MGP sites. TCA is a common degradation byproduct of PCE.

Non-MGP Related Compounds

Nine VOCs that are not considered MGP related or CVOCs were detected at low concentrations in the soil gas samples collected from the site, including 1,3-butadiene, 2,2,4-trimethylpentane, 2-butanone (methyl ethyl ketone), acetone, carbon disulfide, cyclohexane, Freon 12 (Dichlorodifluoromethane), heptanes, and hexane. The greatest total concentration of non-MGP related compounds was detected in SV-4. Many of these VOCs can be lab artifacts.

Possibly MGP Related Compounds

Compounds potentially related to MGP residues detected in the soil gas samples include benzene, toluene, ethylbenzene, and xylenes (BTEX). The greatest total concentration of possibly MGP related compounds was detected in SV-4. However, a review of data collected during SC and RI activities from MW-4 and SB-02 indicates the absence of these analytes in soil

or groundwater, beyond an estimated concentration of benzene within soil at MW-04. Additionally, a review of the boring logs from both of these locations indicates the absence of any NAPL, staining, odors, or elevated PID readings, suggesting that the detection of these analytes within soil gas at SV-4 is from a non-MGP related source.

# SECTION 5

# EXTENT OF MGP NAPL IMPACTS

As noted in earlier sections of this document, the surface elevation of the lower and upper portion differ greatly, ranging from a surface elevation of 16.9 feet MSL at SB-04 to a surface elevation of 39.7 feet MSL at SB-13. The approximately 23 feet variance in grade is due to the City of Yonkers' placement there of various debris, across the northern portion of the Site and is the reason for its designation as the 'upper' portion of the Site.

In an effort to effectively show the distribution of coal tar residue in the subsurface, Figures 12 to 15 the occurrence of NAPL relative to remnant and former MGP structures and depth in the subsurface relative to the ground surface of the lower portion for the site are presented as depths relative to ground surface of the lower portion of the Site. For example, Figure 12 depicts the location of where NAPL was observed 6 to 11 feet below the assumed average ground surface of the lower portion of the Site (16 feet msl).

## 5.1 MGP NAPL – 6 TO 11 FEET

Figure 12 presents the location of relatively shallow NAPL detected on the Site at 6 to top of water table (approximately 11 feet below grade). This plan view NAPL area is approximately 50 feet wide and 100 feet long or 5,000 square feet. The northern section of this NAPL area, from the concrete block retaining wall towards SB-10 and SB-16 is likely related to the former 50,000 cubic foot holder. Cross-sections appear to indicate that the southern portion of this area is occurs down gradient of the former 22,800 cubic foot holder and the former 50,000 foot holder. As discussed previously, the VOC and SVOC impacts within soil are concurrent with and related to the presence of NAPL.

It should be noted that the area immediately to the north of the concrete block retaining wall was inaccessible due to a steep unstable slope. While the two NAPL areas are presumed to be connected as shown, it is possible that the areas are separate. This portion of NAPL impacts, while shown on this figure as present 6 to 11 feet below the lower parcel, some of these areas are covered with an additional 23 feet of fill. It is anticipated that this area will be investigated further during a pre-design investigation (PDI).

## 5.2 MGP NAPL – 11 TO 21 FEET

Figure 13 presents the occurrence of NAPL detected between 11 to 21 feet below grade. This area is approximately equivalent to a rectangle 75 feet wide and 100 feet long, or 7,500 square feet. Cross-sections on Figure 7A and Figure 7B indicate that the western section of this NAPL area at SB-07 and SB-12 are from the former 250,000 cubic foot holder or from the down gradient edge of the NAPL from the two smaller former gas holders. NAPL observed from the concrete block retaining wall towards SB-10 and SB-16 is related to the former 50,000 cubic foot holder. NAPL at SB-05 and SB-06, the southern portion of this area, is present down gradient of the former 22,800 cubic foot holder and the former 50,000 foot holder. As discussed previously, the VOC and SVOC impacts within soil are concurrent with and related to the presence of NAPL.

It should be noted that the area between SB-12 and MW-7, as well as the area immediately to the west of MW-7, were inaccessible due to a steep unstable slope. It is anticipated that this area will be investigated further during a pre-design investigation (PDI).

## 5.3 MGP NAPL – 21 TO 25 FEET

Figure 14 depicts the location of NAPL detected on the Site at 21 to 25 feet below the surface of the lower parcel. The NAPL detected at these depths are isolated at SB-04 (250,000 cubic foot gas holder), SB-05 (22,800 cubic foot gas holder), and SB-13 (50,000 cubic foot gas holder). The NAPL at SB-05 and SB-13 at this depth, appear to be the lower edges of the NAPL noted in Section 5.4. As discussed previously, the VOC and SVOC impacts within soil are concurrent with and related to the presence of NAPL.

## 5.4 MGP NAPL – DEEPER THAN 35 38 FEET

Figure 15 depicts the location of NAPL detected on the Site deeper than35 feet below grade. The NAPL detected at this depth is isolated to the vicinity of soil boring SB-12, at a depth above bedrock. It is believed that this NAPL migrated from upgradient locations at the two smaller holders. NAPL was not detected at SB-11, the down gradient location of boring SB-12. As discussed previously, the VOC and SVOC impacts within soil are concurrent with and related to the presence of NAPL.

# SECTION 6

# EXPOSURE ASSESSMENT

Information collected during the initial Site Characterization and the RI at the former Ludlow Street Works Site has been used to qualitatively assess potential exposure pathways for the various detected compounds in Site soils, groundwater, and soil vapor. The Site is located within an industrial district of a multi-use (i.e., residential and commercial) neighborhood and is currently used as a City of Yonkers Department of Public Works storage yard (lower portion of the Site) and fill deposition area (upper portion of the Site)

## 6.1 SOILS – VOCS, SVOCS AND MGP NAPL

As noted in earlier sections of this document, NAPL was detected at discrete locations in the subsurface ranging in depths from 6 to 38 feet below the surface of the lower portion of the Site. One VOC was detected above its USCO as shallow as 3 feet below ground surface (toluene at TP-4). However, all other VOC and SVOC impacts were concurrent with the observations of NAPL at onsite areas, with the highest VOC and SVOCs detected associated with NAPL in the vicinity of the foundation of the former 50,000 cubic foot gas holder. As discussed in Section 5, the majority of NAPL is present at depths deeper than 11 feet below the lower portion of the Site, and is covered with up to 40 feet of fill materials.

There is limited potential for shallow NAPL impacted soil to be encountered during intrusive maintenance activities adjacent to the concrete block wall. It is unlikely that these materials would be encountered during typical Site operations (i.e., use as a DPW storage yard). Most Site soils are covered with gravel and broken bituminous pavement and, for most of the year; the southern (or lower) portion of the Site is covered by a pile of road salt, limiting the potential exposure to humans or the environment.

VOCs, SVOCs and MGP NAPL are not present offsite, west of the railroad tracks.

## 6.2 SOILS – INORGANIC IMPACTS

Seven inorganics (arsenic, chromium, copper, lead, mercury, nickel, and zinc) were detected at concentrations exceeding their respective USCOs. As noted in earlier portions of this document, the majority of inorganics present above USCO are within offsite soils encountered at MW-8, MW-9, SB-11, and TP-06, locations down gradient and off-site from the historical extent of the former MGP site. Sanborn Fire Insurance Maps indicate that this offsite area was formerly in an area formerly identified as open water. Accordingly, this entire off-site area consists of non-native urban fill, which typically contains metals and other inorganic potential COI at concentrations above their SCOs.

Given the current depth below ground surface of remnant MGP structures, and the presence of the fill emplaced on the upper portion of the Site, it is assumed that these areas have been covered by historic fill materials, containing metals and other inorganics. As noted in Section 6.1, the lower portion of the site is covered by pavement, soil, and a salt pile, while the upper portion of the Site is covered approximately 15 feet of construction debris (e.g., wood, concrete, boulders, asphalt, gravel, etc.) and some vegetation. These cover materials limit the potential exposure to humans or the environment from the historic fill materials.

## 6.3 GROUNDWATER – VOCS, SVOCS AND MGP NAPL

Analytical results indicated the presence of VOCs, PAHs, and inorganic concentrations in groundwater at the Site above the Class GA AWQSGV and guidance values. Two monitoring wells (MW-3 and MW-7) exceeded AWQSGV MGP-related VOCs and SVOCs during the first groundwater sampling round, and again during the second groundwater sampling round, along with replacement well MW-5.

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 west - northwest towards the Hudson River. The depths to groundwater measured in on and off-site wells in January 2013 ranged from approximately 4 to 39 feet bgs which corresponds to elevations of approximately 2 to 6 feet MSL. Therefore, the potential for exposure to groundwater during intrusive subsurface activities is not anticipated.

## 6.3 GROUNDWATER – FILL RELATED CONSTITUENTS

Several inorganic analytes were detected at the Site (including sodium, magnesium, and manganese) at concentrations exceeding Class GA Groundwater Standards. These analytes are not associated with MGP related operations. Their presence at high concentrations in both Site soils and in Site groundwater is believed to be due to use of the Site for road salt storage, or due to the presence of urban fill materials. These analytes are also present in offsite groundwater, down gradient of the Site. The presence of these analytes in the off-site downgradient wells is consistent with their proximity to the Hudson River, which is a saline water body.

## 6.4 SOIL VAPOR

Soil vapor results indicate the presence of 15 VOCs in the soil gas samples collected during the RI. In an effort to assess the potential impact of these concentrations, these concentrations were compared to target concentrations in the document "USEPA OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance)" Table 2b, EPA530-D-02-004, November 2002. As noted on Table 5, none of the possibly related MGP VOCs exceeded the Target Soil Gas Concentrations. Based on this comparison, there appears to be no exposure risk to offsite buildings, related to soil vapor concentrations from MGP related contaminants.

# SECTION 7

# CONCLUSIONS AND RECOMMENDATIONS

## 7.1 CONCLUSIONS

The results of the RI and SCS show that impacted soil and groundwater are associated with discrete on-site source areas in the southern portion of the Site where the former works operations took place. Due to the depth and occurrence of the impacted media and configuration of the Site, there are no current exposure risks. Impacts detected on the northern portion are isolated to the southern-most areas in the vicinity of the former 50,000 cu ft gas holder and retort house. The following provides a summary of the key findings.

- Remnants of the former MGP structures (lime house, purifying house, meter house, retort house 250,000 cubic foot holder, 22,00 cubic foot holder, 50,000 gas holder are present on the property.

- No evidence of the former tar pipe identified on the 1886 Sanborn Fire Insurance maps was observed in the field.

- An active sanitary force main is present offsite (21" vitrified clay east of Site); and abandoned sewer main (14-inch cast iron pipe) are present in the subsurface at the Site and offsite areas. The force main is operated by the Westchester County Department of Environmental Facilities. This active conveyance is present at a depth of approximately 12 feet bgs relative to the grade at the southern or lower portion of the Site and runs north-south along the eastern border of the Site. The 14-inch cast iron pipe is abandoned in place, generally bisecting the Site east-west through the northern portion of the Site, from the sanitary force main located along the eastern boundary of the Site.

- A storm sewer main, constructed of reinforced concrete pipe, according to the City of Yonkers, runs to the west-northwest from the southeast corner of the southern portion of the Site. This structure appears to extend beneath the MNRR right-of-way.

- Surface soil across the southern portion of the Site, where the predominance of MGP activities occurred, is covered by road salt, fill material, isolated remnant asphalt areas and abandoned concrete structures. Exposure to surface soils in the southern portion of the site is limited due to the extensive fill, salt piles and controlled access.

- Surface soil in the northern portions of the site that was present at grade when the MGP was operational, is currently covered by 15 to 20 feet of debris and fill that was placed there by the City of Yonkers subsequent to operations of the former MGP. Accordingly, there is no potential to encounter the former surface soils there. Furthermore, based on the historical records, this portion of the Site was not utilized during MGP operations and so it is not expected that former surface soils there contain impacts from the former MGP.

- Subsurface soil is comprised of three unconsolidated units, which are fill, sand, silt and clay, with isolated deposits of sand and cobbles, and gravel and sand, as shown on the cross sections on Figure 7A to Figure 7C. Fill, consisting of non-native soils, bricks, concrete and other debris, is encountered to depths up to 14 feet below the lower portion of the Site, below which sand is encountered to bedrock. In some areas of the site, the silt and clay layer is encountered from 14 to 24 feet below the lower portion of the site. NAPL and groundwater are predominantly found in the sand layer. Ground water is encountered primarily within the sand layer, at an approximate depth of 14 feet below the lower portion of the site.

- Bedrock occurs at depths ranging from approximately 20 to 36 feet below grade of the lower portion of the site.

- Subsurface soil at the southern portion of the Site is impacted by residual coal tar and NAPL. The soil also contains elevated concentrations of VOCs and SVOCs associated with the 22,800 cu foot holder, the 250,000 cu foot holder, and the retort house (Figure 12 to Figure 15). The impacts in the areas surrounding these structures occur primarily in the soils within the respective structures and deeper soils outside of and in the vicinity of the structures above and below the water table, with the shallowest occurrences observed at depths below 6 to 11 feet bgs below the lower portion of the Site.

- Subsurface soil in the southern-most area of the northern portion of the Site are impacted by residual coal tar and NAPL associated with the 50,000 cu ft holder and retort house (Figure 12 to Figure 15). The impacts occur primarily inside the remnants of these structures and in the soils below the water table to a depth of approximately 25 feet bgs below the lower portion of the Site.

- Impacts were observed in the deep subsurface soil at 36 feet bgs below the lower portion of the Site at SB-12, within the footprint of former retort house and at 25 feet bgs below the lower portion of the site, within weathered bedrock at SB-13, outside of the 50,000 cu foot holder.

- Based on the historical records, the northern portion of the Site (north of the footprint of the 50,000 cubic foot holder), was not utilized during MGP operations and accordingly it is not likely that subsurface soils in this area contain impacts related to the former MGP.

- Groundwater occurs at depths that ranged from 9 to14 feet bgs of the lower portion of the Site and flows from the southeast to northwest across the Site (Figure 7). Where groundwater flows through soil containing MGP source material (e.g., coal tar NAPL or residual coal tar) it leaches the more soluble components of the coal tar, which include VOCs and SVOCs. As a result, groundwater in the vicinity of the source areas (as identified above) contained elevated concentrations of BTEX (VOCs) and some PAHs (SVOCs). This distribution is shown on Figure 9 and Figure 10. As previously noted, it is likely that impacted groundwater has migrated down gradient from the site to areas beneath the railroad right-of-way. Due to the mild influence of tidal fluctuation on groundwater flow in areas closer to the Hudson River and the numerous natural

attenuation processes that occur in the subsurface (i.e., dilutions, dispersion, adsorption, biodegradation, etc.) it is not likely that impacted groundwater migrates a substantial distance from the on-site source areas.

- VOCs were detected at low levels in soil gas samples collected beneath buildings that currently occupy parcels adjacent to the site. There was no apparent evidence that VOCs detected in soil gas were migrating into the structures at these locations. Therefore, additional monitoring of soil gas is not warranted.

- Elevated concentrations of sodium, manganese, and magnesium detected in Site soil and groundwater are believed to be associated with use of the Site as a road salt storage facility, or due to the presence of urban fill materials.

## 7.2 RECOMMENDATIONS

Based on the RI activities, no additional investigation is recommended to delineate the impacts identified within the Site.

It is recommended that remedial alternatives be evaluated in order to address the subsurface impacts identified during the remedial investigation. Prior to identifying overall remedial approach and specific alternatives, Con Edison will consult with NYSDEC to review and consider the impacts and Site-specific conditions.

# SECTION 8

# REFERENCES


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**Table 1**
**RI Sample Summary**
**Former Ludlow Street Works Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Location | Sample ID | Depth (bgs) | TCL VOCs | TCL SVOCs | TAL Metals | Cyanide | TO-15 Modified | Dissolved Metals |
|---|---|---|---|---|---|---|---|---|
| **SOIL SAMPLES** | | | | | | | | |
| MW-7 | MW-7 (36-38) | 36-38' | X | X | X | X | | |
| | MW-7 (48-50) | 48-50' | X | X | X | X | | |
| | MW-17 (36-38)* | 36-38' | X | X | X | X | | |
| MW-8 | MW-8 (9.5-10) | 9.5-10' | X | X | X | X | | |
| | MW-8 24.5-25) | 24.5-25' | X | X | X | X | | |
| MW-9 | MW-9 (35-35.5) | 35-35.5' | X | X | X | X | | |
| | MW-9 (9-9.5) | 9-9.5' | X | X | X | X | | |
| SB-9 | SB-9 (5-8) | 5-8' | X | X | X | X | | |
| | SB-9 (28-30) | 28-30' | X | X | X | X | | |
| SB-10 | SB-10 (30-32) | 30-32' | X | X | X | X | | |
| | SB-10 (45-47) | 45-47' | X | X | X | X | | |
| SB-11 | SB-11 (5-5.5) | 5-5.5' | X | X | X | X | | |
| | SB-11 (29.5-30) | 29.5-30' | X | X | X | X | | |
| SB-12 | SB-12 (12-14) | 12-14' | X | X | X | X | | |
| | SB-12 (36-38) | 36-38' | X | X | X | X | | |
| SB-13 | SB-13 (47-49) | 47-49' | X | X | X | X | | |
| SB-14 | SB-14 (38-40) | 38-40' | X | X | X | X | | |
| | SB-14 (45-47) | 45-47' | X | X | X | X | | |
| | SB-14A (45-47)* | 45-47' | X | X | X | X | | |
| SB-16 | SB-16 (30-33) | 30-33' | X | X | X | X | | |
| | SB-16 (45-47) | 45-47' | X | X | X | X | | |
| SB-17 | SB-17 (33-35) | 33-35' | X | X | X | X | | |
| | SB-17 (45-47) | 45-47' | X | X | X | X | | |
| TP-6 | TP-6 Floor | 6' | X | X | X | X | | |
| **GROUNDWATER SAMPLES - November 2012** | | | | | | | | |
| MW-1 | MW-1 | NA | X | X | X | X | | |
| MW-3 | MW-3 | NA | X | X | X | X | | |
| MW-4 | MW-4 | NA | X | X | X | X | | |
| MW-7 | MW-7 | NA | X | X | X | X | | |
| MW-8 | MW-8 | NA | X | X | X | X | | |
| MW-8 | MW-18* | NA | X | X | X | X | | |
| MW-9 | MW-9 | NA | X | X | X | X | | |
| **GROUNDWATER SAMPLES - April 2013** | | | | | | | | |
| MW-1 | MW-1 | NA | X | X | X | X | | X |
| MW-2 | MW-2 | NA | X | X | X | X | | |
| MW-3 | MW-3 | NA | X | X | X | X | | |
| MW-3 | MW-3A* | 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-7 | MW-7 | NA | X | X | X | X | | |
| MW-8 | MW-8 | NA | X | X | X | X | | |
| MW-9 | MW-9 | NA | X | X | X | X | | |

**Table 1**
**RI Sample Summary**
**Former Ludlow Street Works Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Location | Sample ID | Depth (bgs) | TCL VOCs | TCL SVOCs | TAL Metals | Cyanide | TO-15 Modified | Dissolved Metals |
|---|---|---|---|---|---|---|---|---|
| **SOIL GAS SAMPLES** | | | | | | | | |
| SV-1/SB-9 | SV-1 | 7' | | | | | X | |
| SV-3 | SV-3 | 8' | | | | | X | |
| SV-4 | SV-4 | 8' | | | | | 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**
**Remedial Investigation - October 2012 through April 2013**

| Well ID | Top of Casing Elevation (feet AMSL) | 11/19/2012 | | 1/3/2013 | | 4/5/2013 | |
|---|---|---|---|---|---|---|---|
| | | Depth to Water (feet) | Groundwater Elevation (feet AMSL) | Depth to Water (feet) | Groundwater Elevation (feet AMSL) | Depth to Water (feet) | Groundwater Elevation (feet AMSL) |
| MW-1 | 20.35 | 13.95 | 6.40 | 14.06 | 6.29 | 13.36 | 6.99 |
| MW-2 | 16.24 | NA(1) | NA(1) | 10.45 | 5.79 | 10.92 | 5.32 |
| MW-3 | 19.35 | 16.33 | 3.02 | 16.51 | 2.84 | 16.49 | 2.86 |
| MW-4 | 19.28 | 14.09 | 5.19 | 14.15 | 5.13 | 13.92 | 5.36 |
| MW-5 | 15.16 | NA(1) | NA(1) | 11.23 | 3.93 | 12.05 | 3.11 |
| MW-7 | 42.03 | 39.08 | 2.95 | 39.19 | 2.84 | 39.00 | 3.03 |
| MW-8 | 5.20 | 5.06 | 2.08 | 5.20 | 1.94 | NA(2) | NA(2) |
| MW-9 | 6.35 | 4.23 | 2.12 | 4.38 | 1.97 | 4.15 | 2.20 |

Notes:
(1) Monitoring well destroyed by DPW site activities, replaced in December 2012.
(2) Access blocked during sampling activities.

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 Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>Detected Compound Summary | | Unrestricted Use Soil Cleanup Objectives | Location ID:<br>Sample ID:<br>Lab Sample Id<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW- 7<br>MW-7(36-38)<br>D4710-03<br>36 - 38 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 9:10<br>1/23/2013 | Dup of MW-7(36-38)<br>MW- 7<br>MW-17(36-38)<br>D4710-09<br>36 - 38 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 9:15<br>1/23/2013 | MW- 7<br>MW-7(48-50)<br>D4710-04<br>48 - 50 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 9:20<br>1/23/2013 | MW-8<br>MW-8(9.5-10)<br>D4751-03<br>9.5 - 10 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 14:15<br>1/23/2013 | MW-8<br>MW-8(24.5-25)<br>D4751-04<br>24.5 - 25 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 14:20<br>1/23/2013 | MW-9<br>MW-9(9-9.5)<br>D4751-06<br>9 - 9.5 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 10:00<br>1/23/2013 | MW-9<br>MW-9(35-35.5)<br>D4751-05<br>35 - 35.5 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 10:05<br>1/23/2013 |
|---|---|---|---|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | | UNITS: | | | | | | | |
| | VOLATILES | | | | | | | | | |
| 67-64-1 | ACETONE | 0.05 | mg/kg | ND | ND | ND | 0.051 | ND | ND | ND |
| 71-43-2 | BENZENE | 0.06 | mg/kg | 7.1 J | 5.3 | 0.0013 J | 0.0023 J | ND | ND | ND |
| 75-15-0 | CARBON DISULFIDE | -- | mg/kg | ND | ND | 0.0013 J | 0.0049 J | ND | ND | ND |
| 74-87-3 | CHLOROMETHANE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 110-82-7 | CYCLOHEXANE | -- | mg/kg | 0.062 J | 0.0082 J | ND | ND | ND | ND | ND |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1.1 | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 541-73-1 | 1,3-DICHLOROBENZENE | 2.4 | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1.8 | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 75-71-8 | DICHLORODIFLUOROMETHANE | -- | mg/kg | ND | ND | ND | 0.0034 J | ND | ND | ND |
| 75-34-3 | 1,1-DICHLOROETHANE | 0.27 | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 100-41-4 | ETHYLBENZENE | 1 | mg/kg | 30 J | 48 | 0.0017 J | ND | ND | ND | ND |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | -- | mg/kg | 6.2 J | 3.6 | ND | ND | ND | ND | ND |
| 108-87-2 | METHYLCYCLOHEXANE | -- | mg/kg | 0.21 J | 0.046 J | ND | ND | ND | ND | ND |
| 75-09-2 | METHYLENE CHLORIDE | 0.05 | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 100-42-5 | STYRENE | -- | mg/kg | 0.89 | 0.96 J | ND | ND | ND | ND | ND |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 108-88-3 | TOLUENE | 0.7 | mg/kg | 15 J | 18 | 0.0013 J | ND | ND | ND | ND |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | 0.26 | mg/kg | 34 J | 54 | 0.002 J | ND | ND | ND | ND |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | 0.26 | mg/kg | 18 J | 28 | ND | ND | ND | ND | ND |
| | **Total VOCs** | **NS** | mg/kg | 111.462 | 157.9142 | 0.0076 | 0.0616 | ND | ND | ND |
| | SEMIVOLATILES | | | | | | | | | |
| 92-52-4 | BIPHENYL (DIPHENYL) | -- | mg/kg | 7 | 11 | ND | ND | ND | ND | ND |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 86-74-8 | CARBAZOLE | -- | mg/kg | 0.55 | 0.7 | ND | ND | ND | ND | ND |
| 132-64-9 | DIBENZOFURAN | -- | mg/kg | 2.2 | 2.8 | ND | ND | ND | ND | ND |
| 131-11-3 | DIMETHYL PHTHALATE | -- | mg/kg | 0.221 J | 0.226 J | ND | 0.215 J | 0.221 J | 0.292 J | 0.2 J |
| 84-74-2 | DI-N-BUTYL PHTHALATE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| | PAHs | | | | | | | | | |
| 83-32-9 | ACENAPHTHENE | 20 | mg/kg | 15 J | 21 J | ND | ND | ND | ND | ND |
| 208-96-8 | ACENAPHTHYLENE | 100 | mg/kg | 12 | 16 | ND | ND | ND | ND | ND |
| 120-12-7 | ANTHRACENE | 100 | mg/kg | 13 | 20 | ND | ND | ND | ND | ND |
| 56-55-3 | BENZO(A)ANTHRACENE | 1 | mg/kg | 8.3 | 13 | ND | 0.26 J | ND | ND | ND |

**Table 3**
**Summary of Soil Analytical Data**
**Former Ludlow Street Works Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>Detected Compound Summary | | Unrestricted Use Soil Cleanup Objectives | Location ID:<br>Sample ID:<br>Lab Sample Id<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW- 7<br>MW-7(36-38)<br>D4710-03<br>36 - 38 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 9:10<br>1/23/2013 | Dup of MW-7(36-38)<br>MW- 7<br>MW-17(36-38)<br>D4710-09<br>36 - 38 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 9:15<br>1/23/2013 | MW- 7<br>MW-7(48-50)<br>D4710-04<br>48 - 50 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 9:20<br>1/23/2013 | MW-8<br>MW-8(9.5-10)<br>D4751-03<br>9.5 - 10 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 14:15<br>1/23/2013 | MW-8<br>MW-8(24.5-25)<br>D4751-04<br>24.5 - 25 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 14:20<br>1/23/2013 | MW-9<br>MW-9(9-9.5)<br>D4751-06<br>9 - 9.5 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 10:00<br>1/23/2013 | MW-9<br>MW-9(35-35.5)<br>D4751-05<br>35 - 35.5 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 10:05<br>1/23/2013 |
|---|---|---|---|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | | UNITS: | | | | | | | |
| | VOLATILES | | | | | | | | | |
| 50-32-8 | BENZO(A)PYRENE | 1 | mg/kg | 5.7 J | 9 J | ND | 0.26 J | ND | ND | ND |
| 205-99-2 | BENZO(B)FLUORANTHENE | 1 | mg/kg | 4.4 J | 6.6 J | ND | 0.3 J | ND | ND | ND |
| 191-24-2 | BENZO(G,H,I)PERYLENE | 100 | mg/kg | 2.4 J | 2.9 J | ND | 0.22 J | ND | ND | ND |
| 207-08-9 | BENZO(K)FLUORANTHENE | 0.8 | mg/kg | 1.7 | 2.2 | ND | ND | ND | ND | ND |
| 218-01-9 | CHRYSENE | 1 | mg/kg | 8 | 12 | ND | 0.29 J | ND | ND | ND |
| 53-70-3 | DIBENZ(A,H)ANTHRACENE | 0.33 | mg/kg | 0.72 | 0.88 | ND | ND | ND | ND | ND |
| 206-44-0 | FLUORANTHENE | 100 | mg/kg | 14 | 23 | ND | 0.57 | ND | ND | ND |
| 86-73-7 | FLUORENE | 30 | mg/kg | 22 | 27 | ND | ND | ND | ND | ND |
| 193-39-5 | INDENO(1,2,3-C,D)PYRENE | 0.5 | mg/kg | 2.1 | 2.7 | ND | 0.17 J | ND | ND | ND |
| 91-57-6 | 2-METHYLNAPHTHALENE | -- | mg/kg | 110 | 130 | ND | ND | ND | ND | ND |
| 91-20-3 | NAPHTHALENE | 12 | mg/kg | 220 | 240 | ND | ND | ND | ND | ND |
| 85-01-8 | PHENANTHRENE | 100 | mg/kg | 60 | 79 | ND | 0.48 | ND | ND | ND |
| 129-00-0 | PYRENE | 100 | mg/kg | 26 | 34 J | ND | 0.55 | ND | ND | ND |
| | **Total PAHs** | -- | mg/kg | 525.32 | 639.28 | ND | 3.1 | ND | ND | ND |
| | **Total SVOCs** | -- | mg/kg | 535.291 | 654.006 | ND | 3.315 | 0.221 | 0.292 | 0.2 |
| | INORGANICS | | | | | | | | | |
| 7429-90-5 | ALUMINUM | -- | mg/kg | 7150 | 6870 | 2050 | 4920 J | 8550 J | 13400 J | 2710 J |
| 7440-38-2 | ARSENIC | 13 | mg/kg | 2.45 | 2.47 | 1.55 | 9.24 J | 2.16 J | ND | 0.75 J |
| 7440-39-3 | BARIUM | 350 | mg/kg | 57.6 | 54 | 36.9 | 73 J | 85.6 J | 177 J | 60.2 J |
| 7440-41-7 | BERYLLIUM | 7.2 | mg/kg | 0.28 | 0.29 | 0.08 J | ND | 0.33 | 0.13 J | 0.07 J |
| 7440-43-9 | CADMIUM | 2.5 | mg/kg | 0.48 | 0.45 | 0.03 J | 1.32 | 0.66 | 2.17 | 0.19 |
| 7440-70-2 | CALCIUM | -- | mg/kg | 1350 | 1340 | 709 | 3220 J | 1870 J | 2660 J | 13000 J |
| 7440-47-3 | CHROMIUM, TOTAL | 30 | mg/kg | 13.6 J | 13.7 J | 4.91 J | 31.2 J | 15.8 J | 28.1 J | 6.01 J |
| 7440-48-4 | COBALT | -- | mg/kg | 7.95 | 7.44 | 2.66 | 6.63 | 10.7 | 27.8 | 3.85 |
| 7440-50-8 | COPPER | 50 | mg/kg | 16 J | 16.2 J | 8.56 J | 93.7 J | 18.8 J | 7.84 J | 8.4 J |
| 7439-89-6 | IRON | -- | mg/kg | 22400 | 21300 | 5950 | 33500 | 24400 | 41900 | 6990 |
| 7439-92-1 | LEAD | 63 | mg/kg | 14.4 | 14.6 | 3.07 | 170 | 16.1 | 17.4 | 4.01 |
| 7439-95-4 | MAGNESIUM | -- | mg/kg | 3170 | 3100 | 1310 | 2310 J | 4040 J | 7840 J | 6590 J |
| 7439-96-5 | MANGANESE | 1600 | mg/kg | 180 | 135 | 44.7 | 240 J | 427 J | 251 J | 192 J |
| 7439-97-6 | MERCURY | 0.18 | mg/kg | 0.011 J | 0.006 J | 0.003 J | 4.03 | ND | 0.425 | ND |
| 7440-02-0 | NICKEL | 30 | mg/kg | 23 | 22 | 8.83 | 19.4 | 26.5 | 48.6 | 10.6 |
| 7440-09-7 | POTASSIUM | -- | mg/kg | 1980 | 1960 | 562 | 1530 J | 2600 J | 10700 J | 860 J |
| 7782-49-2 | SELENIUM | 3.9 | mg/kg | ND | ND | 0.52 | 0.57 | 0.26 J | 0.5 | ND |
| 7440-22-4 | SILVER | 2 | mg/kg | 0.5 | 0.47 | 0.1 J | 0.36 | 0.57 | 0.23 J | ND |
| 7440-23-5 | SODIUM | -- | mg/kg | 2090 | 2190 | 195 | 627 J | 662 J | 402 J | 1080 J |
| 7440-28-0 | THALLIUM | -- | mg/kg | 0.46 J | 0.48 J | ND | 1.23 | 0.52 J | ND | ND |
| 7440-62-2 | VANADIUM | -- | mg/kg | 18 | 17.7 | 5.98 | 15.3 J | 21.2 J | 38.8 J | 9.23 J |
| 7440-66-6 | ZINC | 109 | mg/kg | 36.1 | 39.3 | 13.7 | 96.8 | 47.2 | 97.6 | 14.5 |
| 57-12-5 | CYANIDE | 27 | mg/kg | 0.29 J | 0.362 | 0.171 J | 0.097 J | ND | 0.087 J | 0.075 J |

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) Shaded values exceed 6NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives.
(6) NA indicates compound was not analyzed.

**Table 3**
**Summary of Soil Analytical Data**
**Former Ludlow Street Works Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>Detected Compound Summary | | Unrestricted Use Soil Cleanup Objectives | Location ID:<br>Sample ID:<br>Lab Sample Id<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB- 9<br>SB-9(5-8)<br>D4710-07<br>5 - 8 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 14:15<br>1/23/2013 | SB- 9<br>SB-9(28-30)<br>D4710-08<br>28 - 30 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 14:55<br>1/23/2013 | SB-10<br>SB-10(30-32)<br>D4710-01<br>30 - 32 ft<br>CTECH<br>D4710<br>SOIL<br>10/25/2012 12:10<br>1/23/2013 | SB-10<br>SB-10(45-47)<br>D4710-02<br>45 - 47 ft<br>CTECH<br>D4710<br>SOIL<br>10/25/2012 12:40<br>1/23/2013 | SB-11<br>SB-11(5-5.5)<br>D4751-01<br>5 - 5.5 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 12:05<br>1/23/2013 | SB-11<br>SB-11(29.5-30)<br>D4751-02<br>29.5 - 30 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 12:10<br>1/23/2013 | SB-12<br>SB-12(12-14)<br>D4751-07<br>12 - 14 ft<br>CTECH<br>D4751<br>SOIL<br>11/5/2012 10:10<br>1/23/2013 |
|---|---|---|---|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | | UNITS: | | | | | | | |
| | VOLATILES | | | | | | | | | |
| 67-64-1 | ACETONE | 0.05 | mg/kg | 0.14 | 0.017 J | ND | ND | ND | ND | ND |
| 71-43-2 | BENZENE | 0.06 | mg/kg | 0.028 J | 0.0079 | 210 | ND | ND | ND | ND |
| 75-15-0 | CARBON DISULFIDE | -- | mg/kg | ND | ND | 0.041 | ND | 0.0028 J | ND | ND |
| 74-87-3 | CHLOROMETHANE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 110-82-7 | CYCLOHEXANE | -- | mg/kg | ND | ND | 0.057 | ND | ND | ND | ND |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | -- | mg/kg | ND | ND | R | ND | ND | ND | ND |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1.1 | mg/kg | ND | ND | R | ND | ND | ND | ND |
| 541-73-1 | 1,3-DICHLOROBENZENE | 2.4 | mg/kg | ND | ND | R | ND | ND | ND | ND |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1.8 | mg/kg | ND | ND | R | ND | ND | ND | ND |
| 75-71-8 | DICHLORODIFLUOROMETHANE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 75-34-3 | 1,1-DICHLOROETHANE | 0.27 | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 100-41-4 | ETHYLBENZENE | 1 | mg/kg | 0.0031 J | 0.002 J | 540 | ND | ND | ND | 9.1 |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | -- | mg/kg | ND | ND | 29 J | ND | ND | ND | 1 |
| 108-87-2 | METHYLCYCLOHEXANE | -- | mg/kg | ND | ND | 0.18 | ND | ND | ND | 69 |
| 75-09-2 | METHYLENE CHLORIDE | 0.05 | mg/kg | ND | ND | 0.16 J | ND | ND | ND | ND |
| 100-42-5 | STYRENE | -- | mg/kg | ND | ND | 7.1 J | ND | ND | ND | 0.29 J |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | -- | mg/kg | ND | ND | R | ND | ND | ND | ND |
| 108-88-3 | TOLUENE | 0.7 | mg/kg | 0.011 J | 0.0059 J | 510 | ND | ND | ND | 1.5 |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | -- | mg/kg | ND | ND | R | ND | ND | ND | ND |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | -- | mg/kg | ND | ND | R | ND | ND | ND | ND |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | 0.26 | mg/kg | 0.0021 J | 0.0015 J | 470 | ND | ND | ND | 11 |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | 0.26 | mg/kg | ND | ND | 220 | ND | ND | ND | 5.7 |
| | **Total VOCs** | **NS** | mg/kg | 0.1842 | 0.0343 | 1986.538 | ND | 0.0028 | ND | 97.59 |
| | SEMIVOLATILES | | | | | | | | | |
| 92-52-4 | BIPHENYL (DIPHENYL) | -- | mg/kg | ND | ND | 200 | ND | ND | ND | 10 |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 86-74-8 | CARBAZOLE | -- | mg/kg | ND | ND | 13 | ND | ND | ND | ND |
| 132-64-9 | DIBENZOFURAN | -- | mg/kg | ND | ND | 43 | ND | ND | ND | 2.5 |
| 131-11-3 | DIMETHYL PHTHALATE | -- | mg/kg | 0.161 J | ND | ND | ND | 0.296 J | 0.284 J | ND |
| 84-74-2 | DI-N-BUTYL PHTHALATE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| | PAHs | | | | | | | | | |
| 83-32-9 | ACENAPHTHENE | 20 | mg/kg | ND | ND | 320 J | ND | ND | ND | 9.1 |
| 208-96-8 | ACENAPHTHYLENE | 100 | mg/kg | ND | ND | 370 | 0.2 J | ND | ND | 50 |
| 120-12-7 | ANTHRACENE | 100 | mg/kg | ND | ND | 370 | ND | ND | ND | 22 |
| 56-55-3 | BENZO(A)ANTHRACENE | 1 | mg/kg | 0.29 J | ND | 220 | ND | ND | ND | 11 |

**Table 3**
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**Remedial Investigation - October 2012 through April 2013**

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>Detected Compound Summary | | Unrestricted Use Soil Cleanup Objectives | Location ID:<br>Sample ID:<br>Lab Sample Id<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB- 9<br>SB-9(5-8)<br>D4710-07<br>5 - 8 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 14:15<br>1/23/2013 | SB- 9<br>SB-9(28-30)<br>D4710-08<br>28 - 30 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 14:55<br>1/23/2013 | SB-10<br>SB-10(30-32)<br>D4710-01<br>30 - 32 ft<br>CTECH<br>D4710<br>SOIL<br>10/25/2012 12:10<br>1/23/2013 | SB-10<br>SB-10(45-47)<br>D4710-02<br>45 - 47 ft<br>CTECH<br>D4710<br>SOIL<br>10/25/2012 12:40<br>1/23/2013 | SB-11<br>SB-11(5-5.5)<br>D4751-01<br>5 - 5.5 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 12:05<br>1/23/2013 | SB-11<br>SB-11(29.5-30)<br>D4751-02<br>29.5 - 30 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 12:10<br>1/23/2013 | SB-12<br>SB-12(12-14)<br>D4751-07<br>12 - 14 ft<br>CTECH<br>D4751<br>SOIL<br>11/5/2012 10:10<br>1/23/2013 |
|---|---|---|---|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | | UNITS: | | | | | | | |
| | VOLATILES | | | | | | | | | |
| 50-32-8 | BENZO(A)PYRENE | 1 | mg/kg | 0.28 J | ND | 150 J | ND | ND | ND | 7.2 |
| 205-99-2 | BENZO(B)FLUORANTHENE | 1 | mg/kg | 0.38 J | ND | 97 J | ND | ND | ND | 5.5 |
| 191-24-2 | BENZO(G,H,I)PERYLENE | 100 | mg/kg | 0.17 J | ND | 42 J | ND | ND | ND | 2.1 |
| 207-08-9 | BENZO(K)FLUORANTHENE | 0.8 | mg/kg | ND | ND | 32 | ND | ND | ND | 1.7 J |
| 218-01-9 | CHRYSENE | 1 | mg/kg | 0.32 J | ND | 220 | ND | ND | ND | 10 |
| 53-70-3 | DIBENZ(A,H)ANTHRACENE | 0.33 | mg/kg | ND | ND | 12 | ND | ND | ND | ND |
| 206-44-0 | FLUORANTHENE | 100 | mg/kg | 0.56 | ND | 400 | ND | ND | ND | 22 |
| 86-73-7 | FLUORENE | 30 | mg/kg | ND | ND | 550 | ND | ND | ND | 33 |
| 193-39-5 | INDENO(1,2,3-C,D)PYRENE | 0.5 | mg/kg | 0.19 J | ND | 37 | ND | ND | ND | 2 |
| 91-57-6 | 2-METHYLNAPHTHALENE | -- | mg/kg | ND | ND | 2800 | ND | ND | ND | 160 |
| 91-20-3 | NAPHTHALENE | 12 | mg/kg | ND | ND | 5700 | 0.21 J | ND | ND | 310 |
| 85-01-8 | PHENANTHRENE | 100 | mg/kg | 0.32 J | ND | 1500 | ND | ND | ND | 94 |
| 129-00-0 | PYRENE | 100 | mg/kg | 0.47 | ND | 640 | ND | ND | ND | 29 |
| | **Total PAHs** | -- | mg/kg | 2.98 | ND | 13460 | 0.41 | ND | ND | 768.6 |
| | **Total SVOCs** | -- | mg/kg | 3.141 | ND | 13716 | 0.41 | 0.296 | 0.284 | 781.1 |
| | INORGANICS | | | | | | | | | |
| 7429-90-5 | ALUMINUM | -- | mg/kg | 7070 | 9490 | 3130 | 4490 | 4170 J | 5890 J | 4120 J |
| 7440-38-2 | ARSENIC | 13 | mg/kg | 7.78 | 3 | 7.21 | 1.23 | 18.3 J | 1.3 J | 0.9 J |
| 7440-39-3 | BARIUM | 350 | mg/kg | 157 | 96 | 30.9 | 55.6 | 156 J | 63.3 J | 31.9 J |
| 7440-41-7 | BERYLLIUM | 7.2 | mg/kg | 0.11 J | 0.39 | 0.04 J | 0.2 | ND | 0.3 | 0.14 J |
| 7440-43-9 | CADMIUM | 2.5 | mg/kg | 1.24 | 0.7 | 1.75 | 0.29 | 0.16 J | 0.42 | 0.35 |
| 7440-70-2 | CALCIUM | -- | mg/kg | 5480 | 2540 | 9540 | 13000 | 2260 J | 12200 J | 952 J |
| 7440-47-3 | CHROMIUM, TOTAL | 30 | mg/kg | 16.7 J | 18.4 J | 5.38 J | 8.9 J | 9.93 J | 11.7 J | 9.3 J |
| 7440-48-4 | COBALT | -- | mg/kg | 7.34 | 11.9 | 3.4 | 5.38 | 6.31 | 6.51 | 6.88 |
| 7440-50-8 | COPPER | 50 | mg/kg | 44.1 J | 20.5 J | 26.5 J | 11.8 J | 69.6 J | 12.1 J | 11 J |
| 7439-89-6 | IRON | -- | mg/kg | 29900 | 28600 | 13200 | 12600 | 26800 | 14600 | 10300 |
| 7439-92-1 | LEAD | 63 | mg/kg | 462 | 18.1 | 215 | 8.81 | 30 | 10.5 | 45.3 |
| 7439-95-4 | MAGNESIUM | -- | mg/kg | 2280 | 5050 | 5480 | 5450 | 1690 J | 5740 J | 1870 J |
| 7439-96-5 | MANGANESE | 1600 | mg/kg | 284 | 414 | 277 | 290 | 803 J | 319 J | 191 J |
| 7439-97-6 | MERCURY | 0.18 | mg/kg | 2.33 | ND | 0.381 | ND | 1.17 | ND | ND |
| 7440-02-0 | NICKEL | 30 | mg/kg | 21.2 | 31.1 | 12.2 | 14.3 | 17.5 | 16.6 | 11.2 |
| 7440-09-7 | POTASSIUM | -- | mg/kg | 655 | 2730 | 352 | 1470 | 1500 J | 2190 J | 957 J |
| 7782-49-2 | SELENIUM | 3.9 | mg/kg | 0.49 | 0.33 J | 1.95 | ND | 1 | ND | ND |
| 7440-22-4 | SILVER | 2 | mg/kg | 0.79 | 0.67 | 0.15 J | 0.09 J | 0.51 | 0.14 J | 0.1 J |
| 7440-23-5 | SODIUM | -- | mg/kg | 1150 | 148 | 4300 | 150 | 867 J | 2520 J | 5360 J |
| 7440-28-0 | THALLIUM | -- | mg/kg | 1.13 | 0.74 J | 1.15 | 0.18 J | 0.46 J | 0.34 J | ND |
| 7440-62-2 | VANADIUM | -- | mg/kg | 16.7 | 22.5 | 7.59 | 13.1 | 14.8 J | 15.3 J | 12.7 J |
| 7440-66-6 | ZINC | 109 | mg/kg | 268 | 50.8 | 506 | 22.9 | 88.4 | 27 | 18.6 |
| 57-12-5 | CYANIDE | 27 | mg/kg | 0.211 J | 0.244 J | 4.4 | 0.172 J | 0.133 J | 0.042 J | 0.434 |

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) Shaded values exceed 6NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives.
(6) NA indicates compound was not analyzed.

**Table 3**
**Summary of Soil Analytical Data**
**Former Ludlow Street Works Site**
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**Remedial Investigation - October 2012 through April 2013**

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>Detected Compound Summary | | Unrestricted Use Soil Cleanup Objectives | Location ID:<br>Sample ID:<br>Lab Sample Id<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB-12<br>SB-12(36-38)<br>D4751-08<br>36 - 38 ft<br>CTECH<br>D4751<br>SOIL<br>11/5/2012 11:00<br>1/23/2013 | SB-13<br>SB-13(47-49)<br>D4751-09<br>47 - 49 ft<br>CTECH<br>D4751<br>SOIL<br>11/5/2012 15:05<br>1/23/2013 | SB-14<br>SB-14(38-40)<br>D5300-03<br>38 - 40 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 10:50<br>1/23/2013 | SB-14<br>SB-14(45-47)<br>D5300-06<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 11:50<br>1/23/2013 | Dup of SB-14(45-47)<br>SB-14<br>SB-14A(45-47)<br>D5300-07<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 12:00<br>1/23/2013 | SB-16<br>SB-16(30-33)<br>D5300-01<br>30 - 33 ft<br>CTECH<br>D5300<br>SOIL<br>12/20/2012 16:10<br>1/23/2013 | SB-16<br>SB-16(45-47)<br>D5300-02<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/20/2012 17:10<br>1/23/2013 |
|---|---|---|---|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | | UNITS: | | | | | | | |
| | VOLATILES | | | | | | | | | |
| 67-64-1 | ACETONE | 0.05 | mg/kg | ND | ND | ND | 0.027 J | 0.026 J | ND | 0.071 |
| 71-43-2 | BENZENE | 0.06 | mg/kg | ND | 0.085 | ND | ND | ND | 17.2 | ND |
| 75-15-0 | CARBON DISULFIDE | -- | mg/kg | ND | 0.0026 J | ND | ND | ND | ND | ND |
| 74-87-3 | CHLOROMETHANE | -- | mg/kg | ND | ND | ND | ND | ND | 0.32 J | ND |
| 110-82-7 | CYCLOHEXANE | -- | mg/kg | ND | 0.0017 J | ND | ND | ND | ND | ND |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | -- | mg/kg | ND | ND | ND | R | R | ND | R |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1.1 | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 541-73-1 | 1,3-DICHLOROBENZENE | 2.4 | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1.8 | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 75-71-8 | DICHLORODIFLUOROMETHANE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 75-34-3 | 1,1-DICHLOROETHANE | 0.27 | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 100-41-4 | ETHYLBENZENE | 1 | mg/kg | ND | 0.46 J | ND | ND | ND | 43.9 | 0.0045 J |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | -- | mg/kg | ND | 0.045 | ND | ND | ND | 3.3 | ND |
| 108-87-2 | METHYLCYCLOHEXANE | -- | mg/kg | ND | 0.0071 | ND | ND | ND | 0.18 J | ND |
| 75-09-2 | METHYLENE CHLORIDE | 0.05 | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 100-42-5 | STYRENE | -- | mg/kg | ND | 0.0038 J | ND | ND | ND | 8.1 | ND |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 108-88-3 | TOLUENE | 0.7 | mg/kg | ND | 0.053 | ND | ND | ND | 46.5 | ND |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | 0.26 | mg/kg | ND | 0.23 | ND | ND | ND | 38.4 | 0.0039 J |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | 0.26 | mg/kg | ND | 0.16 | ND | ND | ND | 18.2 | 0.0022 J |
| | **Total VOCs** | **NS** | mg/kg | ND | 1.0482 | ND | 0.027 | 0.026 | 176.1 | 0.0816 |
| | SEMIVOLATILES | | | | | | | | | |
| 92-52-4 | BIPHENYL (DIPHENYL) | -- | mg/kg | ND | ND | ND | ND | ND | 1.6 | ND |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 86-74-8 | CARBAZOLE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 132-64-9 | DIBENZOFURAN | -- | mg/kg | ND | ND | ND | ND | ND | 0.53 | ND |
| 131-11-3 | DIMETHYL PHTHALATE | -- | mg/kg | 0.455 | 0.403 | 0.57 | 0.32 J | 0.34 J | 0.25 J | 0.4 J |
| 84-74-2 | DI-N-BUTYL PHTHALATE | -- | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| | PAHs | | | | | | | | | |
| 83-32-9 | ACENAPHTHENE | 20 | mg/kg | ND | 0.32 J | ND | ND | ND | 1.8 | ND |
| 208-96-8 | ACENAPHTHYLENE | 100 | mg/kg | ND | 0.24 J | ND | ND | ND | 4.7 | ND |
| 120-12-7 | ANTHRACENE | 100 | mg/kg | ND | 0.31 J | ND | ND | ND | 2.5 | ND |
| 56-55-3 | BENZO(A)ANTHRACENE | 1 | mg/kg | ND | 0.26 J | ND | ND | ND | 1.6 | ND |

**Table 3**
**Summary of Soil Analytical Data**
**Former Ludlow Street Works Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>Detected Compound Summary | | Unrestricted Use Soil Cleanup Objectives | Location ID:<br>Sample ID:<br>Lab Sample Id<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB-12<br>SB-12(36-38)<br>D4751-08<br>36 - 38 ft<br>CTECH<br>D4751<br>SOIL<br>11/5/2012 11:00<br>1/23/2013 | SB-13<br>SB-13(47-49)<br>D4751-09<br>47 - 49 ft<br>CTECH<br>D4751<br>SOIL<br>11/5/2012 15:05<br>1/23/2013 | SB-14<br>SB-14(38-40)<br>D5300-03<br>38 - 40 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 10:50<br>1/23/2013 | SB-14<br>SB-14(45-47)<br>D5300-06<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 11:50<br>1/23/2013 | Dup of SB-14(45-47)<br>SB-14<br>SB-14A(45-47)<br>D5300-07<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 12:00<br>1/23/2013 | SB-16<br>SB-16(30-33)<br>D5300-01<br>30 - 33 ft<br>CTECH<br>D5300<br>SOIL<br>12/20/2012 16:10<br>1/23/2013 | SB-16<br>SB-16(45-47)<br>D5300-02<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/20/2012 17:10<br>1/23/2013 |
|---|---|---|---|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | | UNITS: | | | | | | | |
| | VOLATILES | | | | | | | | | |
| 50-32-8 | BENZO(A)PYRENE | 1 | mg/kg | ND | 0.2 J | ND | ND | ND | 1.2 | ND |
| 205-99-2 | BENZO(B)FLUORANTHENE | 1 | mg/kg | ND | 0.16 J | ND | ND | ND | 0.94 | ND |
| 191-24-2 | BENZO(G,H,I)PERYLENE | 100 | mg/kg | ND | ND | ND | ND | ND | 0.31 J | ND |
| 207-08-9 | BENZO(K)FLUORANTHENE | 0.8 | mg/kg | ND | ND | ND | ND | ND | 0.38 J | ND |
| 218-01-9 | CHRYSENE | 1 | mg/kg | ND | 0.26 J | ND | ND | ND | 1.6 | ND |
| 53-70-3 | DIBENZ(A,H)ANTHRACENE | 0.33 | mg/kg | ND | ND | ND | ND | ND | ND | ND |
| 206-44-0 | FLUORANTHENE | 100 | mg/kg | ND | 0.49 | ND | ND | ND | 2.5 | ND |
| 86-73-7 | FLUORENE | 30 | mg/kg | ND | 0.32 J | ND | ND | ND | 4.5 | ND |
| 193-39-5 | INDENO(1,2,3-C,D)PYRENE | 0.5 | mg/kg | ND | ND | ND | ND | ND | 0.2 J | ND |
| 91-57-6 | 2-METHYLNAPHTHALENE | -- | mg/kg | ND | 1.3 | ND | ND | ND | 14.9 | ND |
| 91-20-3 | NAPHTHALENE | 12 | mg/kg | ND | 2.8 | ND | ND | ND | 33.7 | ND |
| 85-01-8 | PHENANTHRENE | 100 | mg/kg | ND | 1.3 | ND | ND | ND | 9.9 | ND |
| 129-00-0 | PYRENE | 100 | mg/kg | ND | 0.62 | ND | ND | ND | 3.3 | ND |
| | **Total PAHs** | -- | mg/kg | ND | 8.58 | ND | ND | ND | 84.03 | ND |
| | **Total SVOCs** | -- | mg/kg | 0.455 | 8.983 | 0.57 | 0.32 | 0.34 | 86.41 | 0.4 |
| | INORGANICS | | | | | | | | | |
| 7429-90-5 | ALUMINUM | -- | mg/kg | 2800 J | 9270 J | 7400 J | 2940 J | 3060 J | 14400 J | 6040 J |
| 7440-38-2 | ARSENIC | 13 | mg/kg | 0.49 J | 1.96 J | 0.97 J | 0.71 J | 0.89 J | 5.98 | 1.18 |
| 7440-39-3 | BARIUM | 350 | mg/kg | 19.1 J | 124 J | 54.1 J | 23.7 J | 26.6 J | 83.1 J | 74.4 J |
| 7440-41-7 | BERYLLIUM | 7.2 | mg/kg | 0.04 J | 0.47 | 0.39 | 0.14 J | 0.14 J | 0.32 J | 0.33 |
| 7440-43-9 | CADMIUM | 2.5 | mg/kg | 0.18 | 0.71 | ND | ND | ND | ND | ND |
| 7440-70-2 | CALCIUM | -- | mg/kg | 10100 J | 19200 J | 2180 J | 9830 J | 9770 J | 24700 J | 12500 J |
| 7440-47-3 | CHROMIUM, TOTAL | 30 | mg/kg | 7.04 J | 19.9 J | 16.3 J | ND | ND | 12.4 J | 12.9 J |
| 7440-48-4 | COBALT | -- | mg/kg | 3.39 | 7.91 | 7.86 | 3.26 | 3.53 | 3.36 | 7.11 |
| 7440-50-8 | COPPER | 50 | mg/kg | 9.25 J | 18.3 J | 7.99 | 5.12 | 5.88 | 5.21 | 9.59 |
| 7439-89-6 | IRON | -- | mg/kg | 6990 | 18600 | 18000 J | 8120 J | 8770 J | 15400 J | 15800 J |
| 7439-92-1 | LEAD | 63 | mg/kg | 3.88 | 15.2 | 10.1 | 4.47 | 4.63 | 25.8 | 8.35 |
| 7439-95-4 | MAGNESIUM | -- | mg/kg | 4920 J | 3760 J | 3730 J | 4070 J | 3950 J | 13500 J | 5840 J |
| 7439-96-5 | MANGANESE | 1600 | mg/kg | 209 J | 1240 J | 424 J | 290 J | 296 J | 652 J | 443 J |
| 7439-97-6 | MERCURY | 0.18 | mg/kg | ND | 0.02 | 0.005 J | ND | 0.003 J | 0.003 J | 0.005 J |
| 7440-02-0 | NICKEL | 30 | mg/kg | 11.5 | 21.4 | 18.7 | 8.25 | 8.93 | 10.1 | 19.1 |
| 7440-09-7 | POTASSIUM | -- | mg/kg | 581 J | 2340 J | 2720 J | 832 J | 824 J | 1040 J | 2050 J |
| 7782-49-2 | SELENIUM | 3.9 | mg/kg | ND | 1.06 | 0.76 J | ND | ND | 0.49 J | 0.63 J |
| 7440-22-4 | SILVER | 2 | mg/kg | ND | 0.34 | 0.51 J | 0.17 J | 0.15 J | 0.23 J | 0.37 J |
| 7440-23-5 | SODIUM | -- | mg/kg | 1220 J | 1280 J | 332 | 101 | 97.1 J | 6400 | 1100 |
| 7440-28-0 | THALLIUM | -- | mg/kg | 0.13 J | 0.81 J | ND | ND | ND | ND | ND |
| 7440-62-2 | VANADIUM | -- | mg/kg | 9.49 J | 18.3 J | 19.3 | 8.87 | 10.2 | 19.1 | 16.6 |
| 7440-66-6 | ZINC | 109 | mg/kg | 14.9 | 33.7 | 26.9 J | 13 J | 12.9 J | 12.6 J | 25.1 J |
| 57-12-5 | CYANIDE | 27 | mg/kg | 0.069 J | 0.093 J | 0.241 J | 0.219 J | 0.299 | 0.909 | 0.294 J |

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) Shaded values exceed 6NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives.
(6) NA indicates compound was not analyzed.

**Table 3**
**Summary of Soil Analytical Data**
**Former Ludlow Street Works Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>Detected Compound Summary | | Unrestricted Use Soil Cleanup Objectives | Location ID:<br>Sample ID:<br>Lab Sample Id<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB-17<br>SB-17(33-35)<br>D5300-08<br>33 - 35 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 15:00<br>1/23/2013 | SB-17<br>SB-17(45-47)<br>D5300-09<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 15:30<br>1/23/2013 | TP-6FLOOR<br>TP-6FLOOR<br>D4751-10<br>-<br>CTECH<br>D4751<br>SOIL<br>11/7/2012 10:30<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | | UNITS: | | | |
| | VOLATILES | | | | | |
| 67-64-1 | ACETONE | 0.05 | mg/kg | ND | 0.011 J | 0.026 J |
| 71-43-2 | BENZENE | 0.06 | mg/kg | ND | ND | ND |
| 75-15-0 | CARBON DISULFIDE | -- | mg/kg | ND | ND | ND |
| 74-87-3 | CHLOROMETHANE | -- | mg/kg | ND | ND | ND |
| 110-82-7 | CYCLOHEXANE | -- | mg/kg | ND | ND | ND |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | -- | mg/kg | R | ND | R |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1.1 | mg/kg | ND | ND | R |
| 541-73-1 | 1,3-DICHLOROBENZENE | 2.4 | mg/kg | ND | ND | R |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1.8 | mg/kg | ND | ND | R |
| 75-71-8 | DICHLORODIFLUOROMETHANE | -- | mg/kg | ND | ND | ND |
| 75-34-3 | 1,1-DICHLOROETHANE | 0.27 | mg/kg | ND | ND | 0.0066 J |
| 100-41-4 | ETHYLBENZENE | 1 | mg/kg | ND | ND | ND |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | -- | mg/kg | ND | ND | R |
| 108-87-2 | METHYLCYCLOHEXANE | -- | mg/kg | ND | ND | ND |
| 75-09-2 | METHYLENE CHLORIDE | 0.05 | mg/kg | ND | ND | ND |
| 100-42-5 | STYRENE | -- | mg/kg | ND | ND | ND |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | -- | mg/kg | ND | ND | R |
| 108-88-3 | TOLUENE | 0.7 | mg/kg | ND | ND | ND |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | -- | mg/kg | ND | ND | R |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | -- | mg/kg | ND | ND | R |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | 0.26 | mg/kg | ND | ND | ND |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | 0.26 | mg/kg | ND | ND | ND |
| | **Total VOCs** | **NS** | mg/kg | ND | 0.011 | 0.0326 |
| | SEMIVOLATILES | | | | | |
| 92-52-4 | BIPHENYL (DIPHENYL) | -- | mg/kg | ND | ND | ND |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | -- | mg/kg | ND | 0.48 | ND |
| 86-74-8 | CARBAZOLE | -- | mg/kg | ND | ND | ND |
| 132-64-9 | DIBENZOFURAN | -- | mg/kg | ND | ND | ND |
| 131-11-3 | DIMETHYL PHTHALATE | -- | mg/kg | 0.35 | 0.39 | 0.632 |
| 84-74-2 | DI-N-BUTYL PHTHALATE | -- | mg/kg | ND | 0.15 J | ND |
| | PAHs | | | | | |
| 83-32-9 | ACENAPHTHENE | 20 | mg/kg | ND | ND | ND |
| 208-96-8 | ACENAPHTHYLENE | 100 | mg/kg | ND | ND | ND |
| 120-12-7 | ANTHRACENE | 100 | mg/kg | ND | ND | ND |
| 56-55-3 | BENZO(A)ANTHRACENE | 1 | mg/kg | ND | ND | 0.35 J |

**Table 3**
**Summary of Soil Analytical Data**
**Former Ludlow Street Works Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>Detected Compound Summary | | Unrestricted Use Soil Cleanup Objectives | Location ID:<br>Sample ID:<br>Lab Sample Id<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB-17<br>SB-17(33-35)<br>D5300-08<br>33 - 35 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 15:00<br>1/23/2013 | SB-17<br>SB-17(45-47)<br>D5300-09<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 15:30<br>1/23/2013 | TP-6FLOOR<br>TP-6FLOOR<br>D4751-10<br>-<br>CTECH<br>D4751<br>SOIL<br>11/7/2012 10:30<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | | UNITS: | | | |
| | VOLATILES | | | | | |
| 50-32-8 | BENZO(A)PYRENE | 1 | mg/kg | ND | ND | 0.41 J |
| 205-99-2 | BENZO(B)FLUORANTHENE | 1 | mg/kg | ND | ND | 0.5 |
| 191-24-2 | BENZO(G,H,I)PERYLENE | 100 | mg/kg | ND | ND | 0.29 J |
| 207-08-9 | BENZO(K)FLUORANTHENE | 0.8 | mg/kg | ND | ND | ND |
| 218-01-9 | CHRYSENE | 1 | mg/kg | ND | ND | 0.4 J |
| 53-70-3 | DIBENZ(A,H)ANTHRACENE | 0.33 | mg/kg | ND | ND | ND |
| 206-44-0 | FLUORANTHENE | 100 | mg/kg | ND | ND | 0.75 |
| 86-73-7 | FLUORENE | 30 | mg/kg | ND | ND | ND |
| 193-39-5 | INDENO(1,2,3-C,D)PYRENE | 0.5 | mg/kg | ND | ND | 0.27 J |
| 91-57-6 | 2-METHYLNAPHTHALENE | -- | mg/kg | ND | 0.19 J | ND |
| 91-20-3 | NAPHTHALENE | 12 | mg/kg | ND | 0.25 J | ND |
| 85-01-8 | PHENANTHRENE | 100 | mg/kg | ND | ND | 0.45 J |
| 129-00-0 | PYRENE | 100 | mg/kg | ND | ND | 0.69 |
| | **Total PAHs** | -- | mg/kg | ND | 0.44 | 4.11 |
| | **Total SVOCs** | -- | mg/kg | 0.35 | 1.46 | 4.742 |
| | INORGANICS | | | | | |
| 7429-90-5 | ALUMINUM | -- | mg/kg | 2860 J | 9120 J | 9100 J |
| 7440-38-2 | ARSENIC | 13 | mg/kg | 0.68 J | 0.73 J | 14.5 J |
| 7440-39-3 | BARIUM | 350 | mg/kg | 33.3 J | 50.8 J | 122 J |
| 7440-41-7 | BERYLLIUM | 7.2 | mg/kg | 0.1 J | 0.06 J | ND |
| 7440-43-9 | CADMIUM | 2.5 | mg/kg | ND | ND | 1.73 |
| 7440-70-2 | CALCIUM | -- | mg/kg | 1980 J | 5560 J | 6580 J |
| 7440-47-3 | CHROMIUM, TOTAL | 30 | mg/kg | ND | 25.5 J | 28.7 J |
| 7440-48-4 | COBALT | -- | mg/kg | 4.01 | 6.27 | 9.95 |
| 7440-50-8 | COPPER | 50 | mg/kg | 8.81 | 31.1 | 173 J |
| 7439-89-6 | IRON | -- | mg/kg | 7530 J | 13000 J | 39400 |
| 7439-92-1 | LEAD | 63 | mg/kg | 2.92 | 20.3 | 356 |
| 7439-95-4 | MAGNESIUM | -- | mg/kg | 2040 J | 3950 J | 4080 J |
| 7439-96-5 | MANGANESE | 1600 | mg/kg | 519 J | 332 J | 345 J |
| 7439-97-6 | MERCURY | 0.18 | mg/kg | 0.003 J | 0.014 | 6.2 |
| 7440-02-0 | NICKEL | 30 | mg/kg | 11.8 | 17.6 | 29.2 |
| 7440-09-7 | POTASSIUM | -- | mg/kg | 730 J | 1420 J | 901 J |
| 7782-49-2 | SELENIUM | 3.9 | mg/kg | 0.38 J | 0.51 J | 2.18 |
| 7440-22-4 | SILVER | 2 | mg/kg | 0.17 J | 0.18 J | 0.39 |
| 7440-23-5 | SODIUM | -- | mg/kg | 188 | 913 | 2090 J |
| 7440-28-0 | THALLIUM | -- | mg/kg | ND | ND | 1.46 |
| 7440-62-2 | VANADIUM | -- | mg/kg | 10.3 | 22.4 | 26 J |
| 7440-66-6 | ZINC | 109 | mg/kg | 13.1 J | 28.6 J | 315 |
| 57-12-5 | CYANIDE | 27 | mg/kg | 0.172 J | 0.257 J | 0.297 J |

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) Shaded values exceed 6NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives.
(6) NA indicates compound was not analyzed.

**Table 4**
**Summary of Groundwater Analytical Data**
**Former Ludlow Street Works Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>Detected Compound Summary | | NYSDEC Class GA Groundwater Standards/Guidance | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-1<br>MW-1<br>D4947-01<br>CTECH<br>D4947<br>WATER<br>11/26/2012<br>1/23/2013 | MW-1<br>MW-1-20130405<br>E1768-02<br>CTECH<br>E1768<br>WATER<br>4/5/2013<br>4/30/2013 | MW-2<br>MW-2-20130408<br>E1768-07<br>CTECH<br>E1768<br>WATER<br>4/8/2013<br>4/30/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | Values [(1)] | UNITS: | | | |
| | VOLATILES | | | | | |
| 67-64-1 | ACETONE | 5 | ug/l | ND | 7.8 J | 8.7 J |
| 74-83-9 | BROMOMETHANE | 5 | ug/l | ND | ND | ND |
| 110-82-7 | CYCLOHEXANE | -- | ug/l | ND | ND | ND |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | 5 | ug/l | ND | ND | ND |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | 50 (G) | ug/l | ND | ND | ND |
| 108-10-1 | METHYL ISOBUTYL KETONE | -- | ug/l | ND | ND | ND |
| 108-87-2 | METHYLCYCLOHEXANE | -- | ug/l | ND | ND | ND |
| 100-42-5 | STYRENE | 5 | ug/l | ND | ND | ND |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | 10 | ug/l | ND | ND | ND |
| | BTEX | | | | | |
| 71-43-2 | BENZENE | 1 | ug/l | ND | ND | ND |
| 100-41-4 | ETHYLBENZENE | 5 | ug/l | ND | ND | ND |
| 108-88-3 | TOLUENE | 5 | ug/l | ND | ND | ND |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | 5 | ug/l | ND | ND | ND |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | 5 | ug/l | ND | ND | ND |
| | CVOCs | | | | | |
| 74-87-3 | CHLOROMETHANE | 5 | ug/l | ND | ND | ND |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | 5 | ug/l | ND | ND | 0.49 J |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | 5 | ug/l | ND | ND | ND |
| | Total VOCs | -- | | ND | 7.8 | 9.19 |
| | SEMIVOLATILES | | | | | |
| 98-86-2 | ACETOPHENONE | -- | ug/l | ND | ND | ND |
| 92-52-4 | BIPHENYL (DIPHENYL) | 5 | ug/l | ND | ND | ND |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | 5 | ug/l | ND | ND | ND |
| 86-74-8 | CARBAZOLE | -- | ug/l | ND | ND | ND |
| 132-64-9 | DIBENZOFURAN | -- | ug/l | ND | ND | ND |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | 5 | ug/l | ND | ND | ND |
| 99-09-2 | 3-NITROANILINE | 5 | ug/l | ND | ND | ND |
| 108-95-2 | PHENOL | 1 | ug/l | ND | ND | ND |
| | PAHs | | | | | |
| 83-32-9 | ACENAPHTHENE | 20 (G) | ug/l | ND | ND | ND |
| 208-96-8 | ACENAPHTHYLENE | -- | ug/l | ND | ND | ND |
| 120-12-7 | ANTHRACENE | 50 (G) | ug/l | ND | ND | ND |
| 56-55-3 | BENZO(A)ANTHRACENE | 0.002 (G) | ug/l | ND | ND | ND |
| 50-32-8 | BENZO(A)PYRENE | ND | ug/l | ND | ND | ND |
| 205-99-2 | BENZO(B)FLUORANTHENE | 0.002 (G) | ug/l | ND | ND | ND |
| 218-01-9 | CHRYSENE | 0.002 (G) | ug/l | ND | ND | ND |
| 206-44-0 | FLUORANTHENE | 50 (G) | ug/l | ND | ND | ND |
| 86-73-7 | FLUORENE | 50 (G) | ug/l | ND | ND | ND |
| 91-57-6 | 2-METHYLNAPHTHALENE | -- | ug/l | ND | ND | ND |
| 91-20-3 | NAPHTHALENE | 10 (G) | ug/l | ND | ND | ND |
| 85-01-8 | PHENANTHRENE | 50 (G) | ug/l | ND | ND | ND |
| 129-00-0 | PYRENE | 50 (G) | ug/l | ND | ND | ND |
| | **Total PAHs** | | | **ND** | **ND** | **ND** |
| | **Total SVOCs** | | | **ND** | **ND** | **ND** |

Notes:

| | |
|---|---|
| | 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. |
| ug/L | Micrograms per liter |

**Table 4**
**Summary of Groundwater Analytical Data**
**Former Ludlow Street Works Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>Detected Compound Summary | | NYSDEC Class GA Groundwater Standards/Guidance | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-1<br>MW-1<br>D4947-01<br>CTECH<br>D4947<br>WATER<br>11/26/2012<br>1/23/2013 | MW-1<br>MW-1-20130405<br>E1768-02<br>CTECH<br>E1768<br>WATER<br>4/5/2013<br>4/30/2013 | MW-2<br>MW-2-20130408<br>E1768-07<br>CTECH<br>E1768<br>WATER<br>4/8/2013<br>4/30/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | Values [1] | UNITS: | | | |
| | VOLATILES | | | | | |
| | INORGANICS | | | | | |
| 7429-90-5 | ALUMINUM | -- | ug/l | 331 J | 2380 J | 368 J |
| 7440-36-0 | ANTIMONY | 3 | ug/l | 4.98 J | ND | 9.48 J |
| 7440-38-2 | ARSENIC | 25 | ug/l | 6.1 | 7.8 J | ND |
| 7440-39-3 | BARIUM | 1000 | ug/l | 159 J | 129 | 1990 |
| 7440-41-7 | BERYLLIUM | 3 (G) | ug/l | ND | ND | ND |
| 7440-43-9 | CADMIUM | 5 | ug/l | ND | R | 1.22 J |
| 7440-70-2 | CALCIUM | -- | ug/l | 91200 J | 59000 J | 262000 J |
| 7440-47-3 | CHROMIUM, TOTAL | 50 | ug/l | ND | 37.6 J | ND |
| 7440-48-4 | COBALT | -- | ug/l | ND | ND | 6.91 J |
| 7440-50-8 | COPPER | 200 | ug/l | 6.08 J | 7.59 J | 27.4 J |
| 7439-89-6 | IRON | 300 | ug/l | 5890 J | 8770 | 6860 |
| 7439-92-1 | LEAD | 25 | ug/l | 1.34 J | 6.36 J | 10.1 J |
| 7439-95-4 | MAGNESIUM | 35000 (G) | ug/l | 22100 J | 13400 J | 33200 J |
| 7439-96-5 | MANGANESE | 300 | ug/l | 4090 J | 2200 J | 2160 J |
| 7439-97-6 | MERCURY | 0.7 | ug/l | 0.092 J | ND | ND |
| 7440-02-0 | NICKEL | 100 | ug/l | ND | 20.9 J | ND |
| 7440-09-7 | POTASSIUM | -- | ug/l | 8980 J | 6390 | 113000 |
| 7782-49-2 | SELENIUM | 10 | ug/l | ND | ND | ND |
| 7440-22-4 | SILVER | 50 | ug/l | ND | ND | ND |
| 7440-23-5 | SODIUM | 20000 | ug/l | 361000 J | 272000 J | 39700000 J |
| 7440-28-0 | THALLIUM | 0.5 (G) | ug/l | ND | ND | ND |
| 7440-62-2 | VANADIUM | -- | ug/l | ND | ND | ND |
| 7440-66-6 | ZINC | 2000 (G) | ug/l | ND | 18.4 J | 35.4 J |
| 57-12-5 | CYANIDE | 200 | ug/L | ND | ND | 224 |
| | DISSOLVED METALS | | | | | |
| 7429-90-5 | ALUMINUM | -- | ug/L | | ND | |
| 7440-36-0 | ANTIMONY | 3 | ug/L | | ND | |
| 7440-38-2 | ARSENIC | 25 | ug/L | | ND | |
| 7440-39-3 | BARIUM | 1000 | ug/L | | 64.9 | |
| 7440-41-7 | BERYLLIUM | 3 (G) | ug/L | | ND | |
| 7440-43-9 | CADMIUM | 5 | ug/L | | R | |
| 7440-70-2 | CALCIUM | -- | ug/L | | 54500 J | |
| 7440-47-3 | CHROMIUM | 50 | ug/L | | ND | |
| 7440-48-4 | COBALT | -- | ug/L | | ND | |
| 7440-50-8 | COPPER | 200 | ug/L | | ND | |
| 7439-89-6 | IRON | 300 | ug/L | | ND | |
| 7439-92-1 | LEAD | 25 | ug/L | | ND | |
| 7439-95-4 | MAGNESIUM | 35000 (G) | ug/L | | 10700 J | |
| 7439-96-5 | MANGANESE | 300 | ug/L | | 680 J | |
| 7439-97-6 | MERCURY | 0.7 | ug/L | | ND | |
| 7440-02-0 | NICKEL | 100 | ug/L | | ND | |
| 7440-09-7 | POTASSIUM | -- | ug/L | | 6360 | |
| 7782-49-2 | SELENIUM | 10 | ug/L | | ND | |
| 7440-23-5 | SODIUM | 20000 | ug/L | | 271000 J | |
| 7440-62-2 | VANADIUM | -- | ug/L | | ND | |
| 7440-66-6 | ZINC | 2000 (G) | ug/L | | 9.09 J | |

Notes:

| | |
|---|---|
| | 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. |
| ug/L | Micrograms per liter |

**Table 4**
**Summary of Groundwater Analytical Data**
**Former Ludlow Street Works Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>Detected Compound Summary | | NYSDEC Class GA Groundwater Standards/Guidance | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-3<br>MW-3<br>D4947-09DL<br>CTECH<br>D4947<br>WATER<br>11/27/2012<br>1/23/2013 | MW-3<br>MW-3-20130408<br>E1768-08<br>CTECH<br>E1768<br>WATER<br>4/8/2013<br>4/30/2013 | MW-3A<br>MW-3A-20130408<br>E1768-09<br>CTECH<br>E1768<br>WATER<br>4/8/2013<br>4/30/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | Values [(1)] | UNITS: | | | |
| | VOLATILES | | | | | |
| 67-64-1 | ACETONE | 5 | ug/l | ND | ND | ND |
| 74-83-9 | BROMOMETHANE | 5 | ug/l | ND | ND | ND |
| 110-82-7 | CYCLOHEXANE | -- | ug/l | 5.5 | 1.5 J | 2.1 J |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | 5 | ug/l | 7 | 3.9 J | 4.6 J |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | 50 (G) | ug/l | ND | ND | ND |
| 108-10-1 | METHYL ISOBUTYL KETONE | -- | ug/l | ND | ND | ND |
| 108-87-2 | METHYLCYCLOHEXANE | -- | ug/l | 10 | 3.1 J | 4.2 J |
| 100-42-5 | STYRENE | 5 | ug/l | 59 | 41.5 | 42.6 |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | 10 | ug/l | ND | 1.7 J | 1.8 J |
| | BTEX | | | | | |
| 71-43-2 | BENZENE | 1 | ug/l | 350 | 360 | 460 |
| 100-41-4 | ETHYLBENZENE | 5 | ug/l | 250 | 160 | 180 |
| 108-88-3 | TOLUENE | 5 | ug/l | 280 | 260 | 310 |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | 5 | ug/l | 410 | 300 | 370 |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | 5 | ug/l | 190 | 160 | 180 |
| | CVOCs | | | | | |
| 74-87-3 | CHLOROMETHANE | 5 | ug/l | ND | ND | ND |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | 5 | ug/l | 0.45 J | ND | ND |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | 5 | ug/l | 0.42 J | ND | ND |
| | Total VOCs | -- | | 1562.37 | 1291.7 | 1555.3 |
| | SEMIVOLATILES | | | | | |
| 98-86-2 | ACETOPHENONE | -- | ug/l | ND | 4.8 J | 8 J |
| 92-52-4 | BIPHENYL (DIPHENYL) | 5 | ug/l | 25.1 J | 25.2 | 36.2 |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | 5 | ug/l | ND | ND | ND |
| 86-74-8 | CARBAZOLE | -- | ug/l | 6.2 J | 5.3 J | 8.4 J |
| 132-64-9 | DIBENZOFURAN | -- | ug/l | 4.5 J | 6.1 J | 8.9 J |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | 5 | ug/l | ND | ND | ND |
| 99-09-2 | 3-NITROANILINE | 5 | ug/l | ND | ND | ND |
| 108-95-2 | PHENOL | 1 | ug/l | ND | ND | ND |
| | PAHs | | | | | |
| 83-32-9 | ACENAPHTHENE | 20 (G) | ug/l | 17.1 J | 22.5 | 32.2 |
| 208-96-8 | ACENAPHTHYLENE | -- | ug/l | 84.2 | 75.6 J | 130 J |
| 120-12-7 | ANTHRACENE | 50 (G) | ug/l | 10.6 J | 21.9 | 27.4 |
| 56-55-3 | BENZO(A)ANTHRACENE | 0.002 (G) | ug/l | ND | 12.1 | 12.2 |
| 50-32-8 | BENZO(A)PYRENE | ND | ug/l | ND | 8.5 J | 8.5 J |
| 205-99-2 | BENZO(B)FLUORANTHENE | 0.002 (G) | ug/l | ND | 6.4 J | 6.5 J |
| 218-01-9 | CHRYSENE | 0.002 (G) | ug/l | ND | 12.3 | 12.2 |
| 206-44-0 | FLUORANTHENE | 50 (G) | ug/l | 7.6 J | 17.8 | 19.9 |
| 86-73-7 | FLUORENE | 50 (G) | ug/l | 34.7 J | 47.3 | 65.1 |
| 91-57-6 | 2-METHYLNAPHTHALENE | -- | ug/l | 320 | 630 | 630 |
| 91-20-3 | NAPHTHALENE | 10 (G) | ug/l | 2500 | 2300 | 3900 |
| 85-01-8 | PHENANTHRENE | 50 (G) | ug/l | 46.2 J | 72.9 | 110 |
| 129-00-0 | PYRENE | 50 (G) | ug/l | 10.1 J | 28.4 | 31.6 |
| | **Total PAHs** | | | **3030.5** | **3255.7** | **4985.6** |
| | **Total SVOCs** | | | **3066.3** | **3297.1** | **5047.1** |

Notes:

| | |
|---|---|
| | 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. |
| ug/L | Micrograms per liter |

**Table 4**
**Summary of Groundwater Analytical Data**
**Former Ludlow Street Works Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>Detected Compound Summary | | NYSDEC Class GA Groundwater Standards/Guidance | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-3<br>MW-3<br>D4947-09DL<br>CTECH<br>D4947<br>WATER<br>11/27/2012<br>1/23/2013 | MW-3<br>MW-3-20130408<br>E1768-08<br>CTECH<br>E1768<br>WATER<br>4/8/2013<br>4/30/2013 | MW-3A<br>MW-3A-20130408<br>E1768-09<br>CTECH<br>E1768<br>WATER<br>4/8/2013<br>4/30/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | Values [(1)] | UNITS: | | | |
| | VOLATILES | | | | | |
| | INORGANICS | | | | | |
| 7429-90-5 | ALUMINUM | -- | ug/l | ND | 96.1 J | 81.4 J |
| 7440-36-0 | ANTIMONY | 3 | ug/l | 5.31 J | ND | ND |
| 7440-38-2 | ARSENIC | 25 | ug/l | 2.45 J | ND | 4.25 J |
| 7440-39-3 | BARIUM | 1000 | ug/l | 106 J | 134 | 128 |
| 7440-41-7 | BERYLLIUM | 3 (G) | ug/l | ND | ND | ND |
| 7440-43-9 | CADMIUM | 5 | ug/l | 0.32 J | 0.52 J | 0.5 R |
| 7440-70-2 | CALCIUM | -- | ug/l | 58900 J | 81900 J | 77000 J |
| 7440-47-3 | CHROMIUM, TOTAL | 50 | ug/l | ND | ND | ND |
| 7440-48-4 | COBALT | -- | ug/l | ND | ND | ND |
| 7440-50-8 | COPPER | 200 | ug/l | 7.44 J | 7.59 J | 6.54 J |
| 7439-89-6 | IRON | 300 | ug/l | 1160 J | 1600 | 1590 |
| 7439-92-1 | LEAD | 25 | ug/l | 6.72 | 40.3 J | 37.6 J |
| 7439-95-4 | MAGNESIUM | 35000 (G) | ug/l | 21500 J | 22600 J | 21000 J |
| 7439-96-5 | MANGANESE | 300 | ug/l | 1100 J | 1500 J | 1400 J |
| 7439-97-6 | MERCURY | 0.7 | ug/l | ND | ND | ND |
| 7440-02-0 | NICKEL | 100 | ug/l | ND | 5.62 J | 5.4 J |
| 7440-09-7 | POTASSIUM | -- | ug/l | 8370 J | 15500 | 14300 |
| 7782-49-2 | SELENIUM | 10 | ug/l | ND | ND | ND |
| 7440-22-4 | SILVER | 50 | ug/l | ND | ND | ND |
| 7440-23-5 | SODIUM | 20000 | ug/l | 3480000 J | 4620000 J | 5420000 J |
| 7440-28-0 | THALLIUM | 0.5 (G) | ug/l | ND | ND | ND |
| 7440-62-2 | VANADIUM | -- | ug/l | ND | ND | ND |
| 7440-66-6 | ZINC | 2000 (G) | ug/l | ND | 20.8 J | 21.1 J |
| 57-12-5 | CYANIDE | 200 | ug/L | 123 | 36 J | 166 J |
| | DISSOLVED METALS | | | | | |
| 7429-90-5 | ALUMINUM | -- | ug/L | | | |
| 7440-36-0 | ANTIMONY | 3 | ug/L | | | |
| 7440-38-2 | ARSENIC | 25 | ug/L | | | |
| 7440-39-3 | BARIUM | 1000 | ug/L | | | |
| 7440-41-7 | BERYLLIUM | 3 (G) | ug/L | | | |
| 7440-43-9 | CADMIUM | 5 | ug/L | | | |
| 7440-70-2 | CALCIUM | -- | ug/L | | | |
| 7440-47-3 | CHROMIUM | 50 | ug/L | | | |
| 7440-48-4 | COBALT | -- | ug/L | | | |
| 7440-50-8 | COPPER | 200 | ug/L | | | |
| 7439-89-6 | IRON | 300 | ug/L | | | |
| 7439-92-1 | LEAD | 25 | ug/L | | | |
| 7439-95-4 | MAGNESIUM | 35000 (G) | ug/L | | | |
| 7439-96-5 | MANGANESE | 300 | ug/L | | | |
| 7439-97-6 | MERCURY | 0.7 | ug/L | | | |
| 7440-02-0 | NICKEL | 100 | ug/L | | | |
| 7440-09-7 | POTASSIUM | -- | ug/L | | | |
| 7782-49-2 | SELENIUM | 10 | ug/L | | | |
| 7440-23-5 | SODIUM | 20000 | ug/L | | | |
| 7440-62-2 | VANADIUM | -- | ug/L | | | |
| 7440-66-6 | ZINC | 2000 (G) | ug/L | | | |

Notes:

| | |
|---|---|
| | 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. |
| ug/L | Micrograms per liter |

**Table 4**
**Summary of Groundwater Analytical Data**
**Former Ludlow Street Works Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>Detected Compound Summary | | NYSDEC Class GA Groundwater Standards/Guidance | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-4<br>MW-4<br>D4947-07<br>CTECH<br>D4947<br>WATER<br>11/27/2012<br>1/23/2013 | MW-4<br>MW-4-20130408<br>E1768-06<br>CTECH<br>E1768<br>WATER<br>4/8/2013<br>4/30/2013 | MW-5<br>MW-5-20130405<br>E1768-03<br>CTECH<br>E1768<br>WATER<br>4/5/2013<br>4/30/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | Values [(1)] | UNITS: | | | |
| | VOLATILES | | | | | |
| 67-64-1 | ACETONE | 5 | ug/l | ND | 81.1 J | 320 J |
| 74-83-9 | BROMOMETHANE | 5 | ug/l | ND | ND | ND |
| 110-82-7 | CYCLOHEXANE | -- | ug/l | ND | ND | ND |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | 5 | ug/l | ND | ND | 1.8 J |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | 50 (G) | ug/l | ND | ND | 29.2 J |
| 108-10-1 | METHYL ISOBUTYL KETONE | -- | ug/l | ND | ND | 200 J |
| 108-87-2 | METHYLCYCLOHEXANE | -- | ug/l | ND | ND | ND |
| 100-42-5 | STYRENE | 5 | ug/l | ND | ND | 0.49 J |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | 10 | ug/l | ND | ND | ND |
| | BTEX | | | | | |
| 71-43-2 | BENZENE | 1 | ug/l | ND | ND | 35.8 |
| 100-41-4 | ETHYLBENZENE | 5 | ug/l | ND | ND | 12.1 |
| 108-88-3 | TOLUENE | 5 | ug/l | ND | ND | 36.9 |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | 5 | ug/l | ND | ND | 7.7 J |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | 5 | ug/l | ND | ND | 8.1 |
| | CVOCs | | | | | |
| 74-87-3 | CHLOROMETHANE | 5 | ug/l | ND | ND | ND |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | 5 | ug/l | ND | ND | ND |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | 5 | ug/l | ND | ND | ND |
| | Total VOCs | -- | | ND | 81.1 | 652.09 |
| | SEMIVOLATILES | | | | | |
| 98-86-2 | ACETOPHENONE | -- | ug/l | ND | ND | ND |
| 92-52-4 | BIPHENYL (DIPHENYL) | 5 | ug/l | ND | ND | 19.6 |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | 5 | ug/l | 15.4 J | ND | ND |
| 86-74-8 | CARBAZOLE | -- | ug/l | ND | ND | ND |
| 132-64-9 | DIBENZOFURAN | -- | ug/l | ND | ND | ND |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | 5 | ug/l | ND | ND | R |
| 99-09-2 | 3-NITROANILINE | 5 | ug/l | ND | ND | R |
| 108-95-2 | PHENOL | 1 | ug/l | ND | ND | ND |
| | PAHs | | | | | |
| 83-32-9 | ACENAPHTHENE | 20 (G) | ug/l | ND | ND | 42.6 |
| 208-96-8 | ACENAPHTHYLENE | -- | ug/l | ND | ND | 18.1 |
| 120-12-7 | ANTHRACENE | 50 (G) | ug/l | ND | ND | ND |
| 56-55-3 | BENZO(A)ANTHRACENE | 0.002 (G) | ug/l | ND | ND | ND |
| 50-32-8 | BENZO(A)PYRENE | ND | ug/l | ND | ND | ND |
| 205-99-2 | BENZO(B)FLUORANTHENE | 0.002 (G) | ug/l | ND | ND | ND |
| 218-01-9 | CHRYSENE | 0.002 (G) | ug/l | ND | ND | ND |
| 206-44-0 | FLUORANTHENE | 50 (G) | ug/l | ND | ND | ND |
| 86-73-7 | FLUORENE | 50 (G) | ug/l | ND | ND | 18 |
| 91-57-6 | 2-METHYLNAPHTHALENE | -- | ug/l | ND | ND | 42.1 |
| 91-20-3 | NAPHTHALENE | 10 (G) | ug/l | ND | ND | 240 J |
| 85-01-8 | PHENANTHRENE | 50 (G) | ug/l | ND | ND | 21.2 |
| 129-00-0 | PYRENE | 50 (G) | ug/l | ND | ND | ND |
| | **Total PAHs** | | | **ND** | **ND** | **382** |
| | **Total SVOCs** | | | **15.4** | **ND** | **401.6** |

Notes:

| | |
|---|---|
| | 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. |
| ug/L | Micrograms per liter |

**Table 4**
**Summary of Groundwater Analytical Data**
**Former Ludlow Street Works Site**
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**Remedial Investigation - October 2012 through April 2013**

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>Detected Compound Summary | | NYSDEC Class GA Groundwater Standards/Guidance | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-4<br>MW-4<br>D4947-07<br>CTECH<br>D4947<br>WATER<br>11/27/2012<br>1/23/2013 | MW-4<br>MW-4-20130408<br>E1768-06<br>CTECH<br>E1768<br>WATER<br>4/8/2013<br>4/30/2013 | MW-5<br>MW-5-20130405<br>E1768-03<br>CTECH<br>E1768<br>WATER<br>4/5/2013<br>4/30/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | Values [1] | UNITS: | | | |
| | VOLATILES | | | | | |
| | INORGANICS | | | | | |
| 7429-90-5 | ALUMINUM | -- | ug/l | 161000 J | 32100 J | 550 J |
| 7440-36-0 | ANTIMONY | 3 | ug/l | ND | ND | 12.1 J |
| 7440-38-2 | ARSENIC | 25 | ug/l | 206 | 40 | 4.4 J |
| 7440-39-3 | BARIUM | 1000 | ug/l | 2170 J | 523 | 916 |
| 7440-41-7 | BERYLLIUM | 3 (G) | ug/l | 7.1 J | 1.23 J | ND |
| 7440-43-9 | CADMIUM | 5 | ug/l | 25 | 1.3 J | 2.2 J |
| 7440-70-2 | CALCIUM | -- | ug/l | 67500 J | 116000 J | 267000 J |
| 7440-47-3 | CHROMIUM, TOTAL | 50 | ug/l | 352 J | 113 J | ND |
| 7440-48-4 | COBALT | -- | ug/l | 263 | 25.1 J | ND |
| 7440-50-8 | COPPER | 200 | ug/l | 822 J | 205 J | 5.86 J |
| 7439-89-6 | IRON | 300 | ug/l | 520000 J | 55300 | 4550 |
| 7439-92-1 | LEAD | 25 | ug/l | 10700 | 1200 J | 232 J |
| 7439-95-4 | MAGNESIUM | 35000 (G) | ug/l | 53000 J | 24500 J | 59800 J |
| 7439-96-5 | MANGANESE | 300 | ug/l | 6820 J | 1210 J | 1580 J |
| 7439-97-6 | MERCURY | 0.7 | ug/l | 16.85 | 20.182 | ND |
| 7440-02-0 | NICKEL | 100 | ug/l | 689 | 112 J | ND |
| 7440-09-7 | POTASSIUM | -- | ug/l | 23300 J | 11800 | 93500 |
| 7782-49-2 | SELENIUM | 10 | ug/l | 26 | 16.1 | ND |
| 7440-22-4 | SILVER | 50 | ug/l | 25.7 J | ND | ND |
| 7440-23-5 | SODIUM | 20000 | ug/l | 167000 J | 712000 J | 32700000 J |
| 7440-28-0 | THALLIUM | 0.5 (G) | ug/l | 5.2 J | 4.02 J | ND |
| 7440-62-2 | VANADIUM | -- | ug/l | 438 J | 77.8 J | ND |
| 7440-66-6 | ZINC | 2000 (G) | ug/l | 5910 J | 715 J | 46.8 J |
| 57-12-5 | CYANIDE | 200 | ug/L | 224 | 126 | 174 |
| | DISSOLVED METALS | | | | | |
| 7429-90-5 | ALUMINUM | -- | ug/L | | 17.1 J | |
| 7440-36-0 | ANTIMONY | 3 | ug/L | | 9.22 J | |
| 7440-38-2 | ARSENIC | 25 | ug/L | | 6 J | |
| 7440-39-3 | BARIUM | 1000 | ug/L | | 243 | |
| 7440-41-7 | BERYLLIUM | 3 (G) | ug/L | | ND | |
| 7440-43-9 | CADMIUM | 5 | ug/L | | R | |
| 7440-70-2 | CALCIUM | -- | ug/L | | 143000 J | |
| 7440-47-3 | CHROMIUM | 50 | ug/L | | 7.84 J | |
| 7440-48-4 | COBALT | -- | ug/L | | ND | |
| 7440-50-8 | COPPER | 200 | ug/L | | 55.2 J | |
| 7439-89-6 | IRON | 300 | ug/L | | 60.5 | |
| 7439-92-1 | LEAD | 25 | ug/L | | 3.29 J | |
| 7439-95-4 | MAGNESIUM | 35000 (G) | ug/L | | 21200 J | |
| 7439-96-5 | MANGANESE | 300 | ug/L | | 488 J | |
| 7439-97-6 | MERCURY | 0.7 | ug/L | | ND | |
| 7440-02-0 | NICKEL | 100 | ug/L | | 10.2 J | |
| 7440-09-7 | POTASSIUM | -- | ug/L | | 8920 | |
| 7782-49-2 | SELENIUM | 10 | ug/L | | 16.2 | |
| 7440-23-5 | SODIUM | 20000 | ug/L | | 753000 J | |
| 7440-62-2 | VANADIUM | -- | ug/L | | ND | |
| 7440-66-6 | ZINC | 2000 (G) | ug/L | | 37.6 J | |

Notes:

| | |
|---|---|
| | 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. |
| ug/L | Micrograms per liter |

**Table 4**
**Summary of Groundwater Analytical Data**
**Former Ludlow Street Works Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>Detected Compound Summary | | NYSDEC Class GA Groundwater Standards/Guidance | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-7<br>MW-7<br>D4947-08<br>CTECH<br>D4947<br>WATER<br>11/27/2012<br>1/23/2013 | MW-7<br>MW-7-20130404<br>E1768-12<br>CTECH<br>E1768<br>WATER<br>4/4/2013<br>4/30/2013 | MW-8<br>MW-8<br>D4947-02<br>CTECH<br>D4947<br>WATER<br>11/26/2012<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | Values [1] | UNITS: | | | |
| | VOLATILES | | | | | |
| 67-64-1 | ACETONE | 5 | ug/l | ND | ND | ND |
| 74-83-9 | BROMOMETHANE | 5 | ug/l | ND | ND | ND |
| 110-82-7 | CYCLOHEXANE | -- | ug/l | 2.7 J | ND | ND |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | 5 | ug/l | 24 | 9.8 | ND |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | 50 (G) | ug/l | ND | ND | ND |
| 108-10-1 | METHYL ISOBUTYL KETONE | -- | ug/l | ND | ND | ND |
| 108-87-2 | METHYLCYCLOHEXANE | -- | ug/l | 3.5 J | 0.44 J | ND |
| 100-42-5 | STYRENE | 5 | ug/l | 18 | ND | ND |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | 10 | ug/l | ND | 1.6 J | 0.52 J |
| | BTEX | | | | | |
| 71-43-2 | BENZENE | 1 | ug/l | 690 | 1200 | ND |
| 100-41-4 | ETHYLBENZENE | 5 | ug/l | 270 | 90 | ND |
| 108-88-3 | TOLUENE | 5 | ug/l | 270 | 62.8 | ND |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | 5 | ug/l | 420 | 180 | ND |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | 5 | ug/l | 190 | 130 | ND |
| | CVOCs | | | | | |
| 74-87-3 | CHLOROMETHANE | 5 | ug/l | ND | ND | ND |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | 5 | ug/l | ND | ND | ND |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | 5 | ug/l | ND | ND | ND |
| | Total VOCs | -- | | 1888.2 | 1674.64 | 0.52 |
| | SEMIVOLATILES | | | | | |
| 98-86-2 | ACETOPHENONE | -- | ug/l | 5.9 J | ND | ND |
| 92-52-4 | BIPHENYL (DIPHENYL) | 5 | ug/l | 7.3 J | 25.7 | ND |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | 5 | ug/l | ND | ND | ND |
| 86-74-8 | CARBAZOLE | -- | ug/l | ND | 5.5 J | ND |
| 132-64-9 | DIBENZOFURAN | -- | ug/l | ND | 6.3 J | ND |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | 5 | ug/l | ND | ND | ND |
| 99-09-2 | 3-NITROANILINE | 5 | ug/l | ND | ND | ND |
| 108-95-2 | PHENOL | 1 | ug/l | ND | ND | ND |
| | PAHs | | | | | |
| 83-32-9 | ACENAPHTHENE | 20 (G) | ug/l | 12.1 | 47.1 | ND |
| 208-96-8 | ACENAPHTHYLENE | -- | ug/l | 7.9 J | 38.6 | ND |
| 120-12-7 | ANTHRACENE | 50 (G) | ug/l | ND | 26.2 | ND |
| 56-55-3 | BENZO(A)ANTHRACENE | 0.002 (G) | ug/l | ND | 14.8 | ND |
| 50-32-8 | BENZO(A)PYRENE | ND | ug/l | ND | 9.7 J | ND |
| 205-99-2 | BENZO(B)FLUORANTHENE | 0.002 (G) | ug/l | ND | 8.2 J | ND |
| 218-01-9 | CHRYSENE | 0.002 (G) | ug/l | ND | 14.6 | ND |
| 206-44-0 | FLUORANTHENE | 50 (G) | ug/l | ND | 18.8 | ND |
| 86-73-7 | FLUORENE | 50 (G) | ug/l | 9.9 J | 46.3 | ND |
| 91-57-6 | 2-METHYLNAPHTHALENE | -- | ug/l | 130 | 340 | ND |
| 91-20-3 | NAPHTHALENE | 10 (G) | ug/l | 1300 | 1600 | ND |
| 85-01-8 | PHENANTHRENE | 50 (G) | ug/l | 14.2 | 110 | ND |
| 129-00-0 | PYRENE | 50 (G) | ug/l | ND | 37 | ND |
| | **Total PAHs** | | | **1474.1** | **2311.3** | **ND** |
| | **Total SVOCs** | | | **1487.3** | **2348.8** | **ND** |

Notes:

| | |
|---|---|
| | 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. |
| ug/L | Micrograms per liter |

**Table 4**
**Summary of Groundwater Analytical Data**
**Former Ludlow Street Works Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>Detected Compound Summary | | NYSDEC Class GA Groundwater Standards/Guidance | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-7<br>MW-7<br>D4947-08<br>CTECH<br>D4947<br>WATER<br>11/27/2012<br>1/23/2013 | MW-7<br>MW-7-20130404<br>E1768-12<br>CTECH<br>E1768<br>WATER<br>4/4/2013<br>4/30/2013 | MW-8<br>MW-8<br>D4947-02<br>CTECH<br>D4947<br>WATER<br>11/26/2012<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | Values [(1)] | UNITS: | | | |
| | VOLATILES | | | | | |
| | INORGANICS | | | | | |
| 7429-90-5 | ALUMINUM | -- | ug/l | 268 J | 244 J | 1860 J |
| 7440-36-0 | ANTIMONY | 3 | ug/l | 6.86 J | ND | 5.06 J |
| 7440-38-2 | ARSENIC | 25 | ug/l | ND | ND | 4.85 J |
| 7440-39-3 | BARIUM | 1000 | ug/l | 109 J | 192 | 104 J |
| 7440-41-7 | BERYLLIUM | 3 (G) | ug/l | ND | ND | ND |
| 7440-43-9 | CADMIUM | 5 | ug/l | ND | R | 0.3 J |
| 7440-70-2 | CALCIUM | -- | ug/l | 105000 J | 123000 J | 78800 J |
| 7440-47-3 | CHROMIUM, TOTAL | 50 | ug/l | ND | 7.73 J | ND |
| 7440-48-4 | COBALT | -- | ug/l | ND | ND | 4.32 J |
| 7440-50-8 | COPPER | 200 | ug/l | 1.44 J | 2.06 J | 20.7 J |
| 7439-89-6 | IRON | 300 | ug/l | ND | 1300 | 3790 J |
| 7439-92-1 | LEAD | 25 | ug/l | 1.72 J | ND | 24.5 J |
| 7439-95-4 | MAGNESIUM | 35000 (G) | ug/l | 37800 J | 42200 J | 25200 J |
| 7439-96-5 | MANGANESE | 300 | ug/l | 1030 J | 688 J | 1520 J |
| 7439-97-6 | MERCURY | 0.7 | ug/l | ND | ND | ND |
| 7440-02-0 | NICKEL | 100 | ug/l | ND | 9 J | ND |
| 7440-09-7 | POTASSIUM | -- | ug/l | 8420 J | 26900 | 8280 J |
| 7782-49-2 | SELENIUM | 10 | ug/l | ND | ND | ND |
| 7440-22-4 | SILVER | 50 | ug/l | ND | ND | ND |
| 7440-23-5 | SODIUM | 20000 | ug/l | 535000 J | 2230000 J | 628000 J |
| 7440-28-0 | THALLIUM | 0.5 (G) | ug/l | ND | ND | ND |
| 7440-62-2 | VANADIUM | -- | ug/l | ND | ND | 5.36 J |
| 7440-66-6 | ZINC | 2000 (G) | ug/l | ND | 10.3 J | ND |
| 57-12-5 | CYANIDE | 200 | ug/L | 27 | 145 | ND |
| | DISSOLVED METALS | | | | | |
| 7429-90-5 | ALUMINUM | -- | ug/L | | | |
| 7440-36-0 | ANTIMONY | 3 | ug/L | | | |
| 7440-38-2 | ARSENIC | 25 | ug/L | | | |
| 7440-39-3 | BARIUM | 1000 | ug/L | | | |
| 7440-41-7 | BERYLLIUM | 3 (G) | ug/L | | | |
| 7440-43-9 | CADMIUM | 5 | ug/L | | | |
| 7440-70-2 | CALCIUM | -- | ug/L | | | |
| 7440-47-3 | CHROMIUM | 50 | ug/L | | | |
| 7440-48-4 | COBALT | -- | ug/L | | | |
| 7440-50-8 | COPPER | 200 | ug/L | | | |
| 7439-89-6 | IRON | 300 | ug/L | | | |
| 7439-92-1 | LEAD | 25 | ug/L | | | |
| 7439-95-4 | MAGNESIUM | 35000 (G) | ug/L | | | |
| 7439-96-5 | MANGANESE | 300 | ug/L | | | |
| 7439-97-6 | MERCURY | 0.7 | ug/L | | | |
| 7440-02-0 | NICKEL | 100 | ug/L | | | |
| 7440-09-7 | POTASSIUM | -- | ug/L | | | |
| 7782-49-2 | SELENIUM | 10 | ug/L | | | |
| 7440-23-5 | SODIUM | 20000 | ug/L | | | |
| 7440-62-2 | VANADIUM | -- | ug/L | | | |
| 7440-66-6 | ZINC | 2000 (G) | ug/L | | | |

Notes:

| | |
|---|---|
| | 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. |
| ug/L | Micrograms per liter |

**Table 4**
**Summary of Groundwater Analytical Data**
**Former Ludlow Street Works Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>Detected Compound Summary | | NYSDEC Class GA Groundwater Standards/Guidance | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-18<br>MW-18<br>D4947-03<br>CTECH<br>D4947<br>WATER<br>11/26/2012<br>1/23/2013 | MW-9<br>MW-9<br>D4947-04<br>CTECH<br>D4947<br>WATER<br>11/26/2012<br>1/23/2013 | MW-9<br>MW-9-20130405<br>E1768-01<br>CTECH<br>E1768<br>WATER<br>4/5/2013<br>4/30/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | Values [(1)] | UNITS: | | | |
| | VOLATILES | | | | | |
| 67-64-1 | ACETONE | 5 | ug/l | ND | ND | ND |
| 74-83-9 | BROMOMETHANE | 5 | ug/l | ND | ND | ND |
| 110-82-7 | CYCLOHEXANE | -- | ug/l | ND | ND | ND |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | 5 | ug/l | ND | ND | ND |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | 50 (G) | ug/l | ND | ND | ND |
| 108-10-1 | METHYL ISOBUTYL KETONE | -- | ug/l | ND | ND | ND |
| 108-87-2 | METHYLCYCLOHEXANE | -- | ug/l | ND | ND | ND |
| 100-42-5 | STYRENE | 5 | ug/l | ND | ND | ND |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | 10 | ug/l | 0.49 J | 1.4 J | 1.6 J |
| | BTEX | | | | | |
| 71-43-2 | BENZENE | 1 | ug/l | ND | ND | ND |
| 100-41-4 | ETHYLBENZENE | 5 | ug/l | ND | ND | ND |
| 108-88-3 | TOLUENE | 5 | ug/l | ND | ND | ND |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | 5 | ug/l | ND | ND | ND |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | 5 | ug/l | ND | ND | ND |
| | CVOCs | | | | | |
| 74-87-3 | CHLOROMETHANE | 5 | ug/l | ND | ND | ND |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | 5 | ug/l | ND | ND | ND |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | 5 | ug/l | ND | ND | ND |
| | Total VOCs | -- | | 0.49 | 1.4 | 1.6 |
| | SEMIVOLATILES | | | | | |
| 98-86-2 | ACETOPHENONE | -- | ug/l | ND | ND | ND |
| 92-52-4 | BIPHENYL (DIPHENYL) | 5 | ug/l | ND | ND | ND |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | 5 | ug/l | ND | ND | ND |
| 86-74-8 | CARBAZOLE | -- | ug/l | ND | ND | ND |
| 132-64-9 | DIBENZOFURAN | -- | ug/l | ND | ND | ND |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | 5 | ug/l | ND | ND | ND |
| 99-09-2 | 3-NITROANILINE | 5 | ug/l | ND | ND | ND |
| 108-95-2 | PHENOL | 1 | ug/l | ND | ND | ND |
| | PAHs | | | | | |
| 83-32-9 | ACENAPHTHENE | 20 (G) | ug/l | ND | ND | ND |
| 208-96-8 | ACENAPHTHYLENE | -- | ug/l | ND | ND | ND |
| 120-12-7 | ANTHRACENE | 50 (G) | ug/l | ND | ND | ND |
| 56-55-3 | BENZO(A)ANTHRACENE | 0.002 (G) | ug/l | ND | ND | ND |
| 50-32-8 | BENZO(A)PYRENE | ND | ug/l | ND | ND | ND |
| 205-99-2 | BENZO(B)FLUORANTHENE | 0.002 (G) | ug/l | ND | ND | ND |
| 218-01-9 | CHRYSENE | 0.002 (G) | ug/l | ND | ND | ND |
| 206-44-0 | FLUORANTHENE | 50 (G) | ug/l | ND | ND | ND |
| 86-73-7 | FLUORENE | 50 (G) | ug/l | ND | ND | ND |
| 91-57-6 | 2-METHYLNAPHTHALENE | -- | ug/l | ND | ND | ND |
| 91-20-3 | NAPHTHALENE | 10 (G) | ug/l | ND | ND | ND |
| 85-01-8 | PHENANTHRENE | 50 (G) | ug/l | ND | ND | ND |
| 129-00-0 | PYRENE | 50 (G) | ug/l | ND | ND | ND |
| | **Total PAHs** | | | **ND** | **ND** | **ND** |
| | **Total SVOCs** | | | **ND** | **ND** | **ND** |

Notes:

| | |
|---|---|
| | 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. |
| ug/L | Micrograms per liter |

**Table 4**
**Summary of Groundwater Analytical Data**
**Former Ludlow Street Works Site**
**Consolidated Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>Detected Compound Summary | | NYSDEC Class GA Groundwater Standards/Guidance | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-18<br>MW-18<br>D4947-03<br>CTECH<br>D4947<br>WATER<br>11/26/2012<br>1/23/2013 | MW-9<br>MW-9<br>D4947-04<br>CTECH<br>D4947<br>WATER<br>11/26/2012<br>1/23/2013 | MW-9<br>MW-9-20130405<br>E1768-01<br>CTECH<br>E1768<br>WATER<br>4/5/2013<br>4/30/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | Values [1] | UNITS: | | | |
| | VOLATILES | | | | | |
| | INORGANICS | | | | | |
| 7429-90-5 | ALUMINUM | -- | ug/l | 9290 J | ND | 91.9 J |
| 7440-36-0 | ANTIMONY | 3 | ug/l | ND | ND | ND |
| 7440-38-2 | ARSENIC | 25 | ug/l | 15.3 J | 13.7 | 9.05 J |
| 7440-39-3 | BARIUM | 1000 | ug/l | 169 J | 478 J | 380 |
| 7440-41-7 | BERYLLIUM | 3 (G) | ug/l | 0.38 J | ND | ND |
| 7440-43-9 | CADMIUM | 5 | ug/l | 0.87 J | 0.27 J | R |
| 7440-70-2 | CALCIUM | -- | ug/l | 90000 J | 198000 J | 196000 J |
| 7440-47-3 | CHROMIUM, TOTAL | 50 | ug/l | ND | ND | ND |
| 7440-48-4 | COBALT | -- | ug/l | 12.8 J | ND | ND |
| 7440-50-8 | COPPER | 200 | ug/l | 59 J | 1.11 J | ND |
| 7439-89-6 | IRON | 300 | ug/l | 18700 J | 17400 J | 11300 |
| 7439-92-1 | LEAD | 25 | ug/l | 85.2 J | ND | ND |
| 7439-95-4 | MAGNESIUM | 35000 (G) | ug/l | 31000 J | 88100 J | 77600 J |
| 7439-96-5 | MANGANESE | 300 | ug/l | 2030 J | 4210 J | 3240 J |
| 7439-97-6 | MERCURY | 0.7 | ug/l | ND | ND | ND |
| 7440-02-0 | NICKEL | 100 | ug/l | ND | ND | ND |
| 7440-09-7 | POTASSIUM | -- | ug/l | 10900 J | 22200 J | 15100 |
| 7782-49-2 | SELENIUM | 10 | ug/l | ND | 2.82 J | ND |
| 7440-22-4 | SILVER | 50 | ug/l | ND | ND | ND |
| 7440-23-5 | SODIUM | 20000 | ug/l | 677000 J | ND | 1210000 J |
| 7440-28-0 | THALLIUM | 0.5 (G) | ug/l | ND | ND | 3.46 J |
| 7440-62-2 | VANADIUM | -- | ug/l | 20.6 J | ND | ND |
| 7440-66-6 | ZINC | 2000 (G) | ug/l | 90.7 J | ND | ND |
| 57-12-5 | CYANIDE | 200 | ug/L | ND | ND | 3 J |
| | DISSOLVED METALS | | | | | |
| 7429-90-5 | ALUMINUM | -- | ug/L | | | |
| 7440-36-0 | ANTIMONY | 3 | ug/L | | | |
| 7440-38-2 | ARSENIC | 25 | ug/L | | | |
| 7440-39-3 | BARIUM | 1000 | ug/L | | | |
| 7440-41-7 | BERYLLIUM | 3 (G) | ug/L | | | |
| 7440-43-9 | CADMIUM | 5 | ug/L | | | |
| 7440-70-2 | CALCIUM | -- | ug/L | | | |
| 7440-47-3 | CHROMIUM | 50 | ug/L | | | |
| 7440-48-4 | COBALT | -- | ug/L | | | |
| 7440-50-8 | COPPER | 200 | ug/L | | | |
| 7439-89-6 | IRON | 300 | ug/L | | | |
| 7439-92-1 | LEAD | 25 | ug/L | | | |
| 7439-95-4 | MAGNESIUM | 35000 (G) | ug/L | | | |
| 7439-96-5 | MANGANESE | 300 | ug/L | | | |
| 7439-97-6 | MERCURY | 0.7 | ug/L | | | |
| 7440-02-0 | NICKEL | 100 | ug/L | | | |
| 7440-09-7 | POTASSIUM | -- | ug/L | | | |
| 7782-49-2 | SELENIUM | 10 | ug/L | | | |
| 7440-23-5 | SODIUM | 20000 | ug/L | | | |
| 7440-62-2 | VANADIUM | -- | ug/L | | | |
| 7440-66-6 | ZINC | 2000 (G) | ug/L | | | |

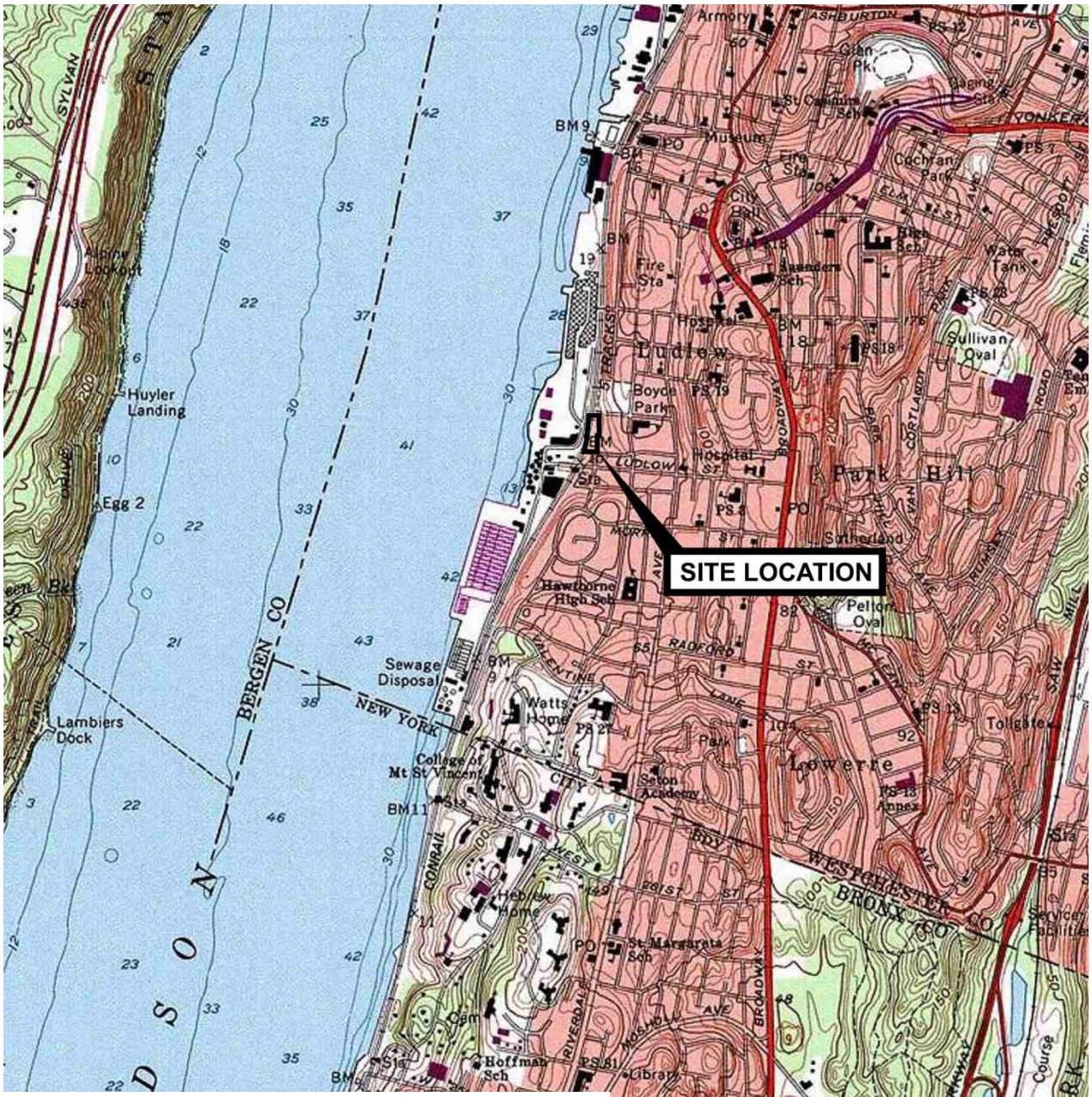
Notes:

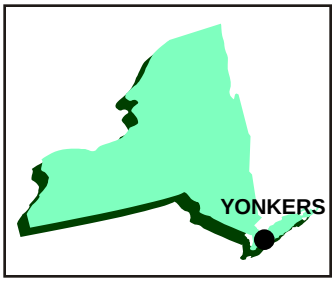
| | |
|---|---|
| | Indicates concentration exceeds standard or guidance value. |
| (G) | Indicates guidance value. |
| NS | No standard or guidance value available. |
| ND | Indicates compound was not detected. |
| J | Indicates an estimated concentration. |
| ug/L | Micrograms per liter |

**Table 5**
**Summary of Soil Gas Analytical Results**
**Former Ludlow Street Works**
**Consolidtaed Edison Company of New York**
**Remedial Investigation - October 2012 through April 2013**

| Consolidated Edison<br>Former Ludlow Street Works<br>Validated Air Analytical Data<br>Detected Compound Summary | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | Target<br>Soil Gas<br>Concentration<br>(1) (2) | SV-1<br>SV-1 (7')<br>1210554-03A<br>ATL<br>1210554<br>Soil Gas<br>10/24/2012<br>4/15/2013 | SV-3<br>SV-3 (8')<br>1210554-01A<br>ATL<br>1210554<br>Soil Gas<br>10/24/2012<br>4/15/2013 | SV-4<br>SV-4 (8')<br>1210554-02A<br>ATL<br>1210554<br>Soil Gas<br>10/24/2012<br>4/15/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | CHLORINATED VOC | | | | | |
| 71-55-6 | 1,1,1-Trichloroethane | UG/M3 | 22,000 | 6.5 | ND | ND |
| 56-23-5 | Carbon tetrachloride | UG/M3 | 16 | ND | ND | ND |
| 156-59-2 | cis-1,2-Dichloroethene | UG/M3 | 350 | ND | ND | ND |
| 127-18-4 | Tetrachloroethene | UG/M3 | 81 | 28 | **100** | 24 |
| 79-01-6 | Trichloroethene | UG/M3 | 2.2 | ND | ND | ND |
| | NON-MGP RELATED VOC | | | | | |
| 106-99-0 | 1,3-Butadiene | UG/M3 | NS | 34 | ND | 4.4 |
| 541-73-1 | 1,3-Dichlorobenzene | UG/M3 | 1,100 | ND | ND | ND |
| 106-46-7 | 1,4-Dichlorobenzene | UG/M3 | 8,000 | ND | ND | ND |
| 540-84-1 | 2,2,4-Trimethylpentane | UG/M3 | NS | 12 | ND | ND |
| 78-93-3 | 2-Butanone (Methyl Ethyl Ketone) | UG/M3 | 10,000 | 11 | ND | ND |
| 591-78-6 | 2-Hexanone | UG/M3 | NS | ND | ND | ND |
| 107-83-5 | 2-Methylpentane | UG/M3 | NS | ND | ND | ND |
| 67-63-0 | 2-Propanol | UG/M3 | NS | ND | ND | ND |
| 108-10-1 | 4-Methyl-2-pentanone | UG/M3 | 800 | ND | ND | ND |
| 67-64-1 | Acetone | UG/M3 | 3,500 | 260 | 150 | 220 |
| 75-27-4 | Bromodichloromethane | UG/M3 | 14 | ND | ND | ND |
| 74-83-9 | Bromomethane | UG/M3 | 50 | ND | ND | ND |
| 75-15-0 | Carbon disulfide | UG/M3 | 7,000 | 17 | ND | 14 |
| 67-66-3 | Chloroform | UG/M3 | 11 | ND | ND | ND |
| 74-87-3 | Chloromethane | UG/M3 | 240 | ND | ND | ND |
| 98-82-8 | Cumene | UG/M3 | 4,000 | ND | ND | ND |
| 110-82-7 | Cyclohexane | UG/M3 | NS | 7.9 | ND | ND |
| 64-17-5 | Ethanol | UG/M3 | NS | ND | ND | ND |
| 75-69-4 | Freon 11 (Trichlorofluoromethane) | UG/M3 | 7,000 | ND | ND | ND |
| 76-13-1 | Freon 113 | UG/M3 | 300,000 | ND | ND | ND |
| 75-71-8 | Freon 12 (Dichlorodifluoromethane) | UG/M3 | 2,000 | 5.9 | ND | ND |
| 142-82-5 | Heptane | UG/M3 | NS | 13 | ND | 190 |
| 110-54-3 | Hexane | UG/M3 | 2,000 | 27 | ND | 360 |
| 75-09-2 | Methylene chloride | UG/M3 | 520 | ND | ND | ND |
| 103-65-1 | Propylbenzene | UG/M3 | 1,400 | ND | ND | ND |
| 100-42-5 | Styrene | UG/M3 | 10,000 | ND | ND | ND |
| 109-99-9 | Tetrahydrofuran | UG/M3 | NS | ND | ND | ND |
| | POSSIBLY MGP RELATED VOC | | | | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | UG/M3 | 60 | ND | ND | ND |
| 108-67-8 | 1,3,5-Trimethylbenzene | UG/M3 | 60 | ND | ND | ND |
| 622-96-8 | 4-Ethyltoluene | UG/M3 | NS | ND | ND | ND |
| 100-41-4 | Ethyl Benzene | UG/M3 | 220 | 5.4 | ND | 5.8 |
| 71-43-2 | Benzene | UG/M3 | 31 | 20 | ND | 8.6 |
| 496-11-7 | Indan | UG/M3 | NS | ND | ND | ND |
| 78-78-4 | Isopentane | UG/M3 | NS | ND | ND | ND |
| 108-38-3/106-42-3 | m,p-Xylene | UG/M3 | 70,000 | 19 | 11 | 20 |
| 91-20-3 | Naphthalene | UG/M3 | 30 | ND | ND | ND |
| 95-47-6 | o-Xylene | UG/M3 | 70,000 | 5.2 | ND | 7 |
| 108-88-3 | Toluene | UG/M3 | 4,000 | 35 | 23 | 60 |

Notes:
1. United States Environmental Protection Agency, " OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance)",Table 2b, EPA530-D-02-004, November 2002.
2. NS indicates Not Specified.
3. Bold/highlighted results indicate exceedance of target concentration.




New York

N

SOURCE:

MAP CREATED WITH TOPO!™ ©2000 WILDFLOWER PRODUCTIONS (www.topo.com)

# FIGURE 1

Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

# SITE LOCATION MAP

**PARSONS**

200 COTTONTAIL LANE, SOMERSET, NJ 08873 PHONE: (732) 537-3500

P:\ConEdison\Ludlow Street\CAD\RIWP\SITEMAP.PPT


LEGEND:

- FORMER MGP STRUCTURES
- FENCELINE
- RAILROAD TRACKS
- PROPERTY LINE
- SITE BOUNDARY
- OHW — OVERHEAD WIRE
- ST — STORM SEWER
- W — WATER LINE
- G — GAS LINE

NOTES:

1. BASE SURVEY DRAWING PROVIDED BY THE CHAZEN COMPANIES. A SURVEY PERFORMED ON THE SITE IN JULY 2010 AND UPDATED IN DECEMBER 2012.
2. HISTORIC FEATURES IN BASE DRAWING BASED ON SANBORN FIRE INSURANCE MAPS DATED 1888, 1898, 1917, 1951, & 1991. WESTCHESTER COUNTY ATLAS, 1931., YONKERS TAX ASSESSORS MAP, REVISED 1947 AND FIGURE 3 FROM GEI CONSULTANTS, INC.

50 25 0 50 100

SCALE: 1"=50'

# FIGURE 2

Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

## FORMER MGP STRUCTURES

PARSONS
200 COTTONTAIL LANE, SOMERSET NJ 08873, PHONE: 732-537-3500

FILE NAME: C:\USERS\48606\DESKTOP\CON ED LUDLOW STREET WORKS\446110-FIG-2.DWG
PLOT DATE: 2/24/2014 10:04 AM PLOTTED BY: GOLDTHWAIT, JAMES

NOTES:

1. BASE SURVEY DRAWING PROVIDED BY THE CHAZEN COMPANIES. A SURVEY PERFORMED ON THE SITE IN JULY 2010 AND UPDATED IN DECEMBER 2012.
2. HISTORIC FEATURES IN BASE DRAWING BASED ON SANBORN FIRE INSURANCE MAPS DATED 1888, 1898, 1917, 1951, & 1991. WESTCHESTER COUNTY ATLAS, 1931., YONKERS TAX ASSESSORS MAP, REVISED 1947 AND FIGURE 3 FROM GEI CONSULTANTS, INC.

LEGEND:

- MONITORING WELL LOCATION (2012)
- SOIL BORING LOCATION (2012)
- TEST PIT LOCATION (2012)
- SOIL VAPOR LOCATION (2012)
- MONITORING WELL LOCATION (2010)
- SOIL BORING LOCATION (2010)
- TEST PIT LOCATION (2010)
- FORMER MGP STRUCTURES
- RAILROAD TRACKS
- FENCE LINES
- PROPERTY LINE
- SITE BOUNDARY
- OHW — OVERHEAD WIRE
- ST — STORM SEWER
- W — WATER LINE
- G — GAS LINE
- UE — UNDERGROUND ELECTRIC LINE
- BUILDING
- CONC. WALK — SIDEWALK
- ASPHALT — ASPHALT DRIVEWAY
- CONC. CURB — CURB/GUTTER
- TREE LINE
- BOLLARD
- C — CATCH BASIN
- D — DRAINAGE MANHOLE
- GUY WIRE
- GAS VALVE
- HYDRANT
- S — SANITARY MANHOLE
- U — UNKNOWN MANHOLE
- UTILITY POLE
- W — WELL
- WATER VALVE
- GATE

50 25 0 50 100

SCALE: 1"=50'

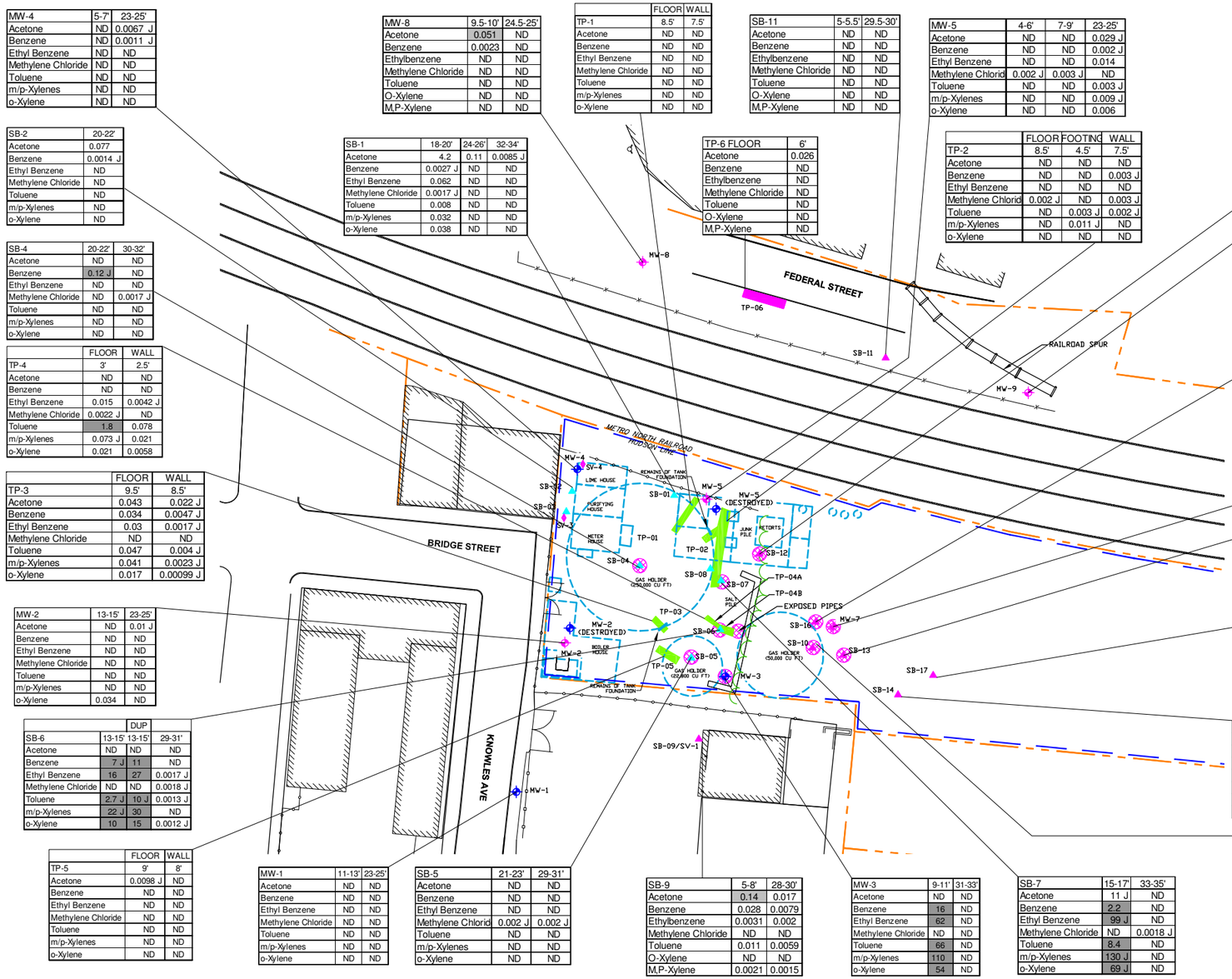
# FIGURE 3

Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

## SAMPLE LOCATION MAP

PARSONS
200 COTTONTAIL LANE, SOMERSET NJ 08873, PHONE: 732-537-3500

FILE NAME: C:\USERS\48606\DESKTOP\CON ED LUDLOW STREET WORKS\446110-FIG-3.DWG
PLOT DATE: 3/19/2014 8:47 AM PLOTTED BY: GOLDTHWAIT, JAMES




| MW-4 | 5-7' | 23-25' |
|---|---|---|
| Acetone | ND | 0.0067 J |
| Benzene | ND | 0.0011 J |
| Ethyl Benzene | ND | ND |
| Methylene Chloride | ND | ND |
| Toluene | ND | ND |
| m/p-Xylenes | ND | ND |
| o-Xylene | ND | ND |

| SB-2 | 20-22' |
|---|---|
| Acetone | 0.077 |
| Benzene | 0.0014 J |
| Ethyl Benzene | ND |
| Methylene Chloride | ND |
| Toluene | ND |
| m/p-Xylenes | ND |
| o-Xylene | ND |

| SB-4 | 20-22' | 30-32' |
|---|---|---|
| Acetone | ND | ND |
| Benzene | 0.12 J | ND |
| Ethyl Benzene | ND | ND |
| Methylene Chloride | ND | 0.0017 J |
| Toluene | ND | ND |
| m/p-Xylenes | ND | ND |
| o-Xylene | ND | ND |

| | FLOOR | WALL |
|---|---|---|
| TP-4 | 3' | 2.5' |
| Acetone | ND | ND |
| Benzene | ND | ND |
| Ethyl Benzene | 0.015 | 0.0042 J |
| Methylene Chloride | 0.0022 J | ND |
| Toluene | 1.8 | 0.078 |
| m/p-Xylenes | 0.073 J | 0.021 |
| o-Xylene | 0.021 | 0.0058 |

| | FLOOR | WALL |
|---|---|---|
| TP-3 | 9.5' | 8.5' |
| Acetone | 0.043 | 0.022 J |
| Benzene | 0.034 | 0.0047 J |
| Ethyl Benzene | 0.03 | 0.0017 J |
| Methylene Chloride | ND | ND |
| Toluene | 0.047 | 0.004 J |
| m/p-Xylenes | 0.041 | 0.0023 J |
| o-Xylene | 0.017 | 0.00099 J |

| MW-2 | 13-15' | 23-25' |
|---|---|---|
| Acetone | ND | 0.01 J |
| Benzene | ND | ND |
| Ethyl Benzene | ND | ND |
| Methylene Chloride | ND | ND |
| Toluene | ND | ND |
| m/p-Xylenes | ND | ND |
| o-Xylene | 0.034 | ND |

| | | DUP | |
|---|---|---|---|
| SB-6 | 13-15' | 13-15' | 29-31' |
| Acetone | ND | ND | ND |
| Benzene | 7 J | 11 | ND |
| Ethyl Benzene | 16 | 27 | 0.0017 J |
| Methylene Chloride | ND | ND | 0.0018 J |
| Toluene | 2.7 J | 10 J | 0.0013 J |
| m/p-Xylenes | 22 J | 30 | ND |
| o-Xylene | 10 | 15 | 0.0012 J |

| | FLOOR | WALL |
|---|---|---|
| TP-5 | 9' | 8' |
| Acetone | 0.0098 J | ND |
| Benzene | ND | ND |
| Ethyl Benzene | ND | ND |
| Methylene Chloride | ND | ND |
| Toluene | ND | ND |
| m/p-Xylenes | ND | ND |
| o-Xylene | ND | ND |

| MW-8 | 9.5-10' | 24.5-25' |
|---|---|---|
| Acetone | 0.051 | ND |
| Benzene | 0.0023 | ND |
| Ethylbenzene | ND | ND |
| Methylene Chloride | ND | ND |
| Toluene | ND | ND |
| O-Xylene | ND | ND |
| M,P-Xylene | ND | ND |

| SB-1 | 18-20' | 24-26' | 32-34' |
|---|---|---|---|
| Acetone | 4.2 | 0.11 | 0.0085 J |
| Benzene | 0.0027 J | ND | ND |
| Ethyl Benzene | 0.062 | ND | ND |
| Methylene Chloride | 0.0017 J | ND | ND |
| Toluene | 0.008 | ND | ND |
| m/p-Xylenes | 0.032 | ND | ND |
| o-Xylene | 0.038 | ND | ND |

| MW-1 | 11-13' | 23-25' |
|---|---|---|
| Acetone | ND | ND |
| Benzene | ND | ND |
| Ethyl Benzene | ND | ND |
| Methylene Chloride | ND | ND |
| Toluene | ND | ND |
| m/p-Xylenes | ND | ND |
| o-Xylene | ND | ND |

| SB-5 | 21-23' | 29-31' |
|---|---|---|
| Acetone | ND | ND |
| Benzene | ND | ND |
| Ethyl Benzene | ND | ND |
| Methylene Chloride | 0.002 J | 0.002 J |
| Toluene | ND | ND |
| m/p-Xylenes | ND | ND |
| o-Xylene | ND | ND |

| | FLOOR | WALL |
|---|---|---|
| TP-1 | 8.5' | 7.5' |
| Acetone | ND | ND |
| Benzene | ND | ND |
| Ethyl Benzene | ND | ND |
| Methylene Chloride | ND | ND |
| Toluene | ND | ND |
| m/p-Xylenes | ND | ND |
| o-Xylene | ND | ND |

| TP-6 FLOOR | 6' |
|---|---|
| Acetone | 0.026 |
| Benzene | ND |
| Ethylbenzene | ND |
| Methylene Chloride | ND |
| Toluene | ND |
| O-Xylene | ND |
| M,P-Xylene | ND |

| SB-9 | 5-8' | 28-30' |
|---|---|---|
| Acetone | 0.14 | 0.017 |
| Benzene | 0.028 | 0.0079 |
| Ethylbenzene | 0.0031 | 0.002 |
| Methylene Chloride | ND | ND |
| Toluene | 0.011 | 0.0059 |
| O-Xylene | ND | ND |
| M,P-Xylene | 0.0021 | 0.0015 |

| SB-11 | 5-5.5' | 29.5-30' |
|---|---|---|
| Acetone | ND | ND |
| Benzene | ND | ND |
| Ethylbenzene | ND | ND |
| Methylene Chloride | ND | ND |
| Toluene | ND | ND |
| O-Xylene | ND | ND |
| M,P-Xylene | ND | ND |

| MW-3 | 9-11' | 31-33' |
|---|---|---|
| Acetone | ND | ND |
| Benzene | 16 | ND |
| Ethyl Benzene | 62 | ND |
| Methylene Chloride | ND | ND |
| Toluene | 66 | ND |
| m/p-Xylenes | 110 | ND |
| o-Xylene | 54 | ND |

| MW-5 | 4-6' | 7-9' | 23-25' |
|---|---|---|---|
| Acetone | ND | ND | 0.029 J |
| Benzene | ND | ND | 0.002 J |
| Ethyl Benzene | ND | ND | 0.014 |
| Methylene Chlorid | 0.002 J | 0.003 J | ND |
| Toluene | ND | ND | 0.003 J |
| m/p-Xylenes | ND | ND | 0.009 J |
| o-Xylene | ND | ND | 0.006 |

| | FLOOR | FOOTING | WALL |
|---|---|---|---|
| TP-2 | 8.5' | 4.5' | 7.5' |
| Acetone | ND | ND | ND |
| Benzene | ND | ND | 0.003 J |
| Ethyl Benzene | ND | ND | ND |
| Methylene Chlorid | 0.002 J | ND | 0.003 J |
| Toluene | ND | 0.003 J | 0.002 J |
| m/p-Xylenes | ND | 0.011 J | ND |
| o-Xylene | ND | ND | ND |

| SB-7 | 15-17' | 33-35' |
|---|---|---|
| Acetone | 11 J | ND |
| Benzene | 2.2 | ND |
| Ethyl Benzene | 99 J | ND |
| Methylene Chloride | ND | 0.0018 J |
| Toluene | 8.4 | ND |
| m/p-Xylenes | 130 J | ND |
| o-Xylene | 69 J | ND |

| SB-12 | 12-14' | 36-38' |
|---|---|---|
| Acetone | ND | ND |
| Benzene | ND | ND |
| Ethylbenzene | 9.1 | ND |
| Methylene Chloride | ND | ND |
| Toluene | 1.5 | ND |
| O-Xylene | 5.7 | ND |
| M,P-Xylene | 11 | ND |

| MW-9 | 9-9.5' | 35-35.5' |
|---|---|---|
| Acetone | ND | ND |
| Benzene | ND | ND |
| Ethylbenzene | ND | ND |
| Methylene Chloride | ND | ND |
| Toluene | ND | ND |
| O-Xylene | ND | ND |
| M,P-Xylene | ND | ND |

| SB-16 | 30-33' | 45-47' |
|---|---|---|
| Acetone | ND | 0.071 |
| Benzene | 17.2 | ND |
| Ethylbenzene | 43.9 | 0.0045 |
| Methylene Chloride | ND | ND |
| Toluene | 46.5 | ND |
| O-Xylene | 18.2 | 0.0022 |
| M,P-Xylene | 38.4 | 0.0039 |

| MW-7 | 36-38' | 36-38' DUP | 48-50' |
|---|---|---|---|
| Acetone | ND | ND | ND |
| Benzene | 7.1 | 5.3 | 0.0013 |
| Ethylbenzene | 30 | 48 | 0.0017 |
| Methylene Chloride | ND | ND | ND |
| Toluene | 15 | 18 | 0.0013 |
| O-Xylene | 18 | 28 | ND |
| M,P-Xylene | 34 | 54 | 0.002 |

| SB-13 | 47-49' |
|---|---|
| Acetone | ND |
| Benzene | 0.085 |
| Ethylbenzene | 0.46 |
| Methylene Chloride | ND |
| Toluene | 0.053 |
| O-Xylene | 0.16 |
| M,P-Xylene | 0.23 |

| SB-17 | 33-35' | 45-47' |
|---|---|---|
| Acetone | ND | 0.011 |
| Benzene | ND | ND |
| Ethylbenzene | ND | ND |
| Methylene Chloride | ND | ND |
| Toluene | ND | ND |
| O-Xylene | ND | ND |
| M,P-Xylene | ND | ND |

| SB-14 | 38-40' | 45-47' | 45-47' DUP |
|---|---|---|---|
| Acetone | ND | 0.027 | 0.026 |
| Benzene | ND | ND | ND |
| Ethylbenzene | ND | ND | ND |
| Methylene Chloride | ND | ND | ND |
| Toluene | ND | ND | ND |
| O-Xylene | ND | ND | ND |
| M,P-Xylene | ND | ND | ND |

| SB-10 | 30-32' | 45-47' |
|---|---|---|
| Acetone | ND | ND |
| Benzene | 210 | ND |
| Ethylbenzene | 540 | ND |
| Methylene Chloride | 0.16 | ND |
| Toluene | 510 | ND |
| O-Xylene | 220 | ND |
| M,P-Xylene | 470 | ND |

LEGEND:

- MONITORING WELL LOCATION (2012)
- SOIL BORING LOCATION (2012)
- TEST PIT LOCATION (2012)
- SOIL VAPOR LOCATION (2012)
- MONITORING WELL LOCATION (2010)
- SOIL BORING LOCATION (2010)
- TEST PIT LOCATION (2010)
- FORMER MGP STRUCTURES
- FENCELINE
- RAILROAD TRACKS
- PROPERTY LINE
- SITE BOUNDARY
- BUILDING
- NAPL OBSERVED

NOTES:

1. BASE SURVEY DRAWING PROVIDED BY THE CHAZEN COMPANIES, FROM A SURVEY PERFORMED ON THE SITE IN JULY, 2010 AND UPDATED IN DECEMBER 2012.
2. HISTORIC FEATURES IN BASE DRAWING BASED ON SANBORN FIRE INSURANCE MAPS DATED 1888, 1898, 1917, 1951, & 1991. WESTCHESTER COUNTY ATLAS, 1931., YONKERS TAX ASSESSORS MAP, REVISED 1947 AND FIGURE 3 FROM GEI CONSULTANTS, INC.
3. ALL CONCENTRATIONS IN MILLIGRAMS PER KILOGRAMS (MG/KG)
4. SHADED VALUES EXCEED 6 NYCRR PART 375 UNRESTRICTED SOIL CLEANUP OBJECTIVES (USCO).
5. ND – NOT DETECTED
6. COMPOUNDS DETECTED DURING THE SITE CHARACTERIZATION OR REMEDIAL INVESTIGATION ABOVE USCOs, AT ANY LOCATION, ARE SHOWN.

40 20 0 40 80

SCALE: 1"=40'

# FIGURE 4

Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

## SUMMARY OF VOC EXCEEDANCES IN SOIL

PARSONS
200 COTTONTAIL LANE, SOMERSET NJ 08873, PHONE: 732-537-3500

FILE NAME: C:\USERS\48606\DESKTOP\CON ED LUDLOW STREET WORKS\446110-SK006-VOC.DWG
PLOT DATE: 3/19/2014 12:22 PM PLOTTED BY: GOLDTHWAIT, JAMES

| SB-1 | 18-20' | 24-26' | 32-34' |
|---|---|---|---|
| Acenaphthene | ND | ND | ND |
| Acenaphthylene | ND | ND | ND |
| Anthracene | ND | ND | ND |
| Benzo(a)anthracene | ND | ND | ND |
| Benzo(a)pyrene | ND | ND | ND |
| Benzo(b)fluoranthene | ND | ND | ND |
| Benzo(k)fluoranthene | ND | ND | ND |
| Chrysene | ND | ND | ND |
| Dibenz(a,h)anthracene | ND | ND | ND |
| Fluoranthene | 0.06 | ND | ND |
| Fluorene | ND | ND | ND |
| Indeno(1,2,3-cd)pyrene | ND | ND | ND |
| Naphthalene | 0.36 | ND | ND |
| Phenanthrene | 0.12 | 0.077 | ND |
| Pyrene | 0.075 | ND | ND |

| MW-8 | 9.5-10' | 24.5-25' |
|---|---|---|
| Acenaphthene | ND | ND |
| Acenaphthylene | ND | ND |
| Anthracene | ND | ND |
| Benzo(a)Anthracene | 0.26 | ND |
| Benzo(b)Pyrene | 0.26 | ND |
| Benzo(b)Fluoranthene | 0.3 | ND |
| Benzo(k)Fluoranthene | ND | ND |
| Chrysene | 0.29 | ND |
| Dibenz(a,h)Anthracene | ND | ND |
| Fluoranthene | 0.57 | ND |
| Fluorene | ND | ND |
| Indeno(1,2,3-C,D)Pyrene | 0.17 | ND |
| Naphthalene | ND | ND |
| Phenanthrene | 0.48 | ND |
| Pyrene | 0.55 | ND |

| | FLOOR | WALL |
|---|---|---|
| TP-1 | 8.5' | 7.5' |
| Acenaphthene | ND | ND |
| Acenaphthylene | ND | ND |
| Anthracene | ND | ND |
| Benzo(a)anthracene | ND | ND |
| Benzo(a)pyrene | ND | ND |
| Benzo(b)fluoranthene | ND | ND |
| Benzo(k)fluoranthene | ND | ND |
| Chrysene | ND | ND |
| Dibenz(a,h)anthracene | ND | ND |
| Fluoranthene | ND | 0.065 |
| Fluorene | ND | ND |
| Indeno(1,2,3-cd)pyrene | ND | ND |
| Naphthalene | ND | ND |
| Phenanthrene | ND | ND |
| Pyrene | ND | ND |

| SB-11 | 5-5.5' | 29.5-30' |
|---|---|---|
| Acenaphthene | ND | ND |
| Acenaphthylene | ND | ND |
| Anthracene | ND | ND |
| Benzo(a)Anthracene | ND | ND |
| Benzo(b)Pyrene | ND | ND |
| Benzo(b)Fluoranthene | ND | ND |
| Benzo(k)Fluoranthene | ND | ND |
| Chrysene | ND | ND |
| Dibenz(a,h)Anthracene | ND | ND |
| Fluoranthene | ND | ND |
| Fluorene | ND | ND |
| Indeno(1,2,3-C,D)Pyrene | ND | ND |
| Naphthalene | ND | ND |
| Phenanthrene | ND | ND |
| Pyrene | ND | ND |

| MW-5 | 4-6' | 7-9' | 23-25' |
|---|---|---|---|
| Acenaphthene | ND | ND | 0.21 |
| Acenaphthylene | 1.3 | ND | 0.64 |
| Anthracene | ND | 0.75 | 0.28 |
| Benzo(a)anthracene | ND | 1.5 | 0.95 |
| Benzo(a)pyrene | ND | 1.1 | 0.7 |
| Benzo(b)fluoranthene | ND | 1.5 | 0.57 |
| Benzo(k)fluoranthene | ND | 0.56 | 0.18 |
| Chrysene | ND | 1.3 | 0.78 |
| Dibenz(a,h)anthracene | ND | ND | 0.068 |
| Fluoranthene | ND | 3.2 | 1.4 |
| Fluorene | ND | ND | 0.2 |
| Indeno(1,2,3-cd)pyrene | ND | 0.64 | 0.24 |
| Naphthalene | ND | ND | 0.9 |
| Phenanthrene | ND | 3.2 | 0.48 |
| Pyrene | ND | 2.6 | 2 |

| SB-12 | 12-14' | 36-38' |
|---|---|---|
| Acenaphthene | 9.1 | ND |
| Acenaphthylene | 50 | ND |
| Anthracene | 22 | ND |
| Benzo(a)Anthracene | 11 | ND |
| Benzo(b)Pyrene | 7.2 | ND |
| Benzo(b)Fluoranthene | 5.5 | ND |
| Benzo(k)Fluoranthene | 1.7 | ND |
| Chrysene | 10 | ND |
| Dibenz(a,h)Anthracene | ND | ND |
| Fluoranthene | 22 | ND |
| Fluorene | 33 | ND |
| Indeno(1,2,3-C,D)Pyrene | 2 | ND |
| Naphthalene | 310 | ND |
| Phenanthrene | 94 | ND |
| Pyrene | 29 | ND |

| MW-9 | 9-9.5' | 35-35.5' |
|---|---|---|
| Acenaphthene | ND | ND |
| Acenaphthylene | ND | ND |
| Anthracene | ND | ND |
| Benzo(a)Anthracene | ND | ND |
| Benzo(b)Pyrene | ND | ND |
| Benzo(b)Fluoranthene | ND | ND |
| Benzo(k)Fluoranthene | ND | ND |
| Chrysene | ND | ND |
| Dibenz(a,h)Anthracene | ND | ND |
| Fluoranthene | ND | ND |
| Fluorene | ND | ND |
| Indeno(1,2,3-C,D)Pyrene | ND | ND |
| Naphthalene | ND | ND |
| Phenanthrene | ND | ND |
| Pyrene | ND | ND |

| SB-2 | 20-22' |
|---|---|
| Acenaphthene | ND |
| Acenaphthylene | ND |
| Anthracene | ND |
| Benzo(a)anthracene | 0.051 |
| Benzo(a)pyrene | ND |
| Benzo(b)fluoranthene | 0.059 |
| Benzo(k)fluoranthene | ND |
| Chrysene | 0.061 |
| Dibenz(a,h)anthracene | ND |
| Fluoranthene | 0.12 |
| Fluorene | ND |
| Indeno(1,2,3-cd)pyrene | ND |
| Naphthalene | 0.21 |
| Phenanthrene | 0.095 |
| Pyrene | 0.11 |

| MW-4 | 5-7' | 23-25' |
|---|---|---|
| Acenaphthene | 1.3 | ND |
| Acenaphthylene | ND | ND |
| Anthracene | 3.2 | ND |
| Benzo(a)anthracene | 7.3 | ND |
| Benzo(a)pyrene | 6.3 | ND |
| Benzo(b)fluoranthene | 8.9 | ND |
| Benzo(k)fluoranthene | 2.1 | ND |
| Chrysene | 7 | ND |
| Dibenz(a,h)anthracene | 0.6 | ND |
| Fluoranthene | 18 | ND |
| Fluorene | 1.3 | ND |
| Indeno(1,2,3-cd)pyrene | 3.7 | ND |
| Naphthalene | 1.5 | ND |
| Phenanthrene | 15 | ND |
| Pyrene | 15 | ND |

| TP-6 FLOOR | 6' |
|---|---|
| Acenaphthene | ND |
| Acenaphthylene | ND |
| Anthracene | ND |
| Benzo(a)Anthracene | 0.35 |
| Benzo(b)Pyrene | 0.41 |
| Benzo(b)Fluoranthene | 0.5 |
| Benzo(k)Fluoranthene | ND |
| Chrysene | 0.4 |
| Dibenz(a,h)Anthracene | ND |
| Fluoranthene | 0.75 |
| Fluorene | ND |
| Indeno(1,2,3-C,D)Pyrene | 0.27 |
| Naphthalene | ND |
| Phenanthrene | 0.45 |
| Pyrene | 0.69 |

| | FLOOR | FOOTING | WALL |
|---|---|---|---|
| TP-2 | 8.5' | 4.5' | 7.5' |
| Acenaphthene | ND | ND | ND |
| Acenaphthylene | ND | ND | ND |
| Anthracene | ND | ND | ND |
| Benzo(a)anthracene | ND | ND | 0.091 |
| Benzo(a)pyrene | ND | ND | 0.075 |
| Benzo(b)fluoranthene | ND | ND | 0.11 |
| Benzo(g,h,i)perylene | ND | ND | ND |
| Chrysene | ND | ND | 0.11 |
| Dibenz(a,h)anthracene | ND | ND | ND |
| Fluoranthene | ND | ND | 0.19 |
| Fluorene | ND | ND | ND |
| Indeno(1,2,3-cd)pyrene | ND | ND | ND |
| Naphthalene | 1 | ND | 0.33 |
| Phenanthrene | ND | ND | 0.11 |
| Pyrene | ND | ND | 0.2 |

| SB-16 | 30-33' | 45-47' |
|---|---|---|
| Acenaphthene | 1.8 | ND |
| Acenaphthylene | 4.7 | ND |
| Anthracene | 2.5 | ND |
| Benzo(a)Anthracene | 1.6 | ND |
| Benzo(b)Pyrene | 1.2 | ND |
| Benzo(b)Fluoranthene | 0.94 | ND |
| Benzo(k)Fluoranthene | 0.38 | ND |
| Chrysene | 1.6 | ND |
| Dibenz(a,h)Anthracene | ND | ND |
| Fluoranthene | 2.5 | ND |
| Fluorene | 4.5 | ND |
| Indeno(1,2,3-C,D)Pyrene | 0.2 | ND |
| Naphthalene | 33.7 | ND |
| Phenanthrene | 9.9 | ND |
| Pyrene | 3.3 | ND |

| SB-4 | 20-22' | 30-32' |
|---|---|---|
| Acenaphthene | 1.2 | 1.3 |
| Acenaphthylene | 1.1 | 12 |
| Anthracene | 2.4 | 3.6 |
| Benzo(a)anthracene | 1.3 | 21 |
| Benzo(a)pyrene | 0.85 | 14 |
| Benzo(b)fluoranthene | 0.65 | 11 |
| Benzo(k)fluoranthene | 0.24 | 3.6 |
| Chrysene | 1.2 | 20 |
| Dibenz(a,h)anthracene | 0.099 | 1.6 |
| Fluoranthene | 2.3 | 39 |
| Fluorene | 2.8 | 1.1 |
| Indeno(1,2,3-cd)pyrene | 0.26 | 4.2 |
| Naphthalene | 1.9 | ND |
| Phenanthrene | 10 | 0.38 |
| Pyrene | 3.6 | 52 |

| | FLOOR | WALL |
|---|---|---|
| TP-3 | 9.5' | 8.5' |
| Acenaphthene | ND | ND |
| Acenaphthylene | ND | ND |
| Anthracene | ND | ND |
| Benzo(a)anthracene | 0.088 | 0.1 |
| Benzo(a)pyrene | 0.084 | 0.08 |
| Benzo(b)fluoranthene | 0.11 | 0.12 |
| Benzo(k)fluoranthene | ND | ND |
| Chrysene | 0.11 | 0.15 |
| Dibenz(a,h)anthracene | ND | ND |
| Fluoranthene | 0.16 | 0.21 |
| Fluorene | ND | ND |
| Indeno(1,2,3-cd)pyrene | 0.054 | 0.061 |
| Naphthalene | 0.53 | 0.97 |
| Phenanthrene | 0.073 | 0.1 |
| Pyrene | 0.16 | 0.23 |

| MW-7 | 36-38' | DUP 36-38' | 48-50' |
|---|---|---|---|
| Acenaphthene | 15 | 21 | ND |
| Acenaphthylene | 12 | 16 | ND |
| Anthracene | 13 | 20 | ND |
| Benzo(a)Anthracene | 8.3 | 13 | ND |
| Benzo(a)Pyrene | 5.7 | 9 | ND |
| Benzo(b)Fluoranthene | 4.4 | 6.6 | ND |
| Benzo(k)Fluoranthene | 1.7 | 2.2 | ND |
| Chrysene | 8 | 12 | ND |
| Dibenz(a,h)Anthracene | 0.72 | 0.88 | ND |
| Fluoranthene | 14 | 23 | ND |
| Fluorene | 22 | 27 | ND |
| Indeno(1,2,3-C,D)Pyrene | 2.1 | 2.7 | ND |
| Naphthalene | 220 | 240 | ND |
| Phenanthrene | 60 | 79 | ND |
| Pyrene | 26 | 34 | ND |

| SB-13 | 47-49' |
|---|---|
| Acenaphthene | 0.32 |
| Acenaphthylene | 0.24 |
| Anthracene | 0.31 |
| Benzo(a)Anthracene | 0.26 |
| Benzo(b)Pyrene | 0.2 |
| Benzo(b)Fluoranthene | 0.16 |
| Benzo(k)Fluoranthene | ND |
| Chrysene | 0.26 |
| Dibenz(a,h)Anthracene | ND |
| Fluoranthene | 0.49 |
| Fluorene | 0.32 |
| Indeno(1,2,3-C,D)Pyrene | ND |
| Naphthalene | 2.8 |
| Phenanthrene | 1.3 |
| Pyrene | 0.62 |

| MV-2 | 13-15' | 23-25' |
|---|---|---|
| Acenaphthene | ND | ND |
| Acenaphthylene | ND | ND |
| Anthracene | ND | ND |
| Benzo(a)anthracene | ND | ND |
| Benzo(a)pyrene | ND | ND |
| Benzo(b)fluoranthene | ND | ND |
| Benzo(k)fluoranthene | ND | ND |
| Chrysene | ND | ND |
| Dibenz(a,h)anthracene | ND | ND |
| Fluoranthene | ND | ND |
| Fluorene | 0.081 | ND |
| Indeno(1,2,3-cd)pyrene | ND | ND |
| Naphthalene | 0.066 | ND |
| Phenanthrene | 0.19 | ND |
| Pyrene | ND | ND |

| SB-17 | 33-35' | 45-47' |
|---|---|---|
| Acenaphthene | ND | ND |
| Acenaphthylene | ND | ND |
| Anthracene | ND | ND |
| Benzo(a)Anthracene | ND | ND |
| Benzo(b)Pyrene | ND | ND |
| Benzo(b)Fluoranthene | ND | ND |
| Benzo(k)Fluoranthene | ND | ND |
| Chrysene | ND | ND |
| Dibenz(a,h)Anthracene | ND | ND |
| Fluoranthene | ND | ND |
| Fluorene | ND | ND |
| Indeno(1,2,3-C,D)Pyrene | ND | ND |
| Naphthalene | ND | 0.25 |
| Phenanthrene | ND | ND |
| Pyrene | ND | ND |

| SB-14 | 38-40' | 45-47' | DUP 45-47' |
|---|---|---|---|
| Acenaphthene | ND | ND | ND |
| Acenaphthylene | ND | ND | ND |
| Anthracene | ND | ND | ND |
| Benzo(a)Anthracene | ND | ND | ND |
| Benzo(b)Pyrene | ND | ND | ND |
| Benzo(b)Fluoranthene | ND | ND | ND |
| Benzo(k)Fluoranthene | ND | ND | ND |
| Chrysene | ND | ND | ND |
| Dibenz(a,h)Anthracene | ND | ND | ND |
| Fluoranthene | ND | ND | ND |
| Fluorene | ND | ND | ND |
| Indeno(1,2,3-C,D)Pyrene | ND | ND | ND |
| Naphthalene | ND | ND | ND |
| Phenanthrene | ND | ND | ND |
| Pyrene | ND | ND | ND |

| TP-4 | 3' | 2.5' |
|---|---|---|
| Acenaphthene | ND | ND |
| Acenaphthylene | ND | ND |
| Anthracene | ND | ND |
| Benzo(a)anthracene | 0.11 | 0.054 |
| Benzo(a)pyrene | 0.11 | 0.055 |
| Benzo(b)fluoranthene | 0.14 | 0.078 |
| Benzo(k)fluoranthene | ND | ND |
| Chrysene | 0.1 | 0.054 |
| Dibenz(a,h)anthracene | ND | ND |
| Fluoranthene | 0.15 | 0.091 |
| Fluorene | ND | ND |
| Indeno(1,2,3-cd)pyrene | 0.078 | ND |
| Naphthalene | ND | ND |
| Phenanthrene | ND | ND |
| Pyrene | 0.13 | 0.089 |

| | FLOOR | WALL |
|---|---|---|
| TP-5 | 9' | 8' |
| Acenaphthene | ND | ND |
| Acenaphthylene | 0.57 | 0.21 |
| Anthracene | 0.29 | 0.1 |
| Benzo(a)anthracene | 0.95 | 0.43 |
| Benzo(a)pyrene | 0.68 | 0.34 |
| Benzo(b)fluoranthene | 0.83 | 0.47 |
| Benzo(k)fluoranthene | 0.3 | 0.14 |
| Chrysene | 0.99 | 0.46 |
| Dibenz(a,h)anthracene | 0.14 | 0.073 |
| Fluoranthene | 1.2 | 0.56 |
| Fluorene | 0.12 | ND |
| Indeno(1,2,3-cd)pyrene | 0.44 | 0.27 |
| Naphthalene | 0.19 | 0.093 |
| Phenanthrene | 0.91 | 0.34 |
| Pyrene | 1.2 | 0.6 |

| MW-1 | 11-13' | 23-25' |
|---|---|---|
| Acenaphthene | ND | ND |
| Acenaphthylene | ND | ND |
| Anthracene | ND | ND |
| Benzo(a)anthracene | ND | ND |
| Benzo(a)pyrene | ND | ND |
| Benzo(b)fluoranthene | ND | ND |
| Benzo(k)fluoranthene | ND | ND |
| Chrysene | ND | ND |
| Dibenz(a,h)anthracene | ND | ND |
| Fluoranthene | ND | ND |
| Fluorene | ND | ND |
| Indeno(1,2,3-cd)pyrene | ND | ND |
| Naphthalene | ND | ND |
| Phenanthrene | ND | ND |
| Pyrene | ND | ND |

| SB-5 | 21-23' | 29-31' |
|---|---|---|
| Acenaphthene | 1.2 | 0.21 |
| Acenaphthylene | 0.73 | 0.1 |
| Anthracene | 1.1 | 0.18 |
| Benzo(a)anthracene | 0.95 | 0.13 |
| Benzo(a)pyrene | 0.63 | 0.076 |
| Benzo(b)fluoranthene | 0.48 | 0.058 |
| Benzo(k)fluoranthene | 0.19 | ND |
| Chrysene | 0.85 | 0.1 |
| Dibenz(a,h)anthracene | 0.075 | ND |
| Fluoranthene | 1.4 | 0.2 |
| Fluorene | 1 | 0.17 |
| Indeno(1,2,3-cd)pyrene | 0.19 | ND |
| Naphthalene | 1.9 | 0.31 |
| Phenanthrene | 3.6 | 0.62 |
| Pyrene | 2 | 0.3 |

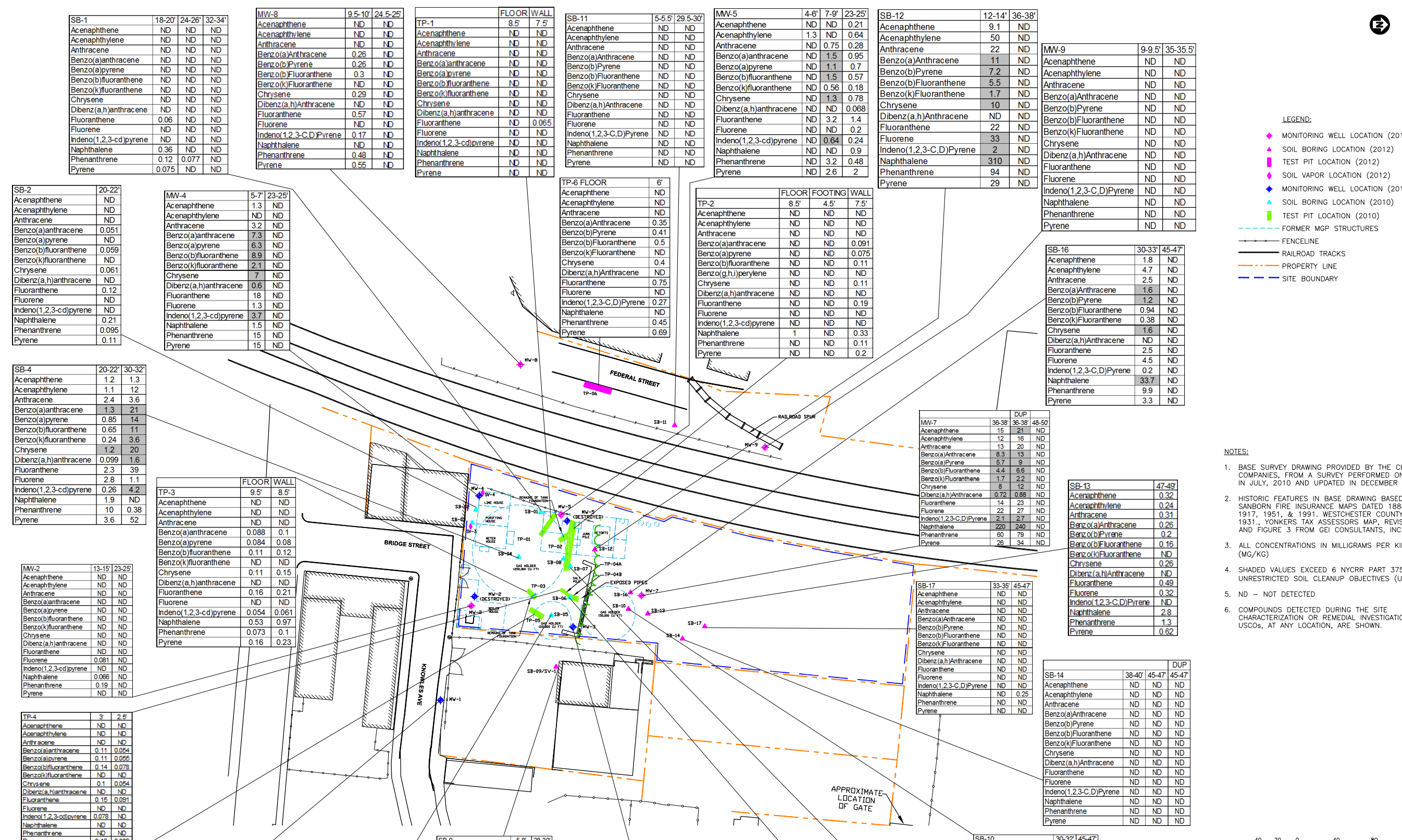
| SB-9 | 5-8' | 28-30' |
|---|---|---|
| Acenaphthene | ND | ND |
| Acenaphthylene | ND | ND |
| Anthracene | ND | ND |
| Benzo(a)Anthracene | 0.029 | ND |
| Benzo(b)Pyrene | 0.028 | ND |
| Benzo(b)Fluoranthene | 0.038 | ND |
| Benzo(k)Fluoranthene | ND | ND |
| Chrysene | 0.32 | ND |
| Dibenz(a,h)Anthracene | ND | ND |
| Fluoranthene | 0.56 | ND |
| Fluorene | ND | ND |
| Indeno(1,2,3-C,D)Pyrene | 0.19 | ND |
| Naphthalene | ND | ND |
| Phenanthrene | 0.32 | ND |
| Pyrene | 0.47 | ND |

| MW-3 | 9-11' | 31-33' |
|---|---|---|
| Acenaphthene | 51 | ND |
| Acenaphthylene | 76 | ND |
| Anthracene | 81 | ND |
| Benzo(a)anthracene | 48 | ND |
| Benzo(a)pyrene | 35 | ND |
| Benzo(b)fluoranthene | 28 | ND |
| Benzo(k)fluoranthene | 8.8 | ND |
| Chrysene | 41 | ND |
| Dibenz(a,h)anthracene | 3.8 | ND |
| Fluoranthene | 78 | ND |
| Fluorene | 100 | ND |
| Indeno(1,2,3-cd)pyrene | 11 | ND |
| Naphthalene | 820 | ND |
| Phenanthrene | 270 | 0.094 |
| Pyrene | 110 | ND |

| SB-6 | 13-15' | DUP 13-15' | 29-31' |
|---|---|---|---|
| Acenaphthene | 7.1 | 9.3 | 0.065 |
| Acenaphthylene | 4 | 6.7 | 0.061 |
| Anthracene | 4.7 | 7.4 | ND |
| Benzo(a)anthracene | 2.3 | 4 | ND |
| Benzo(a)pyrene | 1.5 | 2.5 | ND |
| Benzo(b)fluoranthene | 1.2 | 2 | ND |
| Benzo(k)fluoranthene | 0.33 | 0.62 | ND |
| Chrysene | 2 | 3.9 | ND |
| Dibenz(a,h)anthracene | 0.17 | 0.29 | ND |
| Fluoranthene | 5 | 8.2 | 0.054 |
| Fluorene | 6.8 | 11 | 0.081 |
| Indeno(1,2,3-cd)pyrene | 0.44 | 0.75 | ND |
| Naphthalene | 63 | 75 | 0.48 |
| Phenanthrene | 18 | 28 | 0.21 |

| SB-7 | 15-17' | 33-35' |
|---|---|---|
| Acenaphthene | 45 | ND |
| Acenaphthylene | 90 | ND |
| Anthracene | 58 | ND |
| Benzo(a)anthracene | 36 | ND |
| Benzo(a)pyrene | 22 | ND |
| Benzo(b)fluoranthene | 18 | ND |
| Benzo(k)fluoranthene | 5.9 | ND |
| Chrysene | 29 | ND |
| Dibenz(a,h)anthracene | 2.6 | ND |
| Fluoranthene | 60 | ND |
| Fluorene | 92 | ND |
| Indeno(1,2,3-cd)pyrene | 6.8 | ND |
| Naphthalene | 250 | ND |
| Phenanthrene | 220 | ND |
| Pyrene | 80 | 0.057 |

| SB-10 | 30-32' | 45-47' |
|---|---|---|
| Acenaphthene | 320 | ND |
| Acenaphthylene | 370 | 0.2 |
| Anthracene | 370 | ND |
| Benzo(a)Anthracene | 220 | ND |
| Benzo(b)Pyrene | 150 | ND |
| Benzo(b)Fluoranthene | 97 | ND |
| Benzo(k)Fluoranthene | 32 | ND |
| Chrysene | 220 | ND |
| Dibenz(a,h)Anthracene | 12 | ND |
| Fluoranthene | 400 | ND |
| Fluorene | 550 | ND |
| Indeno(1,2,3-C,D)Pyrene | 37 | ND |
| Naphthalene | 5700 | 0.21 |
| Phenanthrene | 1500 | ND |
| Pyrene | 640 | ND |




LEGEND:

- MONITORING WELL LOCATION (2012)
- SOIL BORING LOCATION (2012)
- TEST PIT LOCATION (2012)
- SOIL VAPOR LOCATION (2012)
- MONITORING WELL LOCATION (2010)
- SOIL BORING LOCATION (2010)
- TEST PIT LOCATION (2010)
- FORMER MGP STRUCTURES
- FENCELINE
- RAILROAD TRACKS
- PROPERTY LINE
- SITE BOUNDARY

NOTES:

1. BASE SURVEY DRAWING PROVIDED BY THE CHAZEN COMPANIES, FROM A SURVEY PERFORMED ON THE SITE IN JULY, 2010 AND UPDATED IN DECEMBER 2012.
2. HISTORIC FEATURES IN BASE DRAWING BASED ON SANBORN FIRE INSURANCE MAPS DATED 1888, 1898, 1917, 1951, & 1991, WESTCHESTER COUNTY ATLAS, 1931., YONKERS TAX ASSESSORS MAP, REVISED 1947 AND FIGURE 3 FROM GEI CONSULTANTS, INC.
3. ALL CONCENTRATIONS IN MILLIGRAMS PER KILOGRAMS (MG/KG)
4. SHADED VALUES EXCEED 6 NYCRR PART 375 UNRESTRICTED SOIL CLEANUP OBJECTIVES (USCO).
5. ND – NOT DETECTED
6. COMPOUNDS DETECTED DURING THE SITE CHARACTERIZATION OR REMEDIAL INVESTIGATION ABOVE USCOs, AT ANY LOCATION, ARE SHOWN.

40 20 0 40 80

SCALE: 1"=40'

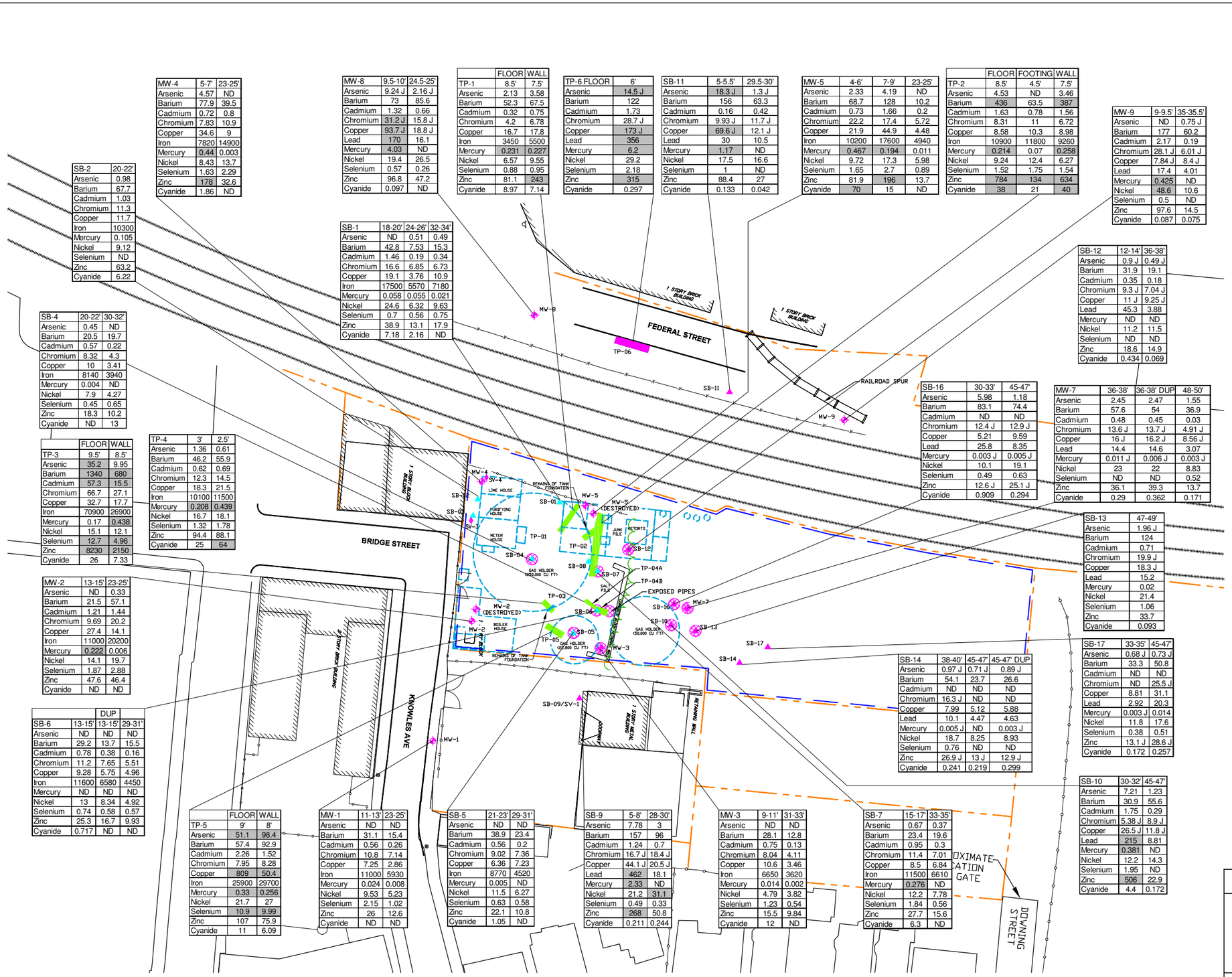
FIGURE 5

Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

SUMMARY OF SVOC EXCEEDANCES IN SOIL

PARSONS
200 COTTONTAIL LANE, SOMERSET NJ 08873, PHONE: 732-537-3500

FILE NAME: C:\USERS\48606\DESKTOP\CON ED LUDLOW STREET WORKS\446110-SK008-SVOC.DWG
PLOT DATE: 3/19/2014 12:26 PM PLOTTED BY: GOLDTHWAIT, JAMES




| MW-4 | 5-7' | 23-25' |
|---|---|---|
| Arsenic | 4.57 | ND |
| Barium | 77.9 | 39.5 |
| Cadmium | 0.72 | 0.8 |
| Chromium | 7.83 | 10.9 |
| Copper | 34.6 | 9 |
| Iron | 7820 | 14900 |
| Mercury | 0.44 | 0.003 |
| Nickel | 8.43 | 13.7 |
| Selenium | 1.63 | 2.29 |
| Zinc | 178 | 32.6 |
| Cyanide | 1.86 | ND |

| MW-8 | 9.5-10' | 24.5-25' |
|---|---|---|
| Arsenic | 9.24 J | 2.16 J |
| Barium | 73 | 85.6 |
| Cadmium | 1.32 | 0.66 |
| Chromium | 31.2 J | 15.8 J |
| Copper | 93.7 J | 18.8 J |
| Lead | 170 | 16.1 |
| Mercury | 4.03 | ND |
| Nickel | 19.4 | 26.5 |
| Selenium | 0.57 | 0.26 |
| Zinc | 96.8 | 47.2 |
| Cyanide | 0.097 | ND |

| | FLOOR | WALL |
|---|---|---|
| TP-1 | 8.5' | 7.5' |
| Arsenic | 2.13 | 3.58 |
| Barium | 52.3 | 67.5 |
| Cadmium | 0.32 | 0.75 |
| Chromium | 4.2 | 6.78 |
| Copper | 16.7 | 17.8 |
| Iron | 3450 | 5500 |
| Mercury | 0.231 | 0.227 |
| Nickel | 6.57 | 9.55 |
| Selenium | 0.88 | 0.95 |
| Zinc | 81.1 | 243 |
| Cyanide | 8.97 | 7.14 |

| TP-6 FLOOR | 6' |
|---|---|
| Arsenic | 14.5 J |
| Barium | 122 |
| Cadmium | 1.73 |
| Chromium | 28.7 J |
| Copper | 173 J |
| Lead | 356 |
| Mercury | 6.2 |
| Nickel | 29.2 |
| Selenium | 2.18 |
| Zinc | 315 |
| Cyanide | 0.297 |

| SB-11 | 5-5.5' | 29.5-30' |
|---|---|---|
| Arsenic | 18.3 J | 1.3 J |
| Barium | 156 | 63.3 |
| Cadmium | 0.16 | 0.42 |
| Chromium | 9.93 J | 11.7 J |
| Copper | 69.6 J | 12.1 J |
| Lead | 30 | 10.5 |
| Mercury | 1.17 | ND |
| Nickel | 17.5 | 16.6 |
| Selenium | 1 | ND |
| Zinc | 88.4 | 27 |
| Cyanide | 0.133 | 0.042 |

| MW-5 | 4-6' | 7-9' | 23-25' |
|---|---|---|---|
| Arsenic | 2.33 | 4.19 | ND |
| Barium | 68.7 | 128 | 10.2 |
| Cadmium | 0.73 | 1.66 | 0.2 |
| Chromium | 22.2 | 17.4 | 5.72 |
| Copper | 21.9 | 44.9 | 4.48 |
| Iron | 10200 | 17600 | 4940 |
| Mercury | 0.467 | 0.194 | 0.011 |
| Nickel | 9.72 | 17.3 | 5.98 |
| Selenium | 1.65 | 2.7 | 0.89 |
| Zinc | 81.9 | 196 | 13.7 |
| Cyanide | 70 | 15 | ND |

| | FLOOR | FOOTING | WALL |
|---|---|---|---|
| TP-2 | 8.5' | 4.5' | 7.5' |
| Arsenic | 4.53 | ND | 3.46 |
| Barium | 436 | 63.5 | 387 |
| Cadmium | 1.63 | 0.78 | 1.56 |
| Chromium | 8.31 | 11 | 6.72 |
| Copper | 8.58 | 10.3 | 8.98 |
| Iron | 10900 | 11800 | 9260 |
| Mercury | 0.214 | 0.07 | 0.258 |
| Nickel | 9.24 | 12.4 | 6.27 |
| Selenium | 1.52 | 1.75 | 1.54 |
| Zinc | 784 | 134 | 634 |
| Cyanide | 38 | 21 | 40 |

| MW-9 | 9-9.5' | 35-35.5' |
|---|---|---|
| Arsenic | ND | 0.75 J |
| Barium | 177 | 60.2 |
| Cadmium | 2.17 | 0.19 |
| Chromium | 28.1 J | 6.01 J |
| Copper | 7.84 J | 8.4 J |
| Lead | 17.4 | 4.01 |
| Mercury | 0.425 | ND |
| Nickel | 48.6 | 10.6 |
| Selenium | 0.5 | ND |
| Zinc | 97.6 | 14.5 |
| Cyanide | 0.087 | 0.075 |

| SB-2 | 20-22' |
|---|---|
| Arsenic | 0.98 |
| Barium | 67.7 |
| Cadmium | 1.03 |
| Chromium | 11.3 |
| Copper | 11.7 |
| Iron | 10300 |
| Mercury | 0.105 |
| Nickel | 9.12 |
| Selenium | ND |
| Zinc | 63.2 |
| Cyanide | 6.22 |

| SB-1 | 18-20' | 24-26' | 32-34' |
|---|---|---|---|
| Arsenic | ND | 0.51 | 0.49 |
| Barium | 42.8 | 7.53 | 15.3 |
| Cadmium | 1.46 | 0.19 | 0.34 |
| Chromium | 16.6 | 6.85 | 6.73 |
| Copper | 19.1 | 3.76 | 10.9 |
| Iron | 17500 | 5570 | 7180 |
| Mercury | 0.058 | 0.055 | 0.021 |
| Nickel | 24.6 | 6.32 | 9.63 |
| Selenium | 0.7 | 0.56 | 0.75 |
| Zinc | 38.9 | 13.1 | 17.9 |
| Cyanide | 7.18 | 2.16 | ND |

| SB-12 | 12-14' | 36-38' |
|---|---|---|
| Arsenic | 0.9 J | 0.49 J |
| Barium | 31.9 | 19.1 |
| Cadmium | 0.35 | 0.18 |
| Chromium | 9.3 J | 7.04 J |
| Copper | 11 J | 9.25 J |
| Lead | 45.3 | 3.88 |
| Mercury | ND | ND |
| Nickel | 11.2 | 11.5 |
| Selenium | ND | ND |
| Zinc | 18.6 | 14.9 |
| Cyanide | 0.434 | 0.069 |

| SB-4 | 20-22' | 30-32' |
|---|---|---|
| Arsenic | 0.45 | ND |
| Barium | 20.5 | 19.7 |
| Cadmium | 0.57 | 0.22 |
| Chromium | 8.32 | 4.3 |
| Copper | 10 | 3.41 |
| Iron | 8140 | 3940 |
| Mercury | 0.004 | ND |
| Nickel | 7.9 | 4.27 |
| Selenium | 0.45 | 0.65 |
| Zinc | 18.3 | 10.2 |
| Cyanide | ND | 13 |

| SB-16 | 30-33' | 45-47' |
|---|---|---|
| Arsenic | 5.98 | 1.18 |
| Barium | 83.1 | 74.4 |
| Cadmium | ND | ND |
| Chromium | 12.4 J | 12.9 J |
| Copper | 5.21 | 9.59 |
| Lead | 25.8 | 8.35 |
| Mercury | 0.003 J | 0.005 J |
| Nickel | 10.1 | 19.1 |
| Selenium | 0.49 | 0.63 |
| Zinc | 12.6 J | 25.1 J |
| Cyanide | 0.909 | 0.294 |

| MW-7 | 36-38' | 36-38' DUP | 48-50' |
|---|---|---|---|
| Arsenic | 2.45 | 2.47 | 1.55 |
| Barium | 57.6 | 54 | 36.9 |
| Cadmium | 0.48 | 0.45 | 0.03 |
| Chromium | 13.6 J | 13.7 J | 4.91 J |
| Copper | 16 J | 16.2 J | 8.56 J |
| Lead | 14.4 | 14.6 | 3.07 |
| Mercury | 0.011 J | 0.006 J | 0.003 J |
| Nickel | 23 | 22 | 8.83 |
| Selenium | ND | ND | 0.52 |
| Zinc | 36.1 | 39.3 | 13.7 |
| Cyanide | 0.29 | 0.362 | 0.171 |

| | FLOOR | WALL |
|---|---|---|
| TP-3 | 9.5' | 8.5' |
| Arsenic | 35.2 | 9.95 |
| Barium | 1340 | 680 |
| Cadmium | 57.3 | 15.5 |
| Chromium | 66.7 | 27.1 |
| Copper | 32.7 | 17.7 |
| Iron | 70900 | 26900 |
| Mercury | 0.17 | 0.438 |
| Nickel | 15.1 | 12.1 |
| Selenium | 12.7 | 4.96 |
| Zinc | 8230 | 2150 |
| Cyanide | 26 | 7.33 |

| TP-4 | 3' | 2.5' |
|---|---|---|
| Arsenic | 1.36 | 0.61 |
| Barium | 46.2 | 55.9 |
| Cadmium | 0.62 | 0.69 |
| Chromium | 12.3 | 14.5 |
| Copper | 18.3 | 21.5 |
| Iron | 10100 | 11500 |
| Mercury | 0.208 | 0.439 |
| Nickel | 16.7 | 18.1 |
| Selenium | 1.32 | 1.78 |
| Zinc | 94.4 | 88.1 |
| Cyanide | 25 | 64 |

| SB-13 | 47-49' |
|---|---|
| Arsenic | 1.96 J |
| Barium | 124 |
| Cadmium | 0.71 |
| Chromium | 19.9 J |
| Copper | 18.3 J |
| Lead | 15.2 |
| Mercury | 0.02 |
| Nickel | 21.4 |
| Selenium | 1.06 |
| Zinc | 33.7 |
| Cyanide | 0.093 |

| MW-2 | 13-15' | 23-25' |
|---|---|---|
| Arsenic | ND | 0.33 |
| Barium | 21.5 | 57.1 |
| Cadmium | 1.21 | 1.44 |
| Chromium | 9.69 | 20.2 |
| Copper | 27.4 | 14.1 |
| Iron | 11000 | 20200 |
| Mercury | 0.222 | 0.006 |
| Nickel | 14.1 | 19.7 |
| Selenium | 1.87 | 2.88 |
| Zinc | 47.6 | 46.4 |
| Cyanide | ND | ND |

| SB-14 | 38-40' | 45-47' | 45-47' DUP |
|---|---|---|---|
| Arsenic | 0.97 J | 0.71 J | 0.89 J |
| Barium | 54.1 | 23.7 | 26.6 |
| Cadmium | ND | ND | ND |
| Chromium | 16.3 J | ND | ND |
| Copper | 7.99 | 5.12 | 5.88 |
| Lead | 10.1 | 4.47 | 4.63 |
| Mercury | 0.005 J | ND | 0.003 J |
| Nickel | 18.7 | 8.25 | 8.93 |
| Selenium | 0.76 | ND | ND |
| Zinc | 26.9 J | 13 J | 12.9 J |
| Cyanide | 0.241 | 0.219 | 0.299 |

| SB-17 | 33-35' | 45-47' |
|---|---|---|
| Arsenic | 0.68 J | 0.73 J |
| Barium | 33.3 | 50.8 |
| Cadmium | ND | ND |
| Chromium | ND | 25.5 J |
| Copper | 8.81 | 31.1 |
| Lead | 2.92 | 20.3 |
| Mercury | 0.003 J | 0.014 |
| Nickel | 11.8 | 17.6 |
| Selenium | 0.38 | 0.51 |
| Zinc | 13.1 J | 28.6 J |
| Cyanide | 0.172 | 0.257 |

| | DUP | |
|---|---|---|
| SB-6 | 13-15' | 13-15' | 29-31' |
| Arsenic | ND | ND | ND |
| Barium | 29.2 | 13.7 | 15.5 |
| Cadmium | 0.78 | 0.38 | 0.16 |
| Chromium | 11.2 | 7.65 | 5.51 |
| Copper | 9.28 | 5.75 | 4.96 |
| Iron | 11600 | 6580 | 4450 |
| Mercury | ND | ND | ND |
| Nickel | 13 | 8.34 | 4.92 |
| Selenium | 0.74 | 0.58 | 0.57 |
| Zinc | 25.3 | 16.7 | 9.93 |
| Cyanide | 0.717 | ND | ND |

| SB-10 | 30-32' | 45-47' |
|---|---|---|
| Arsenic | 7.21 | 1.23 |
| Barium | 30.9 | 55.6 |
| Cadmium | 1.75 | 0.29 |
| Chromium | 5.38 J | 8.9 J |
| Copper | 26.5 J | 11.8 J |
| Lead | 215 | 8.81 |
| Mercury | 0.381 | ND |
| Nickel | 12.2 | 14.3 |
| Selenium | 1.95 | ND |
| Zinc | 506 | 22.9 |
| Cyanide | 4.4 | 0.172 |

| | FLOOR | WALL |
|---|---|---|
| TP-5 | 9' | 8' |
| Arsenic | 51.1 | 98.4 |
| Barium | 57.4 | 92.9 |
| Cadmium | 2.26 | 1.52 |
| Chromium | 7.95 | 8.28 |
| Copper | 809 | 50.4 |
| Iron | 25900 | 29700 |
| Mercury | 0.33 | 0.256 |
| Nickel | 21.7 | 27 |
| Selenium | 10.9 | 9.99 |
| Zinc | 107 | 75.9 |
| Cyanide | 11 | 6.09 |

| MW-1 | 11-13' | 23-25' |
|---|---|---|
| Arsenic | ND | ND |
| Barium | 31.1 | 15.4 |
| Cadmium | 0.56 | 0.26 |
| Chromium | 10.8 | 7.14 |
| Copper | 7.25 | 2.86 |
| Iron | 11000 | 5930 |
| Mercury | 0.024 | 0.008 |
| Nickel | 9.53 | 5.23 |
| Selenium | 2.15 | 1.02 |
| Zinc | 26 | 12.6 |
| Cyanide | ND | ND |

| SB-5 | 21-23' | 29-31' |
|---|---|---|
| Arsenic | ND | ND |
| Barium | 38.9 | 23.4 |
| Cadmium | 0.56 | 0.2 |
| Chromium | 9.02 | 7.36 |
| Copper | 6.36 | 7.23 |
| Iron | 8770 | 4520 |
| Mercury | 0.005 | ND |
| Nickel | 11.5 | 6.27 |
| Selenium | 0.63 | 0.58 |
| Zinc | 22.1 | 10.8 |
| Cyanide | 1.05 | ND |

| SB-9 | 5-8' | 28-30' |
|---|---|---|
| Arsenic | 7.78 | 3 |
| Barium | 157 | 96 |
| Cadmium | 1.24 | 0.7 |
| Chromium | 16.7 J | 18.4 J |
| Copper | 44.1 J | 20.5 J |
| Lead | 462 | 18.1 |
| Mercury | 2.33 | ND |
| Nickel | 21.2 | 31.1 |
| Selenium | 0.49 | 0.33 |
| Zinc | 268 | 50.8 |
| Cyanide | 0.211 | 0.244 |

| MW-3 | 9-11' | 31-33' |
|---|---|---|
| Arsenic | ND | ND |
| Barium | 28.1 | 12.8 |
| Cadmium | 0.75 | 0.13 |
| Chromium | 8.04 | 4.11 |
| Copper | 10.6 | 3.46 |
| Iron | 6650 | 3620 |
| Mercury | 0.014 | 0.002 |
| Nickel | 4.79 | 3.82 |
| Selenium | 1.23 | 0.54 |
| Zinc | 15.5 | 9.84 |
| Cyanide | 12 | ND |

| SB-7 | 15-17' | 33-35' |
|---|---|---|
| Arsenic | 0.67 | 0.37 |
| Barium | 23.4 | 19.6 |
| Cadmium | 0.95 | 0.3 |
| Chromium | 11.4 | 7.01 |
| Copper | 8.5 | 6.84 |
| Iron | 11500 | 6610 |
| Mercury | 0.276 | ND |
| Nickel | 12.2 | 7.78 |
| Selenium | 1.84 | 0.56 |
| Zinc | 27.7 | 15.6 |
| Cyanide | 6.3 | ND |

LEGEND:

- MONITORING WELL LOCATION (2012)
- SOIL BORING LOCATION (2012)
- TEST PIT LOCATION (2012)
- SOIL VAPOR LOCATION (2012)
- MONITORING WELL LOCATION (2010)
- SOIL BORING LOCATION (2010)
- TEST PIT LOCATION (2010)
- FORMER MGP STRUCTURES
- FENCELINE
- RAILROAD TRACKS
- PROPERTY LINE
- SITE BOUNDARY
- BUILDING
- NAPL OBSERVED

NOTES:

1. BASE SURVEY DRAWING PROVIDED BY THE CHAZEN COMPANIES, FROM A SURVEY PERFORMED ON THE SITE IN JULY, 2010 AND UPDATED IN DECEMBER 2012.
2. HISTORIC FEATURES IN BASE DRAWING BASED ON SANBORN FIRE INSURANCE MAPS DATED 1888, 1898, 1917, 1951, & 1991. WESTCHESTER COUNTY ATLAS, 1931., YONKERS TAX ASSESSORS MAP, REVISED 1947 AND FIGURE 3 FROM GEI CONSULTANTS, INC.
3. ALL CONCENTRATIONS IN MILLIGRAMS PER KILOGRAMS (MG/KG)
4. SHADED VALUES EXCEED 6 NYCRR PART 375 UNRESTRICTED SOIL CLEANUP OBJECTIVES (USCO).
5. ND – NOT DETECTED
6. COMPOUNDS DETECTED DURING THE SITE CHARACTERIZATION OR REMEDIAL INVESTIGATION ABOVE USCOs, AT ANY LOCATION, ARE SHOWN.

40 20 0 40 80

SCALE: 1"=40'

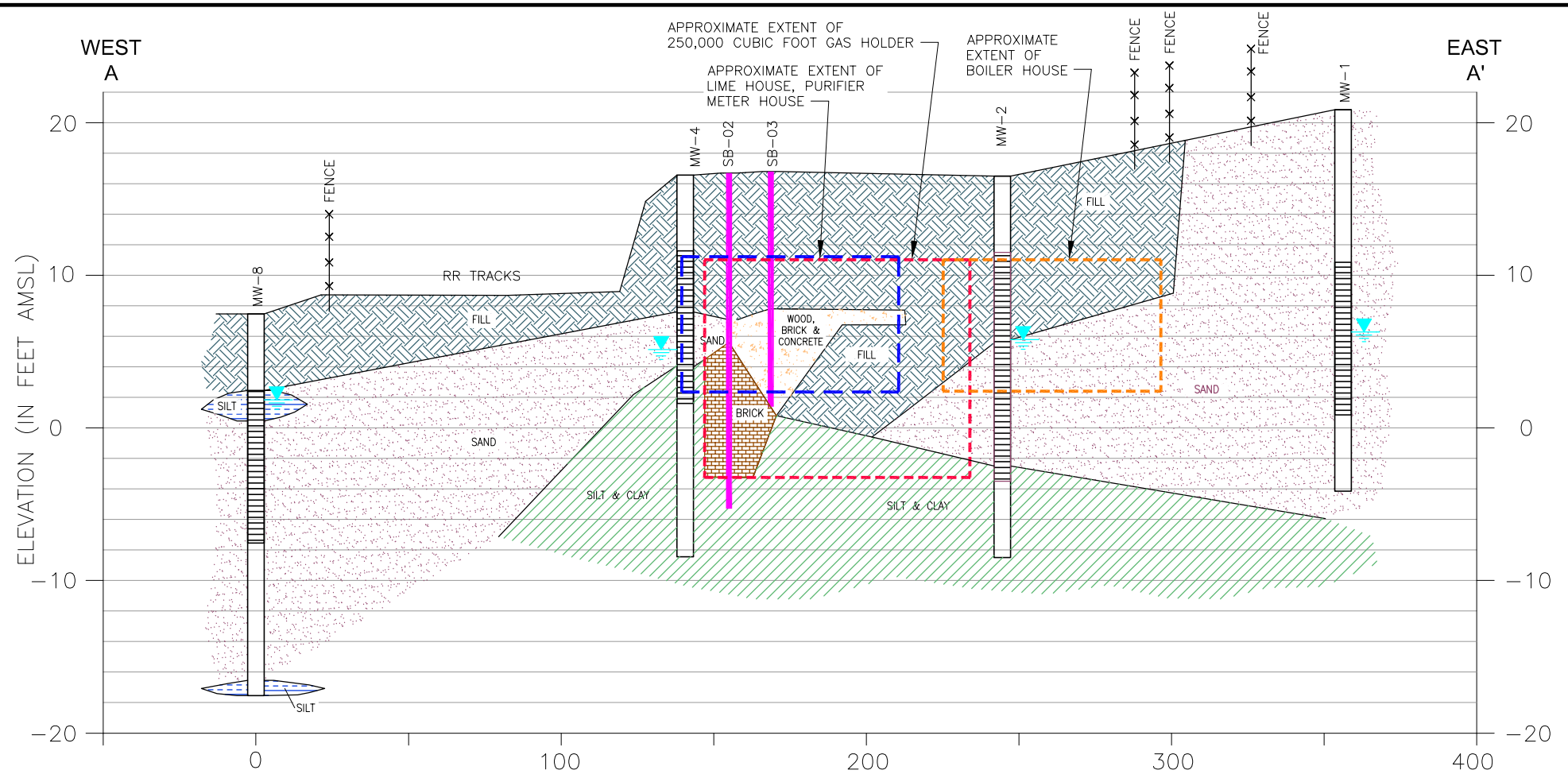
# FIGURE 6

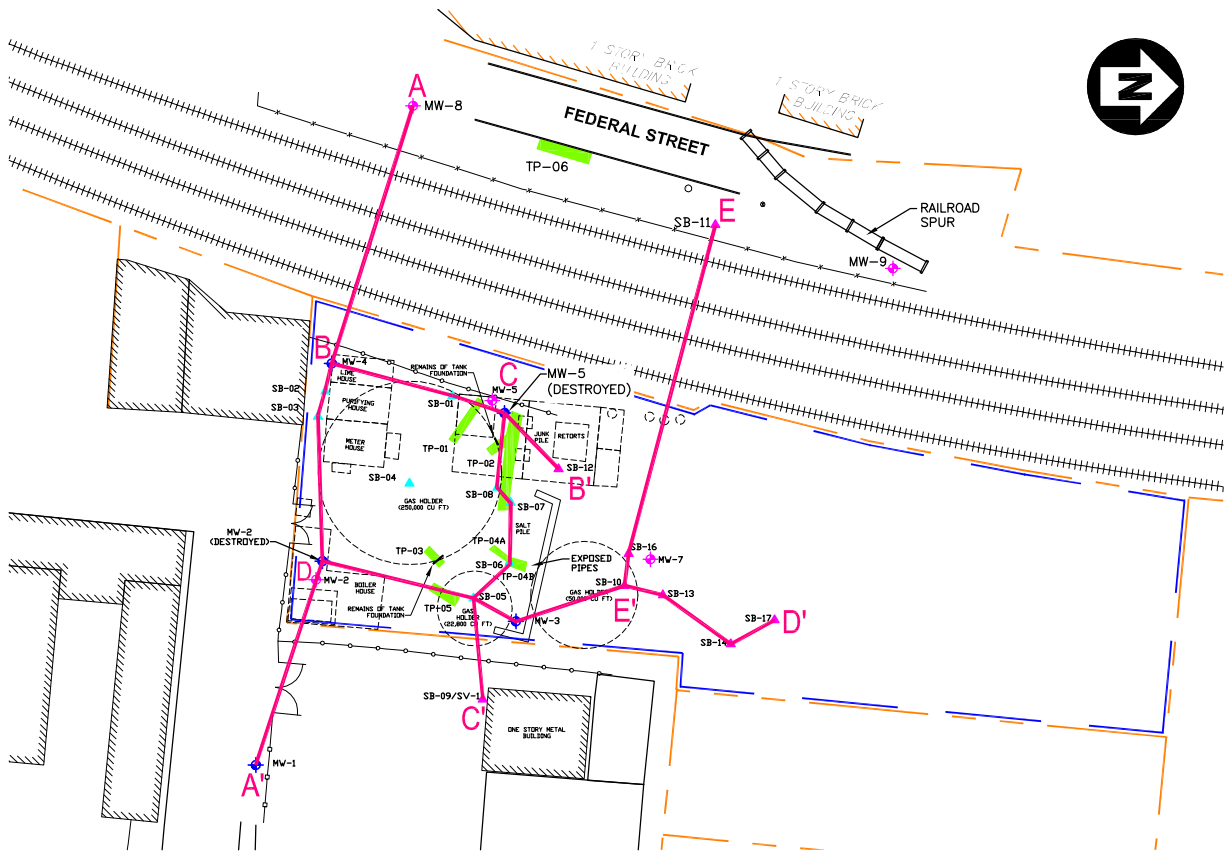
Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

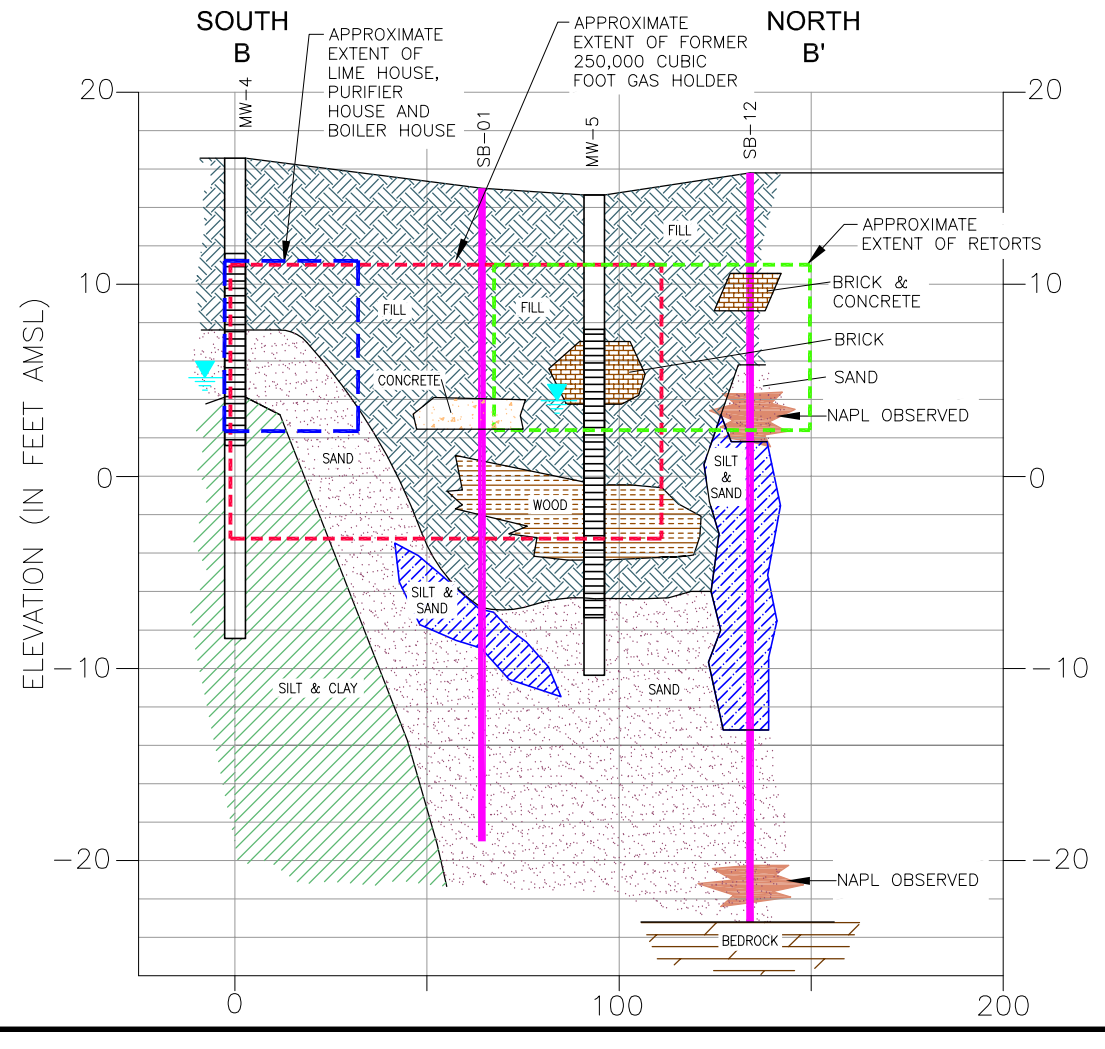
**SUMMARY OF INORGANIC EXCEEDANCES IN SOIL**

PARSONS
200 COTTONTAIL LANE, SOMERSET NJ 08873, PHONE: 732-537-3500

FILE NAME: C:\USERS\48606\DESKTOP\CON ED LUDLOW STREET WORKS\446110-SK007-INORG.DWG
PLOT DATE: 3/19/2014 1:43 PM PLOTTED BY: GOLDTHWAIT, JAMES




LEGEND:

- MONITORING WELL LOCATION (MW)
- SOIL BORING LOCATION (SB)
- TEST PIT LOCATION (TP)
- FORMER MGP STRUCTURES
- FENCELINE
- RAILROAD TRACKS
- PROPERTY LINE
- SITE BOUNDARY
- A — A' CROSS SECTION LOCATIONS
- WELL SCREEN
- SOIL BORING
- GROUNDWATER ELEVATION (OBSERVED 1/3/2013)

NOTES:

AMSL = ABOVE MEAN SEA LEVEL
ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

50 25 0 50 100

SCALE: 1"=50'
HORIZONTAL

100 50 0 100 200

SCALE: 1"=100'

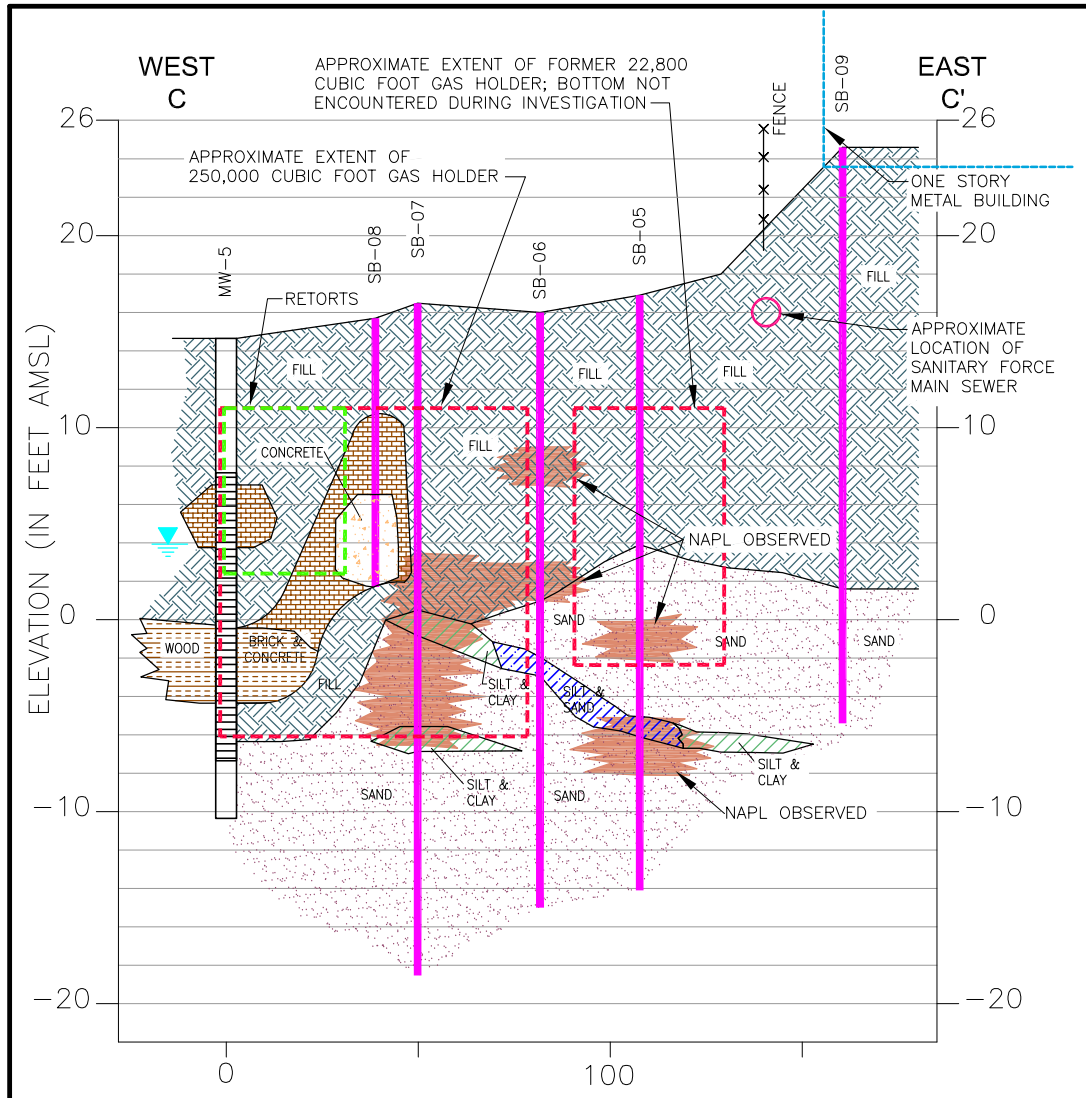
FILE NAME: C:\USERS\48606\DESKTOP\CON ED LUDLOW STREET WORKS\446110-SK010.DWG
PLOT DATE: 3/18/2014 4:26 PM PLOTTED BY: GOLDTHWAIT, JAMES

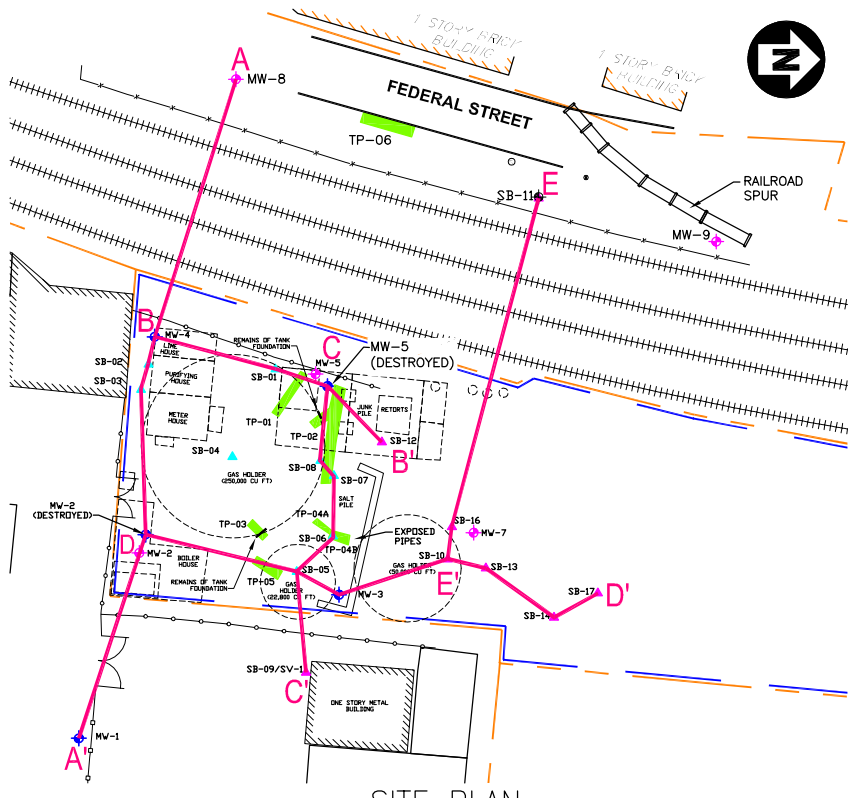
# FIGURE 7A

Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

## CROSS SECTIONS A-A' & B-B'

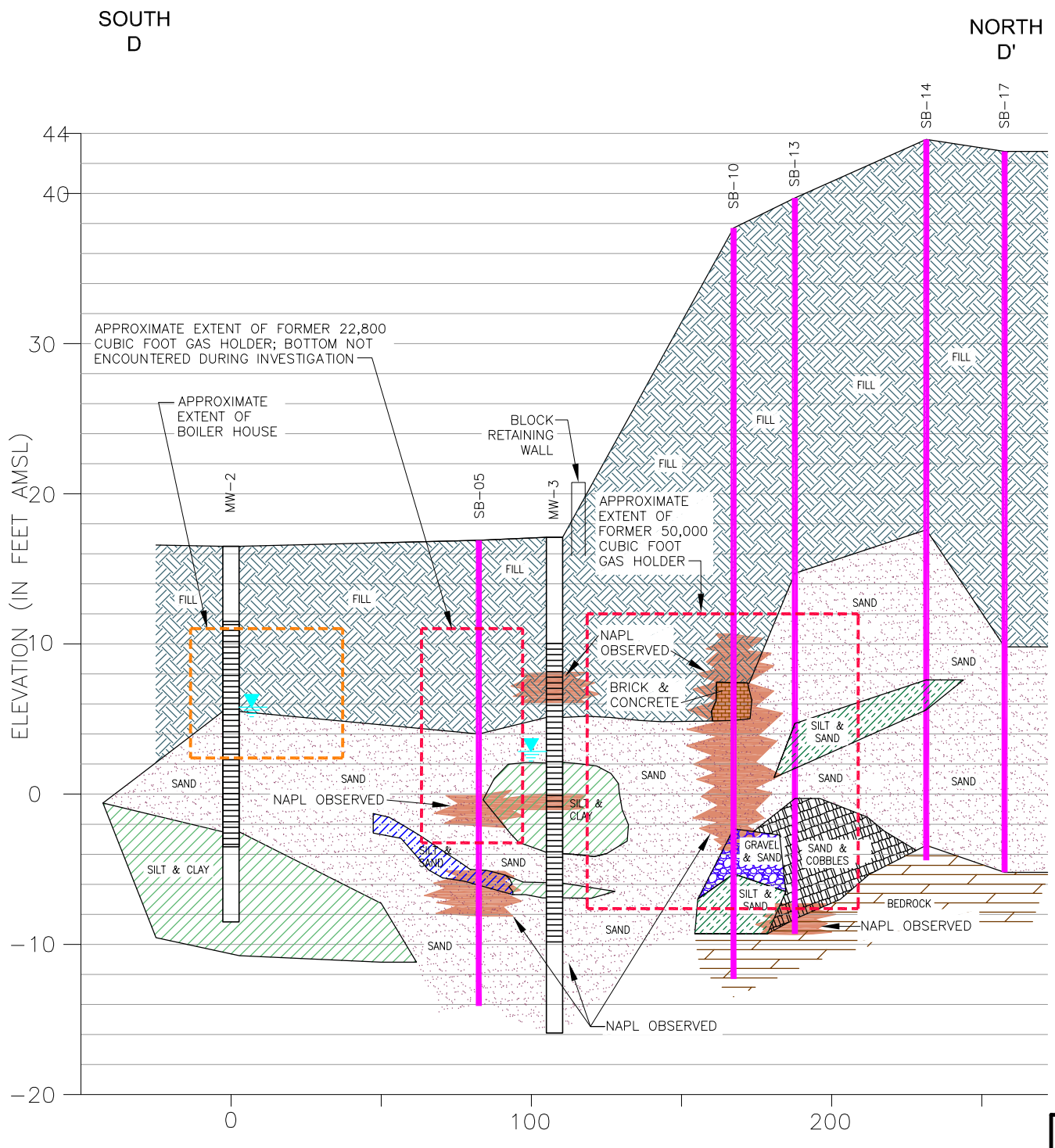
PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560




SITE PLAN

SCALE: 1"=100'




LEGEND:

- MONITORING WELL LOCATION (MW)
- SOIL BORING LOCATION (SB)
- TEST PIT LOCATION (TP)
- FORMER MGP STRUCTURES
- FENCELINE
- RAILROAD TRACKS
- PROPERTY LINE
- SITE BOUNDARY
- C — C' CROSS SECTION LOCATIONS
- WELL SCREEN
- SOIL BORING
- GROUNDWATER ELEVATION (OBSERVED ON 1/3/2013)

50 25 0 50 100

SCALE: 1"=50'
HORIZONTAL

100 50 0 100 200

SCALE: 1"=100'

NOTES:

AMSL = ABOVE MEAN SEA LEVEL
ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

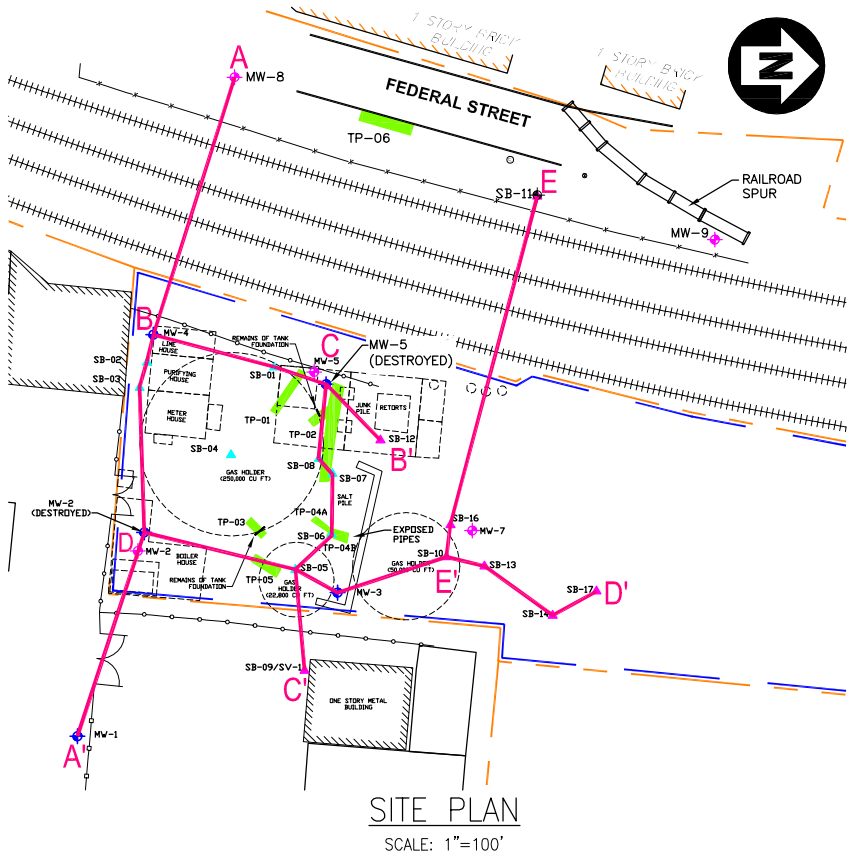
# FIGURE 7B

Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

## CROSS SECTIONS C–C' & D–D'

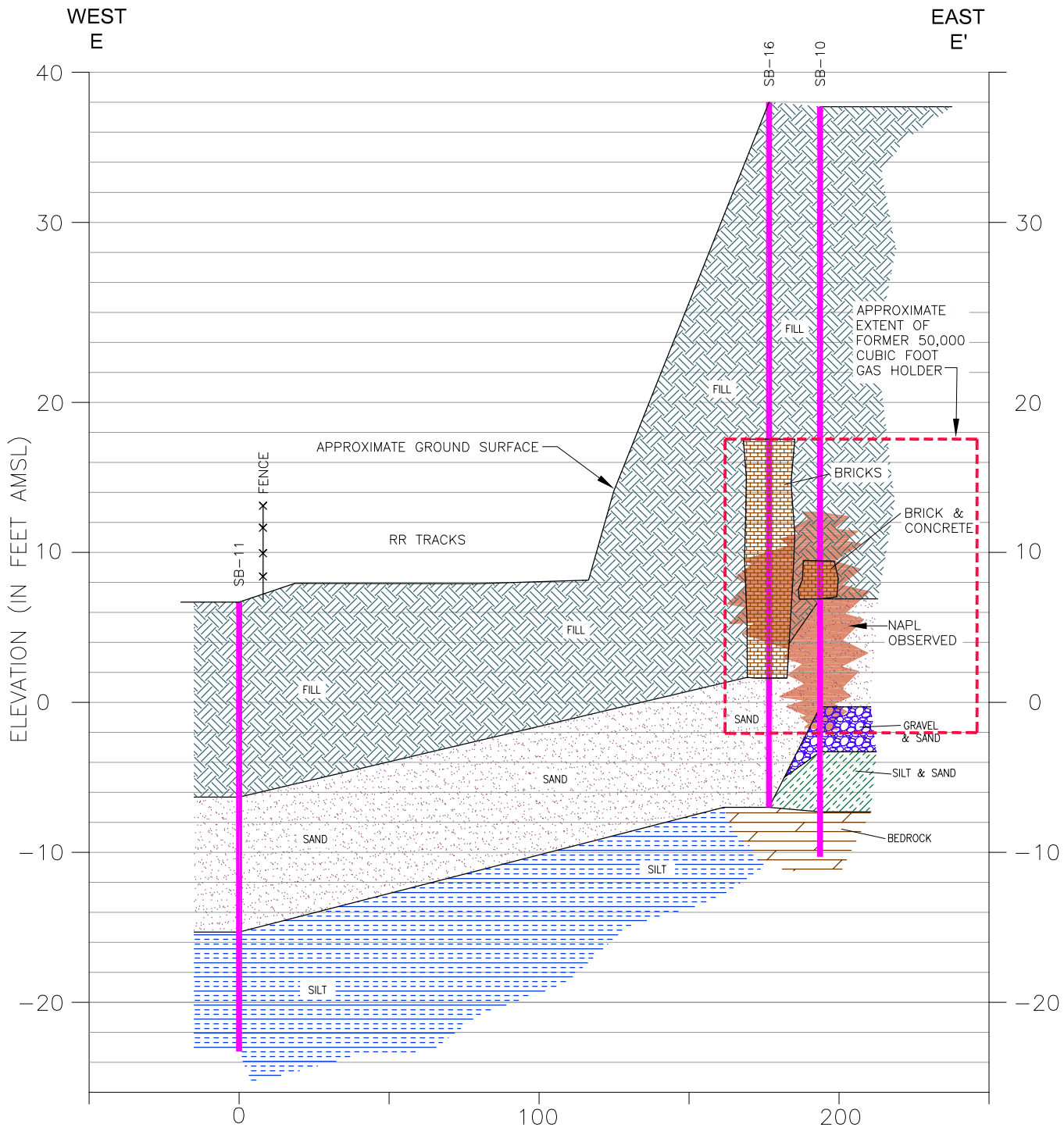
PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560

FILE NAME: C:\USERS\48606\DESKTOP\CON ED LUDLOW STREET WORKS\446110-SK010.DWG
PLOT DATE: 3/18/2014 4:17 PM PLOTTED BY: GOLDTHWAIT, JAMES




SITE PLAN

SCALE: 1"=100'




LEGEND:

- MONITORING WELL LOCATION (MW)
- SOIL BORING LOCATION (SB)
- TEST PIT LOCATION (TP)
- FORMER MGP STRUCTURES
- FENCELINE
- RAILROAD TRACKS
- PROPERTY LINE
- SITE BOUNDARY
- E — E' CROSS SECTION LOCATIONS
- WELL SCREEN
- SOIL BORING
- GROUNDWATER ELEVATION (OBSERVED ON 1/3/2013)

NOTES:

AMSL = ABOVE MEAN SEA LEVEL
ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

50 25 0 50 100

SCALE: 1"=50'
HORIZONTAL

100 50 0 100 200

SCALE: 1"=100'

# FIGURE 7C

Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

## CROSS SECTION E–E'

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

FILE NAME: C:\USERS\48606\DESKTOP\CON ED LUDLOW STREET WORKS\446110–SK010.DWG
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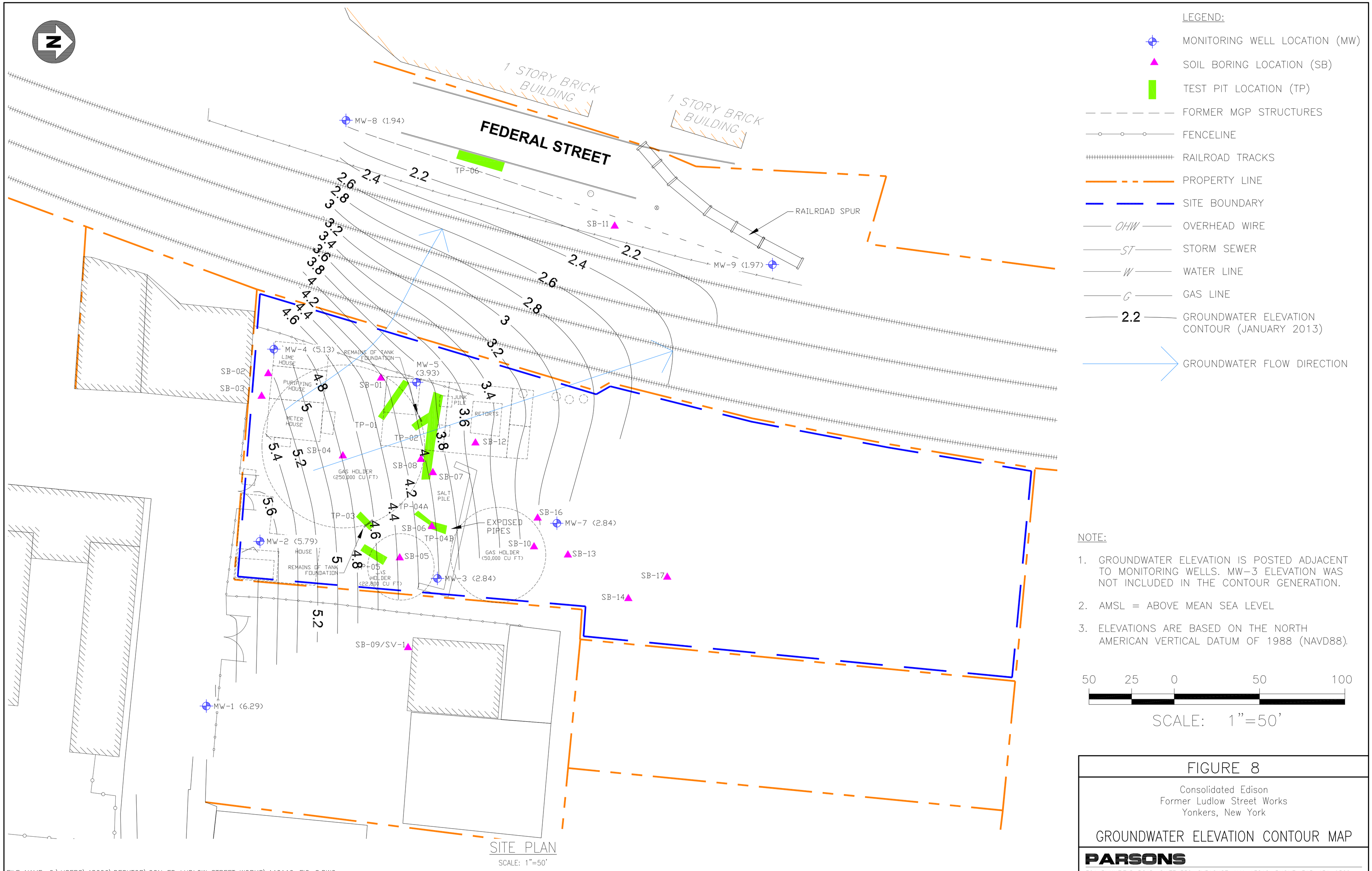



SITE PLAN
SCALE: 1"=50'

LEGEND:

- MONITORING WELL LOCATION (MW)
- SOIL BORING LOCATION (SB)
- TEST PIT LOCATION (TP)
- FORMER MGP STRUCTURES
- FENCELINE
- RAILROAD TRACKS
- PROPERTY LINE
- SITE BOUNDARY
- OHW — OVERHEAD WIRE
- ST — STORM SEWER
- W — WATER LINE
- G — GAS LINE
- 2.2 — GROUNDWATER ELEVATION CONTOUR (JANUARY 2013)
- GROUNDWATER FLOW DIRECTION

NOTE:

1. GROUNDWATER ELEVATION IS POSTED ADJACENT TO MONITORING WELLS. MW-3 ELEVATION WAS NOT INCLUDED IN THE CONTOUR GENERATION.
2. AMSL = ABOVE MEAN SEA LEVEL
3. ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

50 25 0 50 100

SCALE: 1"=50'

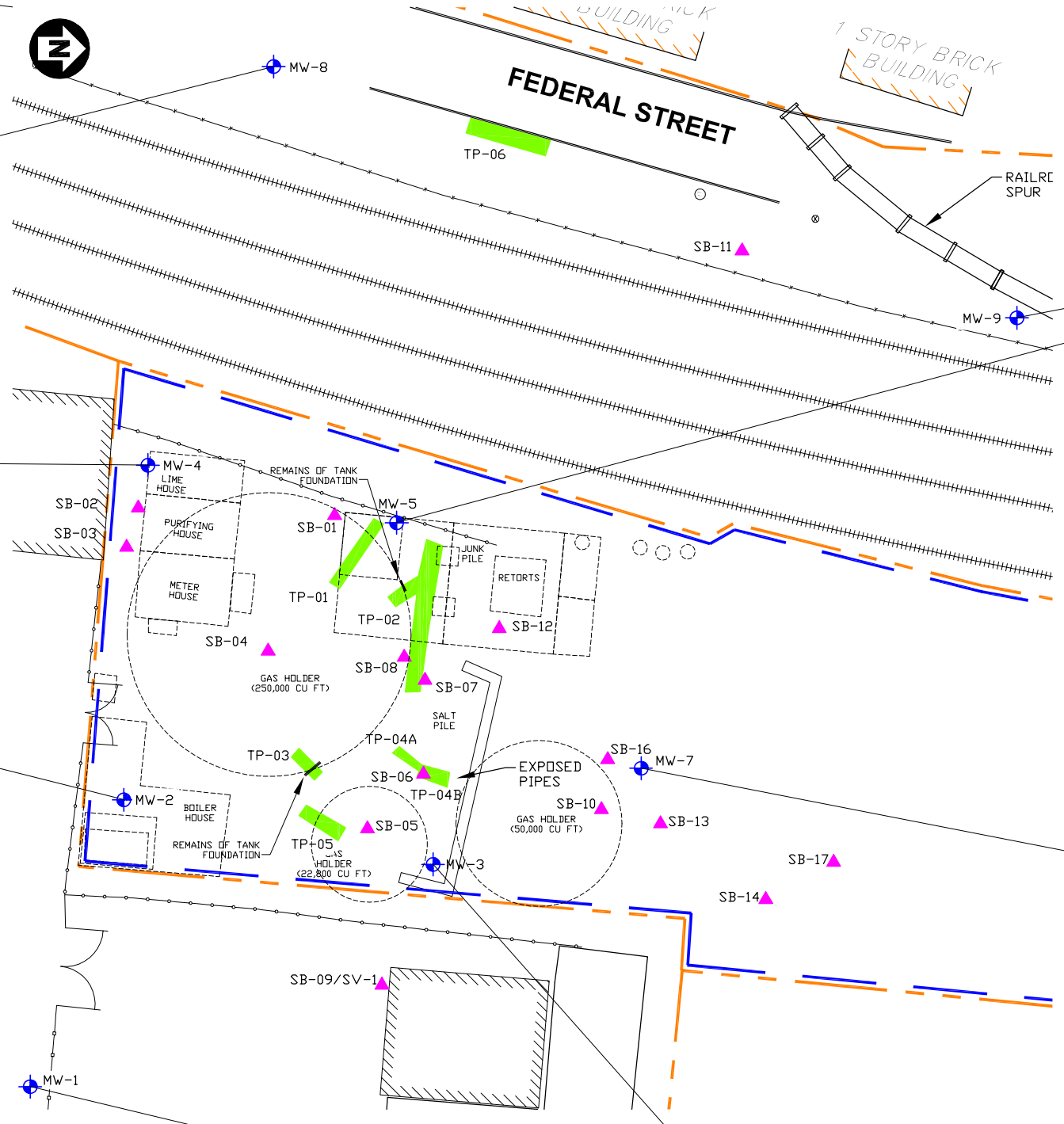
# FIGURE 8

Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

## GROUNDWATER ELEVATION CONTOUR MAP

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

FILE NAME: C:\USERS\48606\DESKTOP\CON ED LUDLOW STREET WORKS\446110-FIG-8.DWG
PLOT DATE: 2/21/2014 5:01 PM PLOTTED BY: GOLDTHWAIT, JAMES




| | MW-8 11/26/12 | MW-8 (d) 11/26/12 |
|---|---|---|
| Acetone | ND | ND |
| Bromomethane | ND | ND |
| Isopropylebenzene | ND | ND |
| Styrene | ND | ND |
| Benzene | ND | ND |
| Ethylbenzene | ND | ND |
| Toluene | ND | ND |
| M,P-Xylene | ND | ND |
| O-Xylene | ND | ND |
| Chloromethane | ND | ND |

| | MW-9 11/26/12 | MW-9 04/05/13 |
|---|---|---|
| Acetone | ND | ND |
| Bromomethane | ND | ND |
| Isopropylebenzene | ND | ND |
| Styrene | ND | ND |
| Benzene | ND | ND |
| Ethylbenzene | ND | ND |
| Toluene | ND | ND |
| M,P-Xylene | ND | ND |
| O-Xylene | ND | ND |
| Chloromethane | ND | ND |

| | MW-5 07/13/10 | MW-5 (d) 07/13/10 | MW-5 04/05/13 |
|---|---|---|---|
| Acetone | 88 J | 140 J | 320 |
| Bromomethane | ND | 9.8 J | ND |
| Isopropylebenzene | ND | ND | 1.8 |
| Styrene | ND | ND | 0.49 |
| Benzene | 7.8 | 9.6 | 35.8 |
| Ethylbenzene | 6 | 7.1 | 12.1 |
| Toluene | 5.2 | 5.9 | 36.9 |
| M,P-Xylene | 3.2 J | 3.5 | 7.7 |
| O-Xylene | 2.4 J | 2.8 | 8.1 |
| Chloromethane | 69 | 64 | ND |

| | MW-4 07/13/10 | MW-4 11/27/12 | MW-4 04/08/13 |
|---|---|---|---|
| Acetone | ND | ND | 81.1 J |
| Bromomethane | ND | ND | ND |
| Isopropylebenzene | ND | ND | ND |
| Styrene | ND | ND | ND |
| Benzene | 1.3 J | ND | ND |
| Ethylbenzene | ND | ND | ND |
| Toluene | ND | ND | ND |
| M,P-Xylene | ND | ND | ND |
| O-Xylene | ND | ND | ND |
| Chloromethane | ND | ND | ND |

| | MW-2 07/12/10 | MW-2 04/08/13 |
|---|---|---|
| Acetone | 13 J | 8.7 J |
| Bromomethane | ND | ND |
| Isopropylebenzene | ND | ND |
| Styrene | ND | ND |
| Benzene | 1.7 J | ND |
| Ethylbenzene | 1.4 J | ND |
| Toluene | ND | ND |
| M,P-Xylene | ND | ND |
| O-Xylene | 3.7 J | ND |
| Chloromethane | ND | ND |

| | MW-7 11/27/12 | MW-7 04/04/13 |
|---|---|---|
| Acetone | ND | ND |
| Bromomethane | ND | ND |
| Isopropylebenzene | 24 | 9.8 |
| Styrene | 18 | ND |
| Benzene | 690 | 1200 |
| Ethylbenzene | 270 | 90 |
| Toluene | 270 | 62.8 |
| M,P-Xylene | 420 | 180 |
| O-Xylene | 190 | 130 |
| Chloromethane | ND | ND |

| | MW-1 07/12/10 | MW-1 11/26/12 | MW-1 04/05/13 |
|---|---|---|---|
| Acetone | ND | ND | 7.8 J |
| Bromomethane | ND | ND | ND |
| Isopropylebenzene | ND | ND | ND |
| Styrene | ND | ND | ND |
| Benzene | ND | ND | ND |
| Ethylbenzene | ND | ND | ND |
| Toluene | ND | ND | ND |
| M,P-Xylene | ND | ND | ND |
| O-Xylene | ND | ND | ND |
| Chloromethane | ND | ND | ND |

| | MW-3 07/13/13 | MW-3 11/27/12 | MW-3 04/08/13 | MW-3 (d) 04/08/13 |
|---|---|---|---|---|
| Acetone | ND | ND | ND | ND |
| Bromomethane | ND | ND | ND | ND |
| Isopropylebenzene | ND | 7 | 3.9 J | 4.6 J |
| Styrene | 7 | 59 | 41.5 | 42.6 |
| Benzene | 95 | 350 | 360 | 460 |
| Ethylbenzene | 64 | 250 | 160 | 180 |
| Toluene | 120 | 280 | 260 | 310 |
| M,P-Xylene | 160 | 410 | 300 | 370 |
| O-Xylene | 77 | 190 | 160 | 180 |
| Chloromethane | ND | ND | ND | ND |

LEGEND:

- MONITORING WELL LOCATION (MW)
- SOIL BORING LOCATION (SB)
- TEST PIT LOCATION (TP)
- FORMER MGP STRUCTURES
- FENCELINE
- RAILROAD TRACKS
- PROPERTY LINE
- SITE BOUNDARY

NOTES:

1. COMPOUNDS DETECTED DURING THE SITE CHARACTERIZATION OR REMEDIAL INVESTIGATION ABOVE NYSDEC CLASS GA GROUNDWATER STANDARDS/GUIDANCE VALUES ARE SHOWN.
2. ALL CONCENTRATIONS LISTED IN MICROGRAMS PER LITER (UG/L).

SHADED = INDICATES COMPOUND EXCEEDS CLASS GA GROUNDWATER OR STANDARD OR GUIDANCE VALUE (REFER TO TABLE 4)

ND = INDICATES COMPOUND WAS NOT DETECTED

J = INDICATES AN ESTIMATED CONCENTRATION

(d) = DUPLICATE SAMPLE

50 25 0 50 100

SCALE: 1"=50'

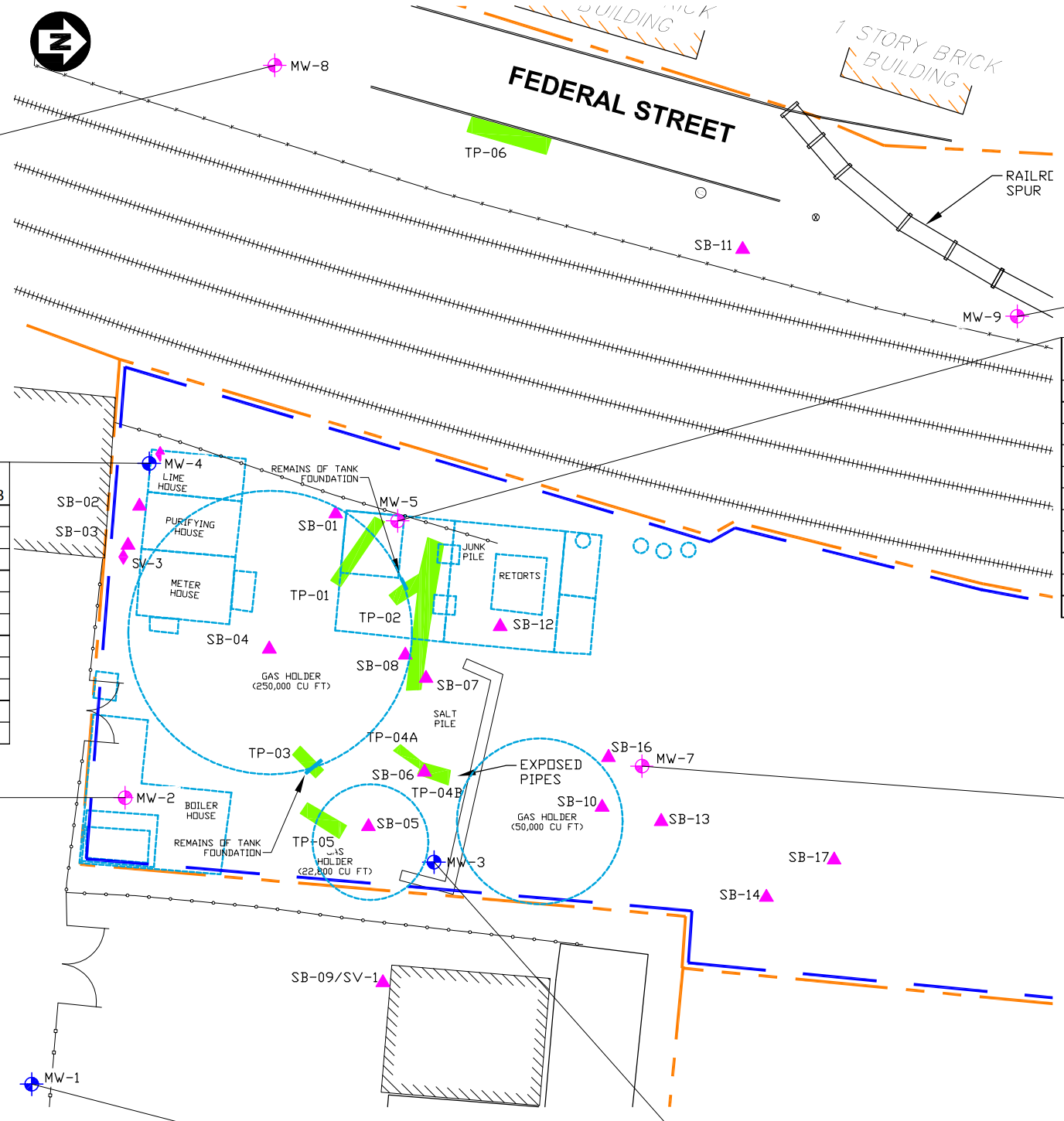
# FIGURE 9

Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

## SUMMARY OF VOC EXCEEDANCES IN GROUNDWATER

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

FILE NAME: C:\USERS\48606\DESKTOP\CON ED LUDLOW STREET WORKS\446110-FIG-10.DWG
PLOT DATE: 2/24/2014 7:41 PM PLOTTED BY: GOLDTHWAIT, JAMES




| | MW-8 11/26/12 | MW-8 (d) 11/26/12 |
|---|---|---|
| Biphenyl (Diphenyl) | ND | ND |
| Bis(2-Ethylehexyl)Phthalate | ND | ND |
| Phenol | ND | ND |
| Acenaphthene | ND | ND |
| Benze(a)anthracene | ND | ND |
| Benzo(a)pyrene | ND | ND |
| Benzo(b)fluoranthene | ND | ND |
| Chrysene | ND | ND |
| Fluorene | ND | ND |
| Naphthalene | ND | ND |
| Phenanthrene | ND | ND |

| | MW-9 11/26/12 | MW-9 04/05/13 |
|---|---|---|
| Biphenyl (Diphenyl) | ND | ND |
| Bis(2-Ethylehexyl)Phthalate | ND | ND |
| Phenol | ND | ND |
| Acenaphthene | ND | ND |
| Benze(a)anthracene | ND | ND |
| Benzo(a)pyrene | ND | ND |
| Benzo(b)fluoranthene | ND | ND |
| Chrysene | ND | ND |
| Fluorene | ND | ND |
| Naphthalene | ND | ND |
| Phenanthrene | ND | ND |

| | MW-5 07/13/10 | MW-5 (d) 07/13/10 | MW-5 04/05/13 |
|---|---|---|---|
| Biphenyl (Diphenyl) | 2.8 J | 3.6 J | 19.6 |
| Bis(2-Ethylehexyl)Phthalate | ND | ND | ND |
| Phenol | 1.4 J | ND | ND |
| Acenaphthene | 11 | 14 | 42.6 |
| Benze(a)anthracene | ND | ND | ND |
| Benzo(a)pyrene | ND | ND | ND |
| Benzo(b)fluoranthene | ND | ND | ND |
| Chrysene | ND | ND | ND |
| Fluorene | 5.8 J | 7.6 J | 18 |
| Naphthalene | 53 | 66 | 240 J |
| Phenanthrene | 14 | 19 | 21.2 |

| | MW-4 07/13/10 | MW-4 11/27/12 | MW-4 04/08/13 |
|---|---|---|---|
| Biphenyl (Diphenyl) | ND | ND | ND |
| Bis(2-Ethylehexyl)Phthalate | ND | 15.4 J | ND |
| Phenol | ND | ND | ND |
| Acenaphthene | ND | ND | ND |
| Benze(a)anthracene | ND | ND | ND |
| Benzo(a)pyrene | ND | ND | ND |
| Benzo(b)fluoranthene | ND | ND | ND |
| Chrysene | ND | ND | ND |
| Fluorene | ND | ND | ND |
| Naphthalene | ND | ND | ND |
| Phenanthrene | ND | ND | ND |

| | MW-7 11/27/12 | MW-7 04/04/13 |
|---|---|---|
| Biphenyl (Diphenyl) | 7.3 J | 25.7 |
| Bis(2-Ethylehexyl)Phthalate | ND | ND |
| Phenol | ND | ND |
| Acenaphthene | 12.1 | 47.1 |
| Benze(a)anthracene | ND | 14.8 |
| Benzo(a)pyrene | ND | 9.7 J |
| Benzo(b)fluoranthene | ND | 8.2 J |
| Chrysene | ND | 14.6 |
| Fluorene | 9.9 J | 46.3 |
| Naphthalene | 1300 | 1600 |
| Phenanthrene | 14.2 | 110 |

| | MW-2 7/12/2010 | MW-2 04/08/13 |
|---|---|---|
| Biphenyl (Diphenyl) | 1.9 J | ND |
| Bis(2-Ethylehexyl)Phthalate | ND | ND |
| Phenol | ND | ND |
| Acenaphthene | ND | ND |
| Benze(a)anthracene | ND | ND |
| Benzo(a)pyrene | ND | ND |
| Benzo(b)fluoranthene | ND | ND |
| Chrysene | ND | ND |
| Fluorene | ND | ND |
| Naphthalene | 4.7 J | ND |
| Phenanthrene | ND | ND |

| | MW-1 7/12/2010 | MW-1 11/26/12 | MW-1 04/05/13 |
|---|---|---|---|
| Biphenyl (Diphenyl) | ND | ND | ND |
| Bis(2-Ethylehexyl)Phthalate | ND | ND | ND |
| Phenol | ND | ND | ND |
| Acenaphthene | ND | ND | ND |
| Benze(a)anthracene | ND | ND | ND |
| Benzo(a)pyrene | ND | ND | ND |
| Benzo(b)fluoranthene | ND | ND | ND |
| Chrysene | ND | ND | ND |
| Fluorene | ND | ND | ND |
| Naphthalene | ND | ND | ND |
| Phenanthrene | ND | ND | ND |

| | MW-3 7/13/2010 | MW-3 11/27/12 | MW-3 04/08/13 | MW-3 (d) 04/08/13 |
|---|---|---|---|---|
| Biphenyl (Diphenyl) | 25 | 25.1 J | 25.2 | 36.2 |
| Bis(2-Ethylehexyl)Phthalate | ND | ND | ND | ND |
| Phenol | 3.2 J | ND | ND | ND |
| Acenaphthene | 31 | 17.1 J | 22.5 | 32.2 |
| Benze(a)anthracene | ND | ND | 12.1 | 12.2 |
| Benzo(a)pyrene | ND | ND | 8.5 J | 8.5 J |
| Benzo(b)fluoranthene | ND | ND | 6.4 J | 6.5 J |
| Chrysene | ND | ND | 12.3 | 12.2 |
| Fluorene | 43 | 34.7 J | 47.3 | 65.1 |
| Naphthalene | 1300 | 2500 | 2300 | 3900 |
| Phenanthrene | 48 | 46.2 J | 72.9 | 110 |

LEGEND:

- MONITORING WELL LOCATION (MW)
- SOIL BORING LOCATION (SB)
- TEST PIT LOCATION (TP)
- FORMER MGP STRUCTURES
- FENCELINE
- RAILROAD TRACKS
- PROPERTY LINE
- SITE BOUNDARY

NOTES:

1. COMPOUNDS DETECTED DURING THE SITE CHARACTERIZATION OR REMEDIAL INVESTIGATION ABOVE NYSDEC CLASS GA GROUNDWATER STANDARDS/GUIDANCE VALUES ARE SHOWN.
2. ALL CONCENTRATIONS LISTED IN MICROGRAMS PER LITER (UG/L).

SHADED = INDICATES COMPOUND EXCEEDS CLASS GA GROUNDWATER OR STANDARD OR GUIDANCE VALUE (REFER TO TABLE 4)

ND = INDICATES COMPOUND WAS NOT DETECTED

J = INDICATES AN ESTIMATED CONCENTRATION

(d) = DUPLICATE SAMPLE

50 25 0 50 100

SCALE: 1"=50'

# FIGURE 10

Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

## SUMMARY OF SVOC EXCEEDANCES IN GROUNDWATER

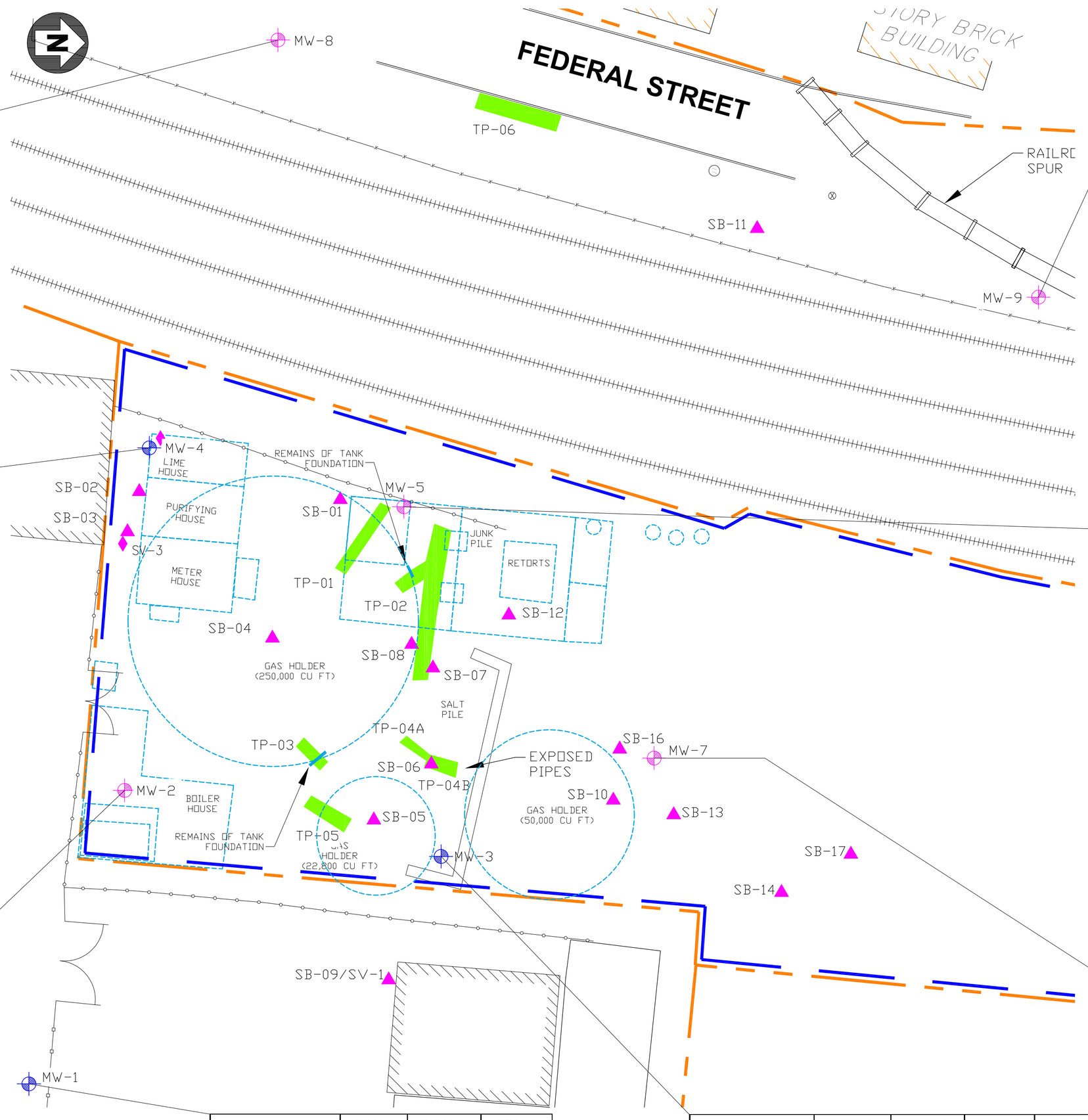
PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560

FILE NAME: C:\USERS\48606\DESKTOP\CON ED LUDLOW STREET WORKS\446110-FIG-10.DWG
PLOT DATE: 2/24/2014 7:38 PM PLOTTED BY: GOLDTHWAIT, JAMES

| | MW-8 11/26/12 | MW-8 (d) 11/26/12 |
|---|---|---|
| Antimony | 5.06 J | ND |
| Arsenic | 4.85 J | 15.3 J |
| Barium | 104 J | 169 J |
| Beryllium | ND | 0.38 J |
| Cadmium | 0.3 J | 0.87 J |
| Chromium, Total | ND | ND |
| Copper | 20.7 J | 59 J |
| Iron | 3790 J | 18700 J |
| Lead | 24.5 J | 85.2 J |
| Magnesium | 25200 J | 31000 J |
| Manganese | 1520 J | 2030 J |
| Mercury | ND | ND |
| Nickel | ND | ND |
| Selenium | ND | ND |
| Sodium | 628000 J | 677000 J |
| Thallium | ND | ND |
| Zinc | ND | 90.7 J |
| Cyanide | ND | ND |

| | MW-4 07/13/10 | MW-4 11/27/12 | MW-4 04/08/13 |
|---|---|---|---|
| Antimony | ND | ND | ND |
| Arsenic | 30.1 | 206 | 40 |
| Barium | 221 | 2170 J | 523 |
| Beryllium | 0.98 J | 7.1 J | 1.23 J |
| Cadmium | 8.57 | 25 | 1.3 J |
| Chromium, Total | 19.3 | 352 J | 113 J |
| Copper | 61.5 | 822 J | 205 J |
| Iron | 20400 | 520000 J | 55300 |
| Lead | 559 | 10700 | 1200 J |
| Magnesium | 6360 | 53000 J | 24500 J |
| Manganese | 927 | 6820 J | 1210 J |
| Mercury | 43.1 | 16.85 | 20.182 |
| Nickel | 36.8 | 689 | 112 J |
| Selenium | 5.7 J | 26 | 16.1 |
| Sodium | 1500000 | 167000 J | 712000 J |
| Thallium | ND | 5.2 J | 4.02 J |
| Zinc | 327 | 5910 J | 715 J |
| Cyanide | 299 | 224 | 126 |

| | MW-2 7/12/10 | MW-2 04/08/13 |
|---|---|---|
| Antimony | ND | 9.48 J |
| Arsenic | 16.2 | ND |
| Barium | 630 | 1990 |
| Beryllium | ND | ND |
| Cadmium | 1.63 J | 1.22 J |
| Chromium, Total | 4.96 J | ND |
| Copper | 12.3 | 27.4 J |
| Iron | 11700 | 6860 |
| Lead | 97 | 10.1 J |
| Magnesium | 10300 | 33200 J |
| Manganese | 2010 | 2160 J |
| Mercury | 9.7 | ND |
| Nickel | 8.77 J | ND |
| Selenium | ND | ND |
| Sodium | 1.1E+07 | 39700000 J |
| Thallium | ND | ND |
| Zinc | ND | 35.4 J |
| Cyanide | 126 | 224 |




| | MW-9 11/26/12 | MW-9 04/05/13 |
|---|---|---|
| Antimony | ND | ND |
| Arsenic | 13.7 | 9.05 J |
| Barium | 478 J | 380 |
| Beryllium | ND | ND |
| Cadmium | 0.27 J | R |
| Chromium, Total | ND | ND |
| Copper | 1.11 J | ND |
| Iron | 17400 J | 11300 |
| Lead | ND | ND |
| Magnesium | 88100 J | 77600 J |
| Manganese | 4210 J | 3240 J |
| Mercury | ND | ND |
| Nickel | ND | ND |
| Selenium | 2.82 J | ND |
| Sodium | ND | 1210000 J |
| Thallium | ND | 3.46 J |
| Zinc | ND | ND |
| Cyanide | ND | 3 |

| | MW-5 07/13/10 | MW-5 (d) 07/13/10 | MW-5 04/05/13 |
|---|---|---|---|
| Antimony | ND | ND | 12.1 J |
| Arsenic | ND | ND | 4.4 J |
| Barium | 157 | 149 | 916 |
| Beryllium | ND | ND | ND |
| Cadmium | ND | ND | 2.2 J |
| Chromium, Total | ND | ND | ND |
| Copper | ND | ND | 5.86 J |
| Iron | 2390 | 2230 | 4550 |
| Lead | 9.5 | 12.2 | 232 J |
| Magnesium | 36900 | 35800 | 59800 J |
| Manganese | 4100 | 3890 | 1580 J |
| Mercury | ND | ND | ND |
| Nickel | 5.53 J | 6.42 J | ND |
| Selenium | ND | ND | ND |
| Sodium | 5250000 | 5170000 | 32700000 J |
| Thallium | ND | ND | ND |
| Zinc | ND | ND | 46.8 J |
| Cyanide | 24 | 27 | 174 |

| | MW-1 7/12/10 | MW-1 11/26/12 | MW-1 04/05/13 |
|---|---|---|---|
| Antimony | ND | 4.98 J | ND |
| Arsenic | 5.98 J | 6.1 | 7.8 J |
| Barium | 139 | 159 J | 129 |
| Beryllium | ND | ND | ND |
| Cadmium | ND | ND | R |
| Chromium, Total | ND | ND | 37.6 J |
| Copper | ND | 6.08 J | 7.59 J |
| Iron | 2040 | 5890 J | 8770 |
| Lead | 10.4 | 1.34 J | 6.36 J |
| Magnesium | 16400 | 22100 J | 13400 J |
| Manganese | 2960 | 4090 J | 2200 J |
| Mercury | ND | 0.092 J | ND |
| Nickel | ND | ND | 20.9 J |
| Selenium | ND | ND | ND |
| Sodium | 240000 | 361000 J | 272000 J |
| Thallium | ND | ND | ND |
| Zinc | ND | ND | 18.4 J |
| Cyanide | 13 | ND | ND |

| | MW-3 7/13/2010 | MW-3 11/27/12 | MW-3 04/08/13 | MW-3 (d) 04/08/13 |
|---|---|---|---|---|
| Antimony | ND | 5.31 J | ND | ND |
| Arsenic | ND | 2.45 J | ND | 4.25 J |
| Barium | 228 | 106 J | 134 | 128 |
| Beryllium | ND | ND | ND | ND |
| Cadmium | ND | 0.32 J | 0.52 J | 0.5 R |
| Chromium, Total | ND | ND | ND | ND |
| Copper | ND | 7.44 J | 7.59 J | 6.54 J |
| Iron | 453 | 1160 J | 1600 | 1590 |
| Lead | 13.4 | 6.72 | 40.3 J | 37.6 J |
| Magnesium | 29900 | 21500 J | 22600 J | 21000 J |
| Manganese | 3150 | 1100 J | 1500 J | 1400 J |
| Mercury | ND | ND | ND | ND |
| Nickel | 13.3 J | ND | 5.62 J | 5.4 J |
| Selenium | ND | ND | ND | ND |
| Sodium | 2450000 | 3480000 J | 4620000 J | 5420000 J |
| Thallium | ND | ND | ND | ND |
| Zinc | ND | ND | 20.8 J | 21.1 J |
| Cyanide | 127 | 123 | 36 J | 166 J |

| | MW-7 11/27/12 | MW-7 04/04/13 |
|---|---|---|
| Antimony | 6.86 J | ND |
| Arsenic | ND | ND |
| Barium | 109 J | 192 |
| Beryllium | ND | ND |
| Cadmium | ND | |
| Chromium, Total | ND | 7.73 J |
| Copper | 1.44 J | 2.06 J |
| Iron | ND | 1300 |
| Lead | 1.72 J | ND |
| Magnesium | 37800 J | 42200 J |
| Manganese | 1030 J | 688 J |
| Mercury | ND | ND |
| Nickel | ND | 9 J |
| Selenium | ND | ND |
| Sodium | 535000 J | 2230000 J |
| Thallium | ND | ND |
| Zinc | ND | 10.3 J |
| Cyanide | 27 | 145 |

LEGEND:

- MONITORING WELL LOCATION (MW)
- SOIL BORING LOCATION (SB)
- TEST PIT LOCATION (TP)
- FORMER MGP STRUCTURES
- FENCELINE
- RAILROAD TRACKS
- PROPERTY LINE
- SITE BOUNDARY

NOTES:

1. COMPOUNDS DETECTED DURING THE SITE CHARACTERIZATION OR REMEDIAL INVESTIGATION ABOVE NYSDEC CLASS GA GROUNDWATER STANDARDS/GUIDANCE VALUES ARE SHOWN.
2. ALL CONCENTRATIONS LISTED IN MICROGRAMS PER LITER (UG/L).

SHADED = INDICATES COMPOUND EXCEEDS CLASS GA GROUNDWATER OR STANDARD OR GUIDANCE VALUE (REFER TO TABLE 4)

ND INDICATES COMPOUND WAS NOT DETECTED

J INDICATES AN ESTIMATED CONCENTRATION

(d) DUPLICATE SAMPLE

50 25 0 50 100

SCALE: 1"=50'

FIGURE 11

Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

SUMMARY OF INORGANICS EXCEEDANCES IN GROUNDWATER

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

FILE NAME: C:\USERS\48606\DESKTOP\CON ED LUDLOW STREET WORKS\446110-FIG-10.DWG
PLOT DATE: 3/19/2014 1:34 PM PLOTTED BY: GOLDTHWAIT, JAMES

NOTES:

1. BASE SURVEY DRAWING PROVIDED BY THE CHAZEN COMPANIES. A SURVEY PERFORMED ON THE SITE IN JULY 2010 AND UPDATED IN DECEMBER 2012.
2. HISTORIC FEATURES IN BASE DRAWING BASED ON SANBORN FIRE INSURANCE MAPS DATED 1888, 1898, 1917, 1951, & 1991. WESTCHESTER COUNTY ATLAS, 1931., YONKERS TAX ASSESSORS MAP, REVISED 1947 AND FIGURE 3 FROM GEI CONSULTANTS, INC.

LEGEND:

- MONITORING WELL LOCATION (2012)
- SOIL BORING LOCATION (2012)
- TEST PIT LOCATION (2012)
- SOIL VAPOR LOCATION (2012)
- MONITORING WELL LOCATION (2010)
- SOIL BORING LOCATION (2010)
- TEST PIT LOCATION (2010)
- FORMER MGP STRUCTURES
- RAILROAD TRACKS
- FENCE LINES
- PROPERTY LINE
- SITE BOUNDARY
- OHW — OVERHEAD WIRE
- ST — STORM SEWER
- W — WATER LINE
- G — GAS LINE
- UE — UNDERGROUND ELECTRIC LINE
- BUILDING
- CONC. WALK — SIDEWALK
- ASPHALT — ASPHALT DRIVEWAY
- CONC. CURB — CURB/GUTTER

- BOLLARD
- CATCH BASIN
- DRAINAGE MANHOLE
- GUY WIRE
- GAS VALVE
- HYDRANT
- SANITARY MANHOLE
- UNKNOWN MANHOLE
- UTILITY POLE
- WELL
- WATER VALVE
- GATE

NAPL OBSERVED

50 25 0 50 100

SCALE: 1"=50'

FIGURE 12

Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

APPROXIMATE LOCATION OF MGP NAPL IMPACTS – 6 TO 11 FEET BELOW GROUND SURFACE OF LOWER PORTION OF THE SITE

PARSONS
200 COTTONTAIL LANE, SOMERSET NJ 08873, PHONE: 732-537-3500

FILE NAME: C:\USERS\48606\DESKTOP\CON ED LUDLOW STREET WORKS\446110-FIG-3.DWG
PLOT DATE: 3/18/2014 4:12 PM PLOTTED BY: GOLDTHWAIT, JAMES

NOTES:

1. BASE SURVEY DRAWING PROVIDED BY THE CHAZEN COMPANIES. A SURVEY PERFORMED ON THE SITE IN JULY 2010 AND UPDATED IN DECEMBER 2012.
2. HISTORIC FEATURES IN BASE DRAWING BASED ON SANBORN FIRE INSURANCE MAPS DATED 1888, 1898, 1917, 1951, & 1991. WESTCHESTER COUNTY ATLAS, 1931., YONKERS TAX ASSESSORS MAP, REVISED 1947 AND FIGURE 3 FROM GEI CONSULTANTS, INC.

LEGEND:

- MONITORING WELL LOCATION (2012)
- SOIL BORING LOCATION (2012)
- TEST PIT LOCATION (2012)
- SOIL VAPOR LOCATION (2012)
- MONITORING WELL LOCATION (2010)
- SOIL BORING LOCATION (2010)
- TEST PIT LOCATION (2010)
- FORMER MGP STRUCTURES
- RAILROAD TRACKS
- FENCE LINES
- PROPERTY LINE
- SITE BOUNDARY
- OHW — OVERHEAD WIRE
- ST — STORM SEWER
- W — WATER LINE
- G — GAS LINE
- UE — UNDERGROUND ELECTRIC LINE
- BUILDING
- CONC. WALK — SIDEWALK
- ASPHALT — ASPHALT DRIVEWAY
- CONC. CURB — CURB/GUTTER

- BOLLARD
- CATCH BASIN
- DRAINAGE MANHOLE
- GUY WIRE
- GAS VALVE
- HYDRANT
- SANITARY MANHOLE
- UNKNOWN MANHOLE
- UTILITY POLE
- WELL
- WATER VALVE
- GATE

NAPL OBSERVED

50 25 0 50 100

SCALE: 1"=50'

FIGURE 13

Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

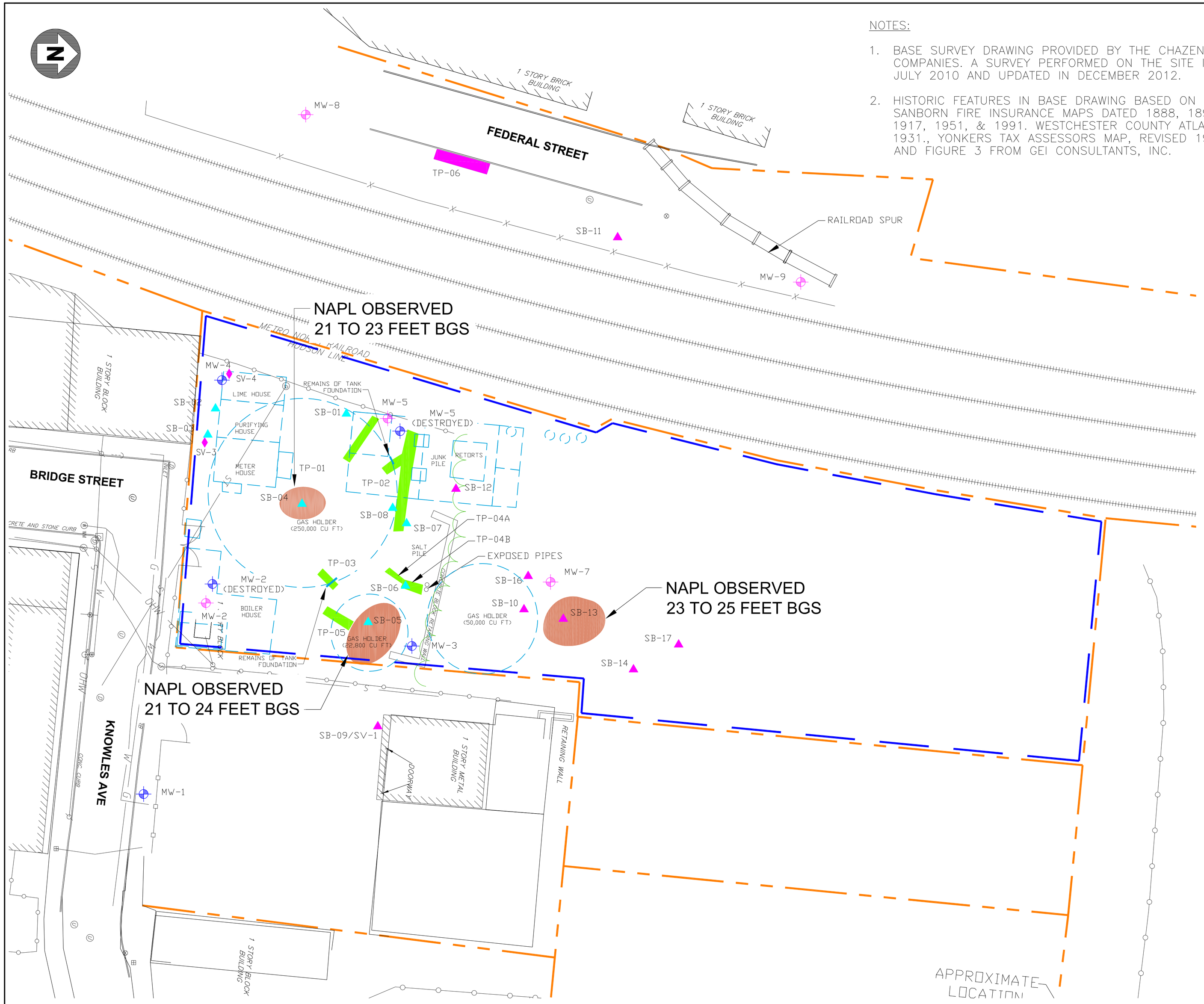
APPROXIMATE LOCATION OF MGP NAPL IMPACTS – 11 TO 21 FEET BELOW GROUND SURFACE OF LOWER PORTION OF THE SITE

PARSONS
200 COTTONTAIL LANE, SOMERSET NJ 08873, PHONE: 732-537-3500

FILE NAME: C:\USERS\48606\DESKTOP\CON ED LUDLOW STREET WORKS\446110-FIG-3.DWG
PLOT DATE: 3/18/2014 4:05 PM PLOTTED BY: GOLDTHWAIT, JAMES

NOTES:

1. BASE SURVEY DRAWING PROVIDED BY THE CHAZEN COMPANIES. A SURVEY PERFORMED ON THE SITE IN JULY 2010 AND UPDATED IN DECEMBER 2012.
2. HISTORIC FEATURES IN BASE DRAWING BASED ON SANBORN FIRE INSURANCE MAPS DATED 1888, 1898, 1917, 1951, & 1991. WESTCHESTER COUNTY ATLAS, 1931., YONKERS TAX ASSESSORS MAP, REVISED 1947 AND FIGURE 3 FROM GEI CONSULTANTS, INC.




LEGEND:

- MONITORING WELL LOCATION (2012)
- SOIL BORING LOCATION (2012)
- TEST PIT LOCATION (2012)
- SOIL VAPOR LOCATION (2012)
- MONITORING WELL LOCATION (2010)
- SOIL BORING LOCATION (2010)
- TEST PIT LOCATION (2010)
- FORMER MGP STRUCTURES
- RAILROAD TRACKS
- FENCE LINES
- PROPERTY LINE
- SITE BOUNDARY
- OHW — OVERHEAD WIRE
- ST — STORM SEWER
- W — WATER LINE
- G — GAS LINE
- UE — UNDERGROUND ELECTRIC LINE
- BUILDING
- CONC. WALK — SIDEWALK
- ASPHALT — ASPHALT DRIVEWAY
- CONC. CURB — CURB/GUTTER

- BOLLARD
- CATCH BASIN
- DRAINAGE MANHOLE
- GUY WIRE
- GAS VALVE
- HYDRANT
- SANITARY MANHOLE
- UNKNOWN MANHOLE
- UTILITY POLE
- WELL
- WATER VALVE
- GATE

NAPL OBSERVED

50 25 0 50 100

SCALE: 1"=50'

# FIGURE 14

Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

APPROXIMATE LOCATION OF MGP NAPL IMPACTS – 21 TO 25 FEET BELOW GROUND SURFACE OF LOWER PORTION OF THE SITE

PARSONS
200 COTTONTAIL LANE, SOMERSET NJ 08873, PHONE: 732-537-3500

FILE NAME: C:\USERS\48606\DESKTOP\CON ED LUDLOW STREET WORKS\446110-FIG-3.DWG
PLOT DATE: 3/19/2014 2:41 PM PLOTTED BY: GOLDTHWAIT, JAMES

NOTES:

1. BASE SURVEY DRAWING PROVIDED BY THE CHAZEN COMPANIES. A SURVEY PERFORMED ON THE SITE IN JULY 2010 AND UPDATED IN DECEMBER 2012.
2. HISTORIC FEATURES IN BASE DRAWING BASED ON SANBORN FIRE INSURANCE MAPS DATED 1888, 1898, 1917, 1951, & 1991. WESTCHESTER COUNTY ATLAS, 1931., YONKERS TAX ASSESSORS MAP, REVISED 1947 AND FIGURE 3 FROM GEI CONSULTANTS, INC.

LEGEND:

- MONITORING WELL LOCATION (2012)
- SOIL BORING LOCATION (2012)
- TEST PIT LOCATION (2012)
- SOIL VAPOR LOCATION (2012)
- MONITORING WELL LOCATION (2010)
- SOIL BORING LOCATION (2010)
- TEST PIT LOCATION (2010)
- FORMER MGP STRUCTURES
- RAILROAD TRACKS
- FENCE LINES
- PROPERTY LINE
- SITE BOUNDARY
- OHW — OVERHEAD WIRE
- ST — STORM SEWER
- W — WATER LINE
- G — GAS LINE
- UE — UNDERGROUND ELECTRIC LINE
- BUILDING
- CONC. WALK — SIDEWALK
- ASPHALT — ASPHALT DRIVEWAY
- CONC. CURB — CURB/GUTTER

- BOLLARD
- CATCH BASIN
- DRAINAGE MANHOLE
- GUY WIRE
- GAS VALVE
- HYDRANT
- SANITARY MANHOLE
- UNKNOWN MANHOLE
- UTILITY POLE
- WELL
- WATER VALVE
- GATE

NAPL OBSERVED

50 25 0 50 100

SCALE: 1"=50'

FEDERAL STREET
BRIDGE STREET
KNOWLES AVE
METRO NORTH RAILROAD HUDSON LINE
RAILROAD SPUR
1 STORY BRICK BUILDING
1 STORY BLOCK BUILDING
1 STORY METAL BUILDING
LIME HOUSE
PURIFYING HOUSE
METER HOUSE
BOILER HOUSE
GAS HOLDER (250,000 CU FT)
GAS HOLDER (50,000 CU FT)
GAS HOLDER (22,800 CU FT)
REMAINS OF TANK FOUNDATION
JUNK PILE
RETORTS
SALT PILE
EXPOSED PIPES
RETAINING WALL
DOORWAY
CONCRETE AND STONE CURB
APPROXIMATE LOCATION

MW-1 MW-2 MW-2 (DESTROYED) MW-3 MW-4 MW-5 MW-5 (DESTROYED) MW-7 MW-8 MW-9
SV-1 SV-3 SV-4
SB-01 SB-02 SB-03 SB-04 SB-05 SB-06 SB-07 SB-08 SB-09/SV-1 SB-10 SB-11 SB-12 SB-13 SB-14 SB-16 SB-17
TP-01 TP-02 TP-03 TP-04A TP-04B TP-05 TP-06

FILE NAME: C:\USERS\48606\DESKTOP\CON ED LUDLOW STREET WORKS\446110-FIG-3.DWG
PLOT DATE: 2/24/2014 11:57 AM PLOTTED BY: GOLDTHWAIT, JAMES

# FIGURE 15

Consolidated Edison
Former Ludlow Street Works
Yonkers, New York

APPROXIMATE LOCATION OF MGP NAPL MPACTS – 36 TO 38 FEET BELOW GROUND SURFACE OF LOWER PORTION OF THE SITE

PARSONS
200 COTTONTAIL LANE, SOMERSET NJ 08873, PHONE: 732-537-3500

# PARSONS
# TEST PIT RECORD

| | |
|---|---|
| PROJECT NAME: | Con Edison: Ludlow Street Works |
| PROJECT NUMBER: | 446110 |
| WEATHER | Partly cloudy, 60s, 5-10 mph E |
| DATE/TIME START: | November 7, 2012/0910 |
| DATE/TIME FINISH: | November 7, 2012/1120 |
| CONTRACTOR: | ADT |
| INSPECTOR: | Zohar Lavy |

**TEST PIT ID:** TP-6

**LOCATION:**

Approximate L X W X D
= 29' X 4' X 6'

West of MTA Tracks, along Federal Street

| DEPTH (feet bgs) | FIELD IDENTIFICATION OF MATERIAL | COMMENTS |
|---|---|---|
| 0 | 0-5' Moist, dark brown/grey fine to coarse SAND and fine to coarse sub-angular to sub-round Gravel, some Slag, little Metal, trace Glass, trace Brick | Naphthalene Pipe not encountered. Top of water table encountered at approximately 5.5 ft bgs |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | Wet, dark brown/grey fine to coarse SAND and fine to coarse sub-angular to sub-round Gravel, some Slag, little Metal, trace Glass | |
| 6 | Bottom of Test Pit at 6 ft bgs | |
| 7 | | |
| 8 | | |
| 9 | | |

# PARSONS
# TEST PIT RECORD

| | |
|---|---|
| PROJECT NAME: | Con Edison: Ludlow Street Works |
| PROJECT NUMBER: | 446110 |
| WEATHER | Partly cloudy, 60s, 5-10 mph E |
| DATE/TIME START: | November 7, 2012/0910 |
| DATE/TIME FINISH: | November 7, 2012/1120 |
| CONTRACTOR: | ADT |
| INSPECTOR: | Zohar Lavy |

**TEST PIT ID:** TP-6

**LOCATION:**

Approximate L X W X D
= 29' X 4' X 6'

West of MTA Tracks, along Federal Street

**PHOTOGRAPH**

TP-6 looking South


TP-6 at 6 ft bgs. Water intrusion at approximately 5.5 ft bgs

TP-6 looking east


TP-6 Commencing excavation

# PARSONS
# TEST PIT RECORD

| | |
|---|---|
| PROJECT NAME: | Con Edison: Ludlow Street Works |
| PROJECT NUMBER: | 446110 |
| WEATHER | Partly cloudy, 60s, 5-10 mph E |
| DATE/TIME START: | June 17, 2010/1230 |
| DATE/TIME FINISH: | June 17, 2010/1400 |
| CONTRACTOR: | ECI |
| INSPECTOR: | Zohar Lavy |

**TEST PIT ID:** TP-1

**LOCATION:**

Approximate L X W X D
= 29' X 4' X 8.5'

Northwest portion of the site

| DEPTH (feet bgs) | FIELD IDENTIFICATION OF MATERIAL | COMMENTS |
|---|---|---|
| 0 | 0-0.5' ASPHALT | Holder foundation wall not encountered. Holder bottom/floor encountered at ~ 8.5 ft bgs. |
| 1 | 0.5-3' Dark brown fine to coarse SAND, some Gravel and Cobble, little Brick, trace Boulder and Wood | |
| 2 | | |
| 3 | | |
| 4 | 3-6' Dark brown medium to coarse SAND, some Gravel and Brick, trace Cobble | |
| 5 | | |
| 6 | 6-8.5' ASH and SLAG, little fine to coarse Sand, Cobble and Brick | |
| 7 | | |
| 8 | | |
| 9 | Bottom of Test Pit at 8.5 ft bgs | |
| 10 | | |
| 11 | | |
| 12 | | |

# PARSONS
# TEST PIT RECORD

| | |
|---|---|
| PROJECT NAME: | Con Edison: Ludlow Street Works |
| PROJECT NUMBER: | 446110 |
| WEATHER | Partly cloudy, 60s, 5-10 mph E |
| DATE/TIME START: | June 17, 2010/1230 |
| DATE/TIME FINISH: | June 17, 2010/1400 |
| CONTRACTOR: | ECI |
| INSPECTOR: | Zohar Lavy |

**TEST PIT ID:** TP-1

**LOCATION:**

Approximate L X W X D
= 29' X 4' X 8.5'

Northwest portion of the site

**PHOTOGRAPH**

TP-1looking west

TP-1 at 8.5 ft bgs

TP-1 Close up looking east

TP-1 Scraped holder bottom at 8.5 ft bgs

# PARSONS
## TEST PIT RECORD

| | |
|---|---|
| PROJECT NAME: | Con Edison: Ludlow Street Works |
| PROJECT NUMBER: | 446110 |
| WEATHER | Clear, 70s, 0-5 mph East |
| DATE/TIME START: | June 18, 2010/0800 |
| DATE/TIME FINISH: | June 18, 2010/1215 |
| CONTRACTOR: | ECI |
| INSPECTOR: | Zohar Lavy |

**TEST PIT ID:** TP-2

**LOCATION:**

Approximate L X W X D
= 50' X 4' X 4.5'
Angled test-pit = 8' X 4' X 8.5'

Northwest portion of the site, just south of junk pile

| DEPTH (feet bgs) | FIELD IDENTIFICATION OF MATERIAL | |
|---|---|---|
| 0 | 0-4.5' CONSTRUCTION DEBRIS and brown fine to coarse SAND, some Brick; 0-4.5' (in Angled Test Pit) BRICK and brown fine to coarse SAND | Holder foundation wall not encountered in originalTP-2. Footings encountered at ~4.5 ft bgs in original TP-2. Holder wall encountered from ~3.5 to 8.5 ft bgs in angled TP-2 (~18 ft east of TP-2 western starting point). Holder foundation wall encountered again at ~ 40 ft east from TP-2 western starting point. |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | 4.5-7.5' (in Angled Test Pit) BRICK and brown fine to coarse SAND | |
| 6 | | |
| 7 | | |
| 8 | 7.5-8.5' (in Angled Test Pit) ASH and SLAG, little fine to coarse Sand | Holder bottom/floor encountered at ~8.5 ft bgs |
| | Bottom of Test Pit at 8.5 ft bgs | |

# PARSONS
# TEST PIT RECORD

| | |
|---|---|
| PROJECT NAME: | Con Edison: Ludlow Street Works |
| PROJECT NUMBER: | 446110 |
| WEATHER | Clear, 70s, 0-5 mph East |
| DATE/TIME START: | June 18, 2010/0800 |
| DATE/TIME FINISH: | June 18, 2010/1215 |
| CONTRACTOR: | ECI |
| INSPECTOR: | Zohar Lavy |

**TEST PIT ID:** TP-2

**LOCATION:**

Approximate L X W X D
= 50' X 4' X 4.5'

Angled test-pit = 8' X 4' X 8.5'

Northwest portion of the site, just south of junk pile

**PHOTOGRAPH**

TP-2 looking northwest

TP-2 looking west

TP-2 (angled) at ~ 8.5 ft bgs with holder foundation wall in foreground and footings in back ground

TP-2 eastward extension with exposed holder foundation wall and larger excavation in back ground

# PARSONS
# TEST PIT RECORD

| | |
|---|---|
| PROJECT NAME: | Con Edison: Ludlow Street Works |
| PROJECT NUMBER: | 446110 |
| WEATHER | Partly cloudy, 60s, 5-10 mph east |
| DATE/TIME START: | June 17, 2010/0800 |
| DATE/TIME FINISH: | June 17, 2010/1130 |
| CONTRACTOR: | ECI |
| INSPECTOR: | Zohar Lavy |

**TEST PIT ID:** TP-3

**LOCATION:**

Approximate L X W X D

= 11' X 4' X 9.5'

Central-Eastern portion of the site

| DEPTH (feet bgs) | FIELD IDENTIFICATION OF MATERIAL | COMMENTS |
|---|---|---|
| 0 | 0-0.5' ASPHALT | Holder wall encountered at ~ 0.5 ft bgs and intact to 9.5 ft bgs |
| 1 | 0.5-3' Brown fine to medium SAND, some Gravel, little sub-round Cobble, trace Urban fill, dry | |
| 2 | | |
| 3 | 3-6' Brown/red medium to coarse SAND, some angular and sub-angular Gravel, trace Cobble, dry | |
| 4 | | |
| 5 | | |
| 6 | 6-9' Dark brown/red fine to coarse SAND, little sub-angular Gravel, little Concrete and Brick, trace Boulder, slightly moist | |
| 7 | | |
| 8 | | |
| 9 | 9-9.5' Dark brown/black fine to coarse SAND, little sub-angular Gravel, moist | Holder bottom encountered at ~ 9.5 ft bgs |
| 10 | Bottom of Test Pit at 9.5 ft bgs | |
| 11 | | |
| 12 | | |

# PARSONS
# TEST PIT RECORD

| | |
|---|---|
| PROJECT NAME: | Con Edison: Ludlow Street Works |
| PROJECT NUMBER: | 446110 |
| WEATHER | Partly cloudy, 60s, 5-10 mph east |
| DATE/TIME START: | June 17, 2010/0800 |
| DATE/TIME FINISH: | June 17, 2010/1130 |
| CONTRACTOR: | ECI |
| INSPECTOR: | Zohar Lavy |

**TEST PIT ID:** TP-3

**LOCATION:**

Approximate L X W X D
= 11' X 4' X 9.5'
Central-eastern portion of the site

**PHOTOGRAPH**

TP-3 looking north


TP-3 looking north into excavation

TP-3 and holder wall exposed at ~0.5 ft bgs

TP-3 and holder wall exposed to 9.5 ft bgs

# PARSONS
# TEST PIT RECORD

| | |
|---|---|
| PROJECT NAME: | Con Edison: Ludlow Street Works |
| PROJECT NUMBER: | 446110 |
| WEATHER | Partly cloudy, 60s, 0-5 mph east |
| DATE/TIME START: | June 14, 2010/1100 |
| DATE/TIME FINISH: | June 14, 2010/1425 |
| CONTRACTOR: | ECI |
| INSPECTOR: | Zohar Lavy |

**TEST PIT ID:** TP-4A/B

**LOCATION:**

Approximate L X W X D

TP-4A = 12' X 4' X 3'

TP-4B = 10' X 4' X4.5'

Northern portion of the site

| DEPTH (feet bgs) | FIELD IDENTIFICATION OF MATERIAL | COMMENTS |
|---|---|---|
| 0 | 0-0.5' SALT | Gasholder wall not encountered. A brick structure with two ~12" diameter pipes running northeast/southwest was exposed. The holder wall was later uncovered at the surface ~8 ft northeast of TP-4B during salt moving operations. Additionally, two open ~12" pipes were encountered ~ 2 ft north of TP-4B. |
| 1 | 0.5-4.5' Brown fine to coarse SAND, some Gravel, some Brick, little Cobble, little Urban fill and Debris | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | Bottom of Test Pit at 4.5 ft bgs | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | | |
| 12 | | |

# PARSONS
# TEST PIT RECORD

| | |
|---|---|
| PROJECT NAME: | Con Edison: Ludlow Street Works |
| PROJECT NUMBER: | 446110 |
| WEATHER | Partly cloudy, 60s, 0-5 mph east |
| DATE/TIME START: | June 14, 2010/1100 |
| DATE/TIME FINISH: | June 14, 2010/1425 |
| CONTRACTOR: | ECI |
| INSPECTOR: | Zohar Lavy |

**TEST PIT ID:** TP-4A/B

**LOCATION:**

Approximate L X W X D

TP-4A = 12' X 4' X 3'

TP-4B = 10' X 4' X4.5'

Northern portion of the site

**PHOTOGRAPH**

TP-4A looking north

TP-4A and 4B looking southwest

TP-4A and brick structure to the north with 2 ~12" pipes running southwest from under brick structure

TP-4B in foreground and TP-4A in background with the square brick structure adjacent to both

# PARSONS
# TEST PIT RECORD

| | |
|---|---|
| PROJECT NAME: | Con Edison: Ludlow Street Works |
| PROJECT NUMBER: | 446110 |
| WEATHER | Clear, 60s, 0-5 mph east |
| DATE/TIME START: | June 15, 2010/0720 |
| DATE/TIME FINISH: | June 15, 2010/1145 |
| CONTRACTOR: | ECI |
| INSPECTOR: | Zohar Lavy |

**TEST PIT ID:** TP-5

**LOCATION:**

Approximate L X W X D

12' X 4' X 9'

Northern portion of the site

| DEPTH (feet bags) | FIELD IDENTIFICATION OF MATERIAL | COMMENTS |
|---|---|---|
| 0 | 0-5' Brown fine to coarse SAND, some Cobble, some Gravel, little Boulder, trace Brick, trace Urban debris, dry | Holder wall encountered at ~ 1.5 ft bgs. The bottom/floor of the holder was not encountered. |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | Brown fine to coarse SAND and COAL, little Gravel, some Cobble, dry | |
| 6 | | |
| 7 | Brown/grey fine to coarse SAND and fine GRAVEL, little Gravel, trace Rubber, trace Metal | Water encountered at ~ 9 ft bgs |
| 8 | | |
| 9 | Bottom of Test Pit at ~ 9 ft bgs | |
| 10 | | |
| 11 | | |
| 12 | | |

# PARSONS
# TEST PIT RECORD

| | |
|---|---|
| PROJECT NAME: | Con Edison: Ludlow Street Works |
| PROJECT NUMBER: | 446110 |
| WEATHER | Clear, 60s, 0-5 mph east |
| DATE/TIME START: | June 15, 2010/0720 |
| DATE/TIME FINISH: | June 15, 2010/1145 |
| CONTRACTOR: | ECI |
| INSPECTOR: | Zohar Lavy |

**TEST PIT ID:** TP-5

**LOCATION:**

Approximate L X W X D

12' X 4' X 9'

Northern portion of the site

**PHOTOGRAPH**

TP-5 looking northeast

TP-5 to 9 ft bgs with holder wall in the foreground

TP-5 looking southwest

TP-5 to 9 ft bgs with holder wall reaching down to and passed water at 9 ft bgs

**PARSONS**
**DRILLING RECORD**

**BORING/WELL ID: SB-9**
Sheet 1 of 1

**Contractor:** Aquifer Drilling & Testing
**Driller:** Greg Rivera
**Inspector:** Zohar Lavy
**Rig Type:** Track Mounted Sonic Rig

**PROJECT NAME:** Consolidated Edison - Former Ludlow Street Works
**PROJECT NUMBER:** 446110-04000

**Location Description:**
Walkway immediately south of Waverly Prop. Building

| GROUNDWATER OBSERVATIONS | | | | |
|---|---|---|---|---|
| Water Level | DTW ~23' bgs | DTW | | |
| Date | 10-26-2012 | | | |
| Time | 1450 | | | |
| Meas. From | ft bgs - Soil cuttings | Top of Casing | | |

**Weather:** Overcast, low 60s
**Date/Time Start:** 10-26-2012/1415
**Date/Time Finish:** 10-26-2012/1455

**Location Plan**
See Site Plan

| Sample Depth | Location/ Sample I.D. | SPT | Rec. (%) | PID (ppm) | FIELD IDENTIFICATION OF MATERIAL | SCHEMATIC | COMMENTS |
|---|---|---|---|---|---|---|---|
| +2 | | | | | | | |
| +1 | | | | | | | |
| 0 | | Vac-tron | NA | NA | 0-4" ASPHALT | | |
| 1 | | Vac-tron | NA | 0.0 | 4"-5' Dry, fine to coarse SAND and DEBRIS, some fine to coarse sub-angular to sub-round Gravel, little Asphalt | | |
| 2 | | Vac-tron | NA | | | | |
| 3 | | Vac-tron | NA | | | | |
| 4 | | Vac-tron | NA | | | | |
| 5 | SB-9 (5-8) | Sonic | 83 | 9.4 | 0-12" Dry, dark brown fine to coarse SAND, some fine to coarse sub-angular Gravel, trace Brick fragments | | |
| 6 | | | | | 12-30" Dry, browm, fine to medium SAND and angular to round fine to medium Gravel | | |
| 7 | | | | | | | |
| 8 | | Sonic | 100 | 8.2 | 0-12" SCHIST | | Very hard drilling at 8' bgs |
| 9 | | | | | 12-24" Moist, brown/orange fine to medium SAND and fine to coarse sub-angular to sub-round GRAVEL, trace Silt | | |
| 10 | | Sonic | 100 | 5.8 | 0-24" Dry/moist, brown medium SAND, some angular to sub-round fine to medium Gravel, trace Porcelain & Shell fragments | | |
| 11 | | | | | | | |
| 12 | | | | | 24-60" Dry, orange fine to medium SAND, little coarse sub-angular Gravel, trace Silt | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | Sonic | 100 | 3.5 | 0-24" Dry, orange fine to medium SAND, little coarse sub-angular Gravel, trace Silt | | |
| 16 | | | | | 24-50" Dry, orange/brown medium to coarse SAND, some angular to sub-angular fine to medium Gravel | | |
| 17 | | | | | | | |
| 18 | | | | | 50-60" Moist, orange/brown fine to coarse SAND, some medium to coarse sub-round Gravel, trace Silt | | |
| 19 | | | | | | | |
| 20 | | Sonic | 80 | 4.4 | 0-24" Moist, orange/brown fine to coarse SAND, some medium to coarse sub-round Gravel, trace Silt, trace Ash and Plastic | | |
| 21 | | | | | | | |
| 22 | | | | | 24-48" Moist/wet, brown fine to coarse SAND, some medium to coarse sub-round Gravel, trace Silt | | |
| 23 | | | | | | | |
| 24 | | | | | | | |
| 25 | | Sonic | 100 | 2.5 | 0-24" Moist/wet, brown fine to coarse SAND, some medium to coarse sub-round Gravel, little Silt | | |
| 26 | | | | | 24-60" Moist, orange fine SAND and Silt, trace Clay and Cobble | | |
| 27 | | | | | | | |
| 28 | SB-9 (28-30) | | | | | | |
| 29 | | | | | | | |
| 30 | End of Boring at 30 ft bgs | | | | | | |

**SAMPLING METHOD**
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WH = WEIGHT OF HAMMER (RODS)

Hand cleared to 5 ft bgs; Sonic drilled from 5 to 30 ft bgs

**PARSONS**
**DRILLING RECORD**

**BORING/WELL ID: SB-10**
Sheet 1 of 1

**Contractor:** Aquifer Drilling & Testing
**Driller:** Greg Rivera
**Inspector:** Zohar Lavy
**Rig Type:** Track Mounted Sonic Rig

**PROJECT NAME:** Consolidated Edison - Former Ludlow Street Works
**PROJECT NUMBER:** 446110-04000

**Location Description:** Approx. 45' north of DPW yard concrete retaining wall and 50' west of Waverly Prop. Boundary

**Location Plan**
See Site Plan

**Weather:** Overcast, low 60s
**Date/Time Start:** 10-25-2012/1125
**Date/Time Finish:** 10-25-2012/1240

GROUNDWATER OBSERVATIONS

| Water Level | DTW | DTW | | |
|---|---|---|---|---|
| | ~20' bgs | | | |
| Date | 10-25-2012 | | | |
| Time | 1150 | | | |
| Meas. From | ft bgs - Drill cuttings | Top of Casing | | |

| Sample Depth | Location/ Sample I.D. | SPT | Rec. (%) | PID (ppm) | FIELD IDENTIFICATION OF MATERIAL | SCHEMATIC | COMMENTS |
|---|---|---|---|---|---|---|---|
| +2 | | | | | | | |
| +1 | | | | | | | |
| 0 | | Vac-tron | NA | 0.0 | 0-6" Moist, dark brown fine to coarse SAND and ORGANICS, some fine to coarse Gravel, trace Silt and Asphalt | | |
| 1 | | Vac-tron | NA | | | | |
| 2 | | Vac-tron | NA | 0.0 | 0.5- 3' Moist, dark brown fine to coarse SAND and ORGANICS, some Cobble, little fine to coarse Gravel 3- 5' Moist/dry brown, medium to fine SAND, some fine to coarse Gravel, trace Brick | | |
| 3 | | Vac-tron | NA | 0.0 | | | |
| 4 | | Vac-tron | NA | | | | |
| 5 | | Sonic | 100 | 0.5 | 0-52" Moist, dark brown fine to coarse SAND, some fine to coarse sub-angular to sub-round Gravel, little Cobble, trace Brick | | |
| 6 | | | | | | | |
| 7 | | | | 1.8 | 52-60" APHALT and WOOD, some fine to coarse Sand and fine to coarse Gravel | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | Sonic | 80 | 1.2 | 0-12" Dry, brown/gray fine to coarse SAND, some fine to coarse Gravel, trace Wood and Metal fragments<br>12-30" Dry, orange, fine to coarse SAND, some Porcelain fragments, trace Metal wire<br>30-48" Moist, brown medium to fine SAND and weathered schist COBBLE, little fine to coarse Gravel, trace Wood, Porcelain, and Silt | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | Sonic | 100 | 1.5 | 0-60" Moist, brown, medium to fine SAND, some fine to coarse sub-angular to sub-round Gravel, little Asphalt, Wood, trace Concrete | | |
| 16 | | | | | | | |
| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | Sonic | 80 | 1.3 | 0-16" Moist, brown, medium to fine SAND, some fine to coarse sub-angular to sub-round Gravel, little Asphalt, Wood, trace Concrete | | |
| 21 | | | | | | | |
| 22 | | | | - | 16-20" CONCRETE | | |
| 23 | | | | 3.8 | 20-40" Moist, black fine to coarse SAND and COAL, slight hydrocarbon odor | | |
| 24 | | | | 1.7 | 40-48" Moist, orange/brown fine to coarse SAND, little angular to sub-round medium to fine Gravel, | | |
| 25 | | Sonic | 100 | 125.0 | 0- 24" Moist, orange/brown fine to coarse SAND, little angular to sub-round medium to fine Gravel, trace Silt | | |
| 26 | | | | 835.0 | 24- 60" Wet, black fine to coarse SAND and angular to sub-angular medium to fine Gravel, some Coal, black staining, strong hydrocarbon odor, NAPL | | |
| 27 | | | | | | | |
| 28 | | | | | | | |
| 29 | | | | | | | |
| 30 | SB-10 (30-32) | Sonic | 100 | 2254.0 | 0- 24" Wet, black fine to coarse SAND and angular to sub-angular medium to fine Gravel, some Coal, black staining, strong hydrocarbon odor, NAPL | | |
| 31 | | | | | 24-28" BRICK | | |
| 32 | | | | | 28-34" CONCRETE | | |
| 33 | | | | | 34-60" Dry, orange/brown, fine to coarse SAND, little medium to fine sub-angular Gravel, trace Silt, | | |
| 34 | | | | 1200.0 | | | |
| 35 | | Sonic | 100 | 1150.0 | 0-20" Dry, orange/brown, fine to coarse SAND, little medium to fine sub-angular Gravel, trace Silt, Staining, strong hydrocarbon odor, NAPL blebs | | |
| 36 | | | | 350.0 | 20-60" Wet, black, medium to coarse SAND, orange NAPL saturated, strong hydrocarbon odor and staining | | |
| 37 | | | | | | | |
| 38 | | | | | | | |
| 39 | | | | | | | |
| 40 | | Sonic | 100 | 485.0 | 0-30" Wet, black fine to coarse GRAVEL and SAND, NAPL saturated, strong hydrocarbon odor | | |
| 41 | | | | 85.0 | 30-36" Wet, orange medium to coarse SAND | | |
| 42 | | | | | 36-60" Wet, orange, fine SAND and SILT, trace olive Clay, sheen | | |
| 43 | | | | | | | |
| 44 | | | | | | | |
| 45 | SB-10 (45-47) | Sonic | 100 | 22.0 | 0-12" Moist/wet, orange, fine SAND and SILT, trace olive Clay, sheen | | |
| 46 | | | | 3.5 | 12-24" Moist, orange/red fine SAND, little Silt | | |
| 47 | | | | | 24-60" Weathered SCHIST | | |
| 48 | | | | | | | |
| 49 | | | | | | | |
| 50 | End of Boring at 50 ft bgs | | | | | | |

**SAMPLING METHOD**
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WH = WEIGHT OF HAMMER (RODS)

NAPL observed from 27 to 42.5 ft bgs
Boring hand cleared to 5 ft bgs; Sonic drilled 5 to 50 ft bgs

**PARSONS**
**DRILLING RECORD**

**BORING/WELL ID: SB-11**
Sheet 1 of 1

**Contractor:** Aquifer Drilling & Testing
**Driller:** Greg Rivera
**Inspector:** Matt Bruno
**Rig Type:** Track Mounted Sonic Rig

**PROJECT NAME:** Consolidated Edison - Former Ludlow Street Works
**PROJECT NUMBER:** 446110-04000

**Location Description:**
On Federal Street immediately west of the MTA tracks and south of the Sugar Refinery

**Location Plan**
See Site Plan

**Weather:** Partly cloudy, 40s
**Date/Time Start:** 11-06-2012/1120
**Date/Time Finish:** 11-06-2012/1150

GROUNDWATER OBSERVATIONS

| | | | | |
|---|---|---|---|---|
| Water Level | DTW ~5' bgs | DTW | | |
| Date | 11-06-2012 | | | |
| Time | 1130 | | | |
| Meas. From | ft bgs - Soil cuttings | Top of Casing | | |

| Sample Depth | Location/ Sample I.D. | SPT | Rec. (%) | PID (ppm) | FIELD IDENTIFICATION OF MATERIAL | SCHEMATIC | COMMENTS |
|---|---|---|---|---|---|---|---|
| +2 | | | | | | | |
| +1 | | | | | | | |
| 0 | | Vac-tron | NA | 0.0 | 0-12" Wet, black fine to medium SAND and sub-angular to sub-round GRAVEL | | |
| 1 | | Vac-tron | NA | 0.0 | 12-5' Dry/moist, brown fine to coarse SAND and weathered Schist COBBLES/BOULDERS, some fine to coarse sub-angular Gravel, trace Metal and Slag | | |
| 2 | | Vac-tron | NA | | | | |
| 3 | | Vac-tron | NA | | | | |
| 4 | | Vac-tron | NA | | | | |
| 5 | SB-11 (5-5.5) | | | 1.5 | 0-24" Wet, black/dark brown, angular GRAVEL and CINDERS, little Silt | | |
| 6 | | | | 1.9 | 24-36" Wet, black SILT, little angular Cobble, trace Coal fragments | | |
| 7 | | Sonic | 60 | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | 3.7 | 0-24" Wet, black, soft fine SAND, little Silt and sub-angular Gravel, trace Plastic fragments, slight hydrocarbon odor | | |
| 11 | | | | | | | |
| 12 | | Sonic | 80 | 4.2 | 24-48" Wet, red/brown medium SAND, trace Silt | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | 12.7 | 0-15" Wet, black/dark brown, sub-angular GRAVEL, little Silt | | |
| 16 | | | | 15.2 | 15-30" Wet, black, medium SAND, little sub-angular Gravel, little Silt | | |
| 17 | | Sonic | 50 | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | 20.2 | 0-12" Moist, red/brown, soft, medium SAND, some Silt | | |
| 21 | | | | 27.3 | 12-48" Wet, red/brown, medium dense, SILT, little Mica Schist | | |
| 22 | | Sonic | 80 | | | | |
| 23 | | | | | | | |
| 24 | | | | | | | |
| 25 | | | | 0.0 | 0-6" Moist, red/brown SILT, lense of white/tan micaceous Sandstone, trace Mica Schist | | |
| 26 | | | | 0.0 | 6-48" Dry, red/brown very dense SILT, trace sub-round Gravel | | |
| 27 | | Sonic | 80 | | | | |
| 28 | | | | | | | |
| 29 | SB-11 (29.5-30) | | | | | | |
| 30 | | | | | End of boring at 30 ft bgs | | |

**SAMPLING METHOD**
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WH = WEIGHT OF HAMMER (RODS)

Hand cleared to 5 ft bgs; Sonic drilled from 5 to 30 ft bgs

**PARSONS**
**DRILLING RECORD**

**BORING/WELL ID: SB-12**
Sheet 1 of 1

**Contractor:** Aquifer Drilling & Testing
**Driller:** Greg Rivera
**Inspector:** Zohar Lavy
**Rig Type:** Track Mounted Sonic Rig

**PROJECT NAME:** Consolidated Edison - Former Ludlow Street Works
**PROJECT NUMBER:** 446110-04000

**Location Description:**
Approx. 25' west and in line w/ DPW yard concrete retaining wall.

**Location Plan**
See Site Plan

**Weather:** Overcast, low 60s
**Date/Time Start:** 11-05-2012/0950
**Date/Time Finish:** 11-05-2012/1100

| GROUNDWATER OBSERVATIONS | | | | |
|---|---|---|---|---|
| Water Level | DTW ~22.5' bgs | DTW | | |
| Date | 11-05-2012 | | | |
| Time | 1450 | | | |
| Meas. From | ft bgs - Soil cuttings | Top of Casing | | |

| Sample Depth | Location/ Sample I.D. | SPT | Rec. (%) | PID (ppm) | FIELD IDENTIFICATION OF MATERIAL | SCHEMATIC | COMMENTS |
|---|---|---|---|---|---|---|---|
| +2 | | | | | | | |
| +1 | | | | | | | |
| 0 | | Vac-tron | NA | 0.0 | 0-1.5' Wet, dark brown, fine to medium SAND, some Debris, little Cobble, fine to coarse sub-angular to round Gravel, trace Brick and Silt | | |
| 1 | | Vac-tron | NA | | | | |
| 2 | | Vac-tron | NA | 0.0 | 1.5-5' Moist, dark brown, fine to medium SAND, some Cobble, little Brick, trace Silt | | |
| 3 | | Vac-tron | NA | | | | |
| 4 | | Vac-tron | NA | | | | |
| 5 | | | | | 0-14" CONCRETE | | |
| 6 | | | | | 14-18" BRICK | | |
| 7 | | Sonic | 50 | 5.4 | 18-30" Moist, orange/brown fine to medium SAND, some fine to medium sub-angular Gravel | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | 135.0 | 0-20" Moist, orange/grey fine to medium SAND, some fine to medium sub-angular Gravel, hydrocarbon odor | | |
| 11 | | | | | | | |
| 12 | SB-12 (12-14) | Sonic | 100 | 1977.0 | 20-50" Moist/wet , orange/grey fine to medium SAND, some fine to medium sub-angular Gravel, trace Cobble, NAPL saturated, hydrocarbon and napthalene odor and staining | | |
| 13 | | | | | | | |
| 14 | | | | 721.0 | 50-60" Moist, tan/orange SILT, some fine Sand, little olive Clay, little fine to medium Sand lenses, hydrocarbon odor | | |
| 15 | | | | | 0-54" Moist, orange SILT and fine SAND, slight hydrocarbon odor | | |
| 16 | | | | | 54-60" Moist, orange SILT and fine SAND, little medium Sand, slight hydrocarbon odor | | |
| 17 | | Sonic | 100 | 65.5 | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | 0-30" Moist, orange/brown SILT and fine SAND, little tan Clay, little fine to medium Sand lenses, hydrocarbon odor | | |
| 21 | | | | | | | |
| 22 | | Sonic | 50 | 73.7 | | | |
| 23 | | | | | | | |
| 24 | | | | | | | |
| 25 | | | | | 0-30" Moist, orange/brown SILT and fine SAND, little tan Clay, little fine to medium Sand lenses, hydrocarbon odor | | |
| 26 | | | | | | | |
| 27 | | | | | 30-36" Moist, orange/brown SILT and fine SAND, little tan Clay, little fine to medium Sand lenses, hydrocarbon odor, sheen | | |
| 28 | | Sonic | 100 | 41.6 | | | |
| 29 | | | | | 36-52" Moist, orange/brown SILT and fine SAND, little tan Clay, little fine to medium Sand lenses, hydrocarbon odor<br>52-60" Moist, orange medium SAND, slight hydrocarbon odor | | |
| 30 | | | | 121.0 | 0-32" Wet, orange/brown medium to coarse SAND, hydrocarbon odor and slight staining | | |
| 31 | | | | 68.4 | 32-60" Wet, orange/brown medium to coarse SAND, hydrocarbon odor, trace fine sub-angular to round Gravel | | |
| 32 | | Sonic | 100 | | | | |
| 33 | | | | | | | |
| 34 | | | | | | | |
| 35 | | | | | 0-24" Wet, orange/brown medium to coarse SAND, hydrocarbon odor, little fine sub-angular to round Gravel trace fine sub-angular to round Gravel | | |
| 36 | SB-12 (36-38) | Sonic | 75 | 22.9 | 24-36" Weathered white SCHIST, NAPL within fractures | | |
| 37 | | | | | | | |
| 38 | | | | | | | |
| 39 | End of boring at 39 ft bgs | | | | | | |

**SAMPLING METHOD**
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WH = WEIGHT OF HAMMER (RODS)

NAPL observed from 36 - 38 ft bgs
Hand cleared to 5 ft bgs; Sonic drilled from 5 to 39 ft bgs

**PARSONS**
**DRILLING RECORD**

**BORING/WELL ID: SB-13**
Sheet 1 of 1

**Contractor:** Aquifer Drilling & Testing
**Driller:** Greg Rivera
**Inspector:** Zohar Lavy
**Rig Type:** Track Mounted Sonic Rig

**PROJECT NAME:** Consolidated Edison - Former Ludlow Street Works
**PROJECT NUMBER:** 446110-04000

**Location Description:**
Approximately 70' north of Yonkers DPW concrete retaining wall and approximately 45' west of Waverly Properties western boundary.

**Location Plan**
See Site Plan

**Weather:** Partly cloudy, 40s
**Date/Time Start:** 11-05-2012/1420
**Date/Time Finish:** 11-05-2012/1505

| GROUNDWATER OBSERVATIONS | | | | |
|---|---|---|---|---|
| Water Level | DTW ~22' bgs | DTW | | |
| Date | 10-26-2012 | | | |
| Time | 1450 | | | |
| Meas. From | ft bgs - Soil cuttings | Top of Casing | | |

| Sample Depth | Location/ Sample I.D. | SPT | Rec. (%) | PID (ppm) | FIELD IDENTIFICATION OF MATERIAL | SCHEMATIC | COMMENTS |
|---|---|---|---|---|---|---|---|
| +2 | | | | | | | |
| +1 | | | | | | | |
| 0 | | Vac-tron | NA | 0.0 | 0-12" Dry, dark brown, fine to coarse SAND, some Organics (rootlets), little Gravel and Cobble | | |
| 1 | | Vac-tron | NA | 0.0 | 12-5' Dry brown/orange fine to coarse SAND and COBBLE, some Brick, little Concrete fragments | | |
| 2 | | Vac-tron | NA | | | | |
| 3 | | Vac-tron | NA | | | | |
| 4 | | Vac-tron | NA | | | | |
| 5 | | | | | 0-12" Weathered gneissic SCHIST boulder | | |
| 6 | | | | | 12-30" Dry, dark brown, fine to medium SAND and fine to coarse angular to sub-round GRAVEL | | |
| 7 | | Sonic | 50 | 1.3 | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | Dry, dark brown, fine to medium SAND and fine to coarse angular to sub-round GRAVEL some gneissic Schist Cobbles and Organics | | |
| 11 | | | | | | | |
| 12 | | Sonic | 100 | 1.7 | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | 0-10" Dry, dark brown, fine to medium SAND and fine to coarse angular to sub-round GRAVEL some gneissic Schist Cobbles and Organics, trace Silt | | |
| 16 | | | | | | | |
| 17 | | Sonic | 100 | 2.1 | 10-48" SCHIST Boulder | | |
| 18 | | | | | 48-60" Moist, dark brown/black fine to medium SAND, some fine to coarse sub-angular to sub-round Gravel | | |
| 19 | | | | | | | |
| 20 | | | | | 0-20" Dry, gray fine to coarse SAND, some sub-angular to sub-round Gravel, little Schist Cobble | | |
| 21 | | | | | 20-40" CONCRETE | | |
| 22 | | Sonic | 100 | 2.3 | 40-60" Moist, black, fine to medium SAND and BRICK, some fine to medium sub-angular Gravel, trace Glass fragments | | |
| 23 | | | | | | | |
| 24 | | | | | | | |
| 25 | | | | | 0-12" Moist, orange/brown fine to medium SAND, little Silt, trace sub-angular to round fine to coarse Gravel | | |
| 26 | | | | | | | |
| 27 | | Sonic | 100 | 1.5 | 12-60" Dry, orange/brown medium to coarse SAND, little coarse angular Gravel, trace Schist Cobble | | |
| 28 | | | | | | | |
| 29 | | | | | | | |
| 30 | | | | | 0-10" Dry, orange/brown medium to coarse SAND, little coarse angular Gravel, trace Schist Cobble | | |
| 31 | | | | | 10-60" Moist orange/brown fine to medium SAND, some Silt, trace course round gravel | | |
| 32 | | Sonic | 100 | 2.1 | | | |
| 33 | | | | | | | |
| 34 | | | | | | | |
| 35 | | | | | 0-36": Moist, orange fine SAND and SILT | | |
| 36 | | | | | | | |
| 37 | | Sonic | 100 | 66.2 | 36-60" Moist, orange/gray fine SAND, slight hydrocarbon odor | | |
| 38 | | | | | | | |
| 39 | | | | | | | |
| 40 | | | | 73.7 | 0-24" Moist, grey/black fine to medium SAND, some angular Gravel, little Schist, trace Silt, slight hydrocarbon odor | | |
| 41 | | | | | | | |
| 42 | | | | 85.6 | 24-40" Moist/wet, orange fine to medium SAND and weathered gneissic SCHIST COBBLE | | |
| 43 | | | | | 40-50" Moist/wet, orange fine to medium SAND and weathered gneissic SCHIST COBBLE, NAPL | | |
| 44 | | Sonic | 46 | | blebs and sheens | | Rock encountered at approximate;y 48 ft bgs |
| 45 | | | | | | | |
| 46 | | | | | | | |
| 47 | SB-13 (47-49) | | | | | | |
| 48 | | | | | | | |
| 49 | | | | | End of boring at 49 ft bgs | | |

**SAMPLING METHOD**
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WH = WEIGHT OF HAMMER (RODS)

NAPL observed from 47 - 49 ft bgs
Hand cleared to 5 ft bgs; Sonic drilled from 5 to 49 ft bgs

**PARSONS**
**DRILLING RECORD**

**BORING/WELL ID: SB-14**
Sheet 1 of 1

**Contractor:** Aquifer Drilling & Testing
**Driller:** Jeremey Meyers
**Inspector:** Zohar Lavy
**Rig Type:** Track Mounted Sonic Rig

**PROJECT NAME:** Consolidated Edison - Former Ludlow Street Works
**PROJECT NUMBER:** 446110-04000

**Location Description:**
Approximately 100' north of Yonkers DPW concrete retaining wall and approximately 30' west of Waverly Properties western boundary.

**Location Plan**
See Site Plan

**Weather:** Rain, 40s, 15-20 mph East
**Date/Time Start:** 12-21 -2012/0925
**Date/Time Finish:** 12-21-2012/1150

GROUNDWATER OBSERVATIONS

| | | | | |
|---|---|---|---|---|
| Water Level | DTW ~36' bgs | DTW | | |
| Date | 12-21-2012 | | | |
| Time | 1050 | | | |
| Meas. From | ft bgs - Soil cuttings | Top of Casing | | |

| Sample Depth | Location/ Sample I.D. | SPT | Rec. (%) | PID (ppm) | FIELD IDENTIFICATION OF MATERIAL | SCHEMATIC | COMMENTS |
|---|---|---|---|---|---|---|---|
| +2 | | | | | | | |
| +1 | | | | | | | |
| 0 | | Vactron | NA | 0.0 | 0-5' Moist, brown, fine to coarse SAND, some Boulder, little Concrete, little fine to coarse Gravel, trace Plastic | | |
| 1 | | Vactron | NA | | | | |
| 2 | | Vactron | NA | | | | |
| 3 | | Vactron | NA | | | | |
| 4 | | Vactron | NA | | | | |
| 5 | | | | 0.0 | 0-12" Wet, dark brown fine to medium SAND and COBBLE | | |
| 6 | | | | 0.0 | 12-20" Wet, sub-angular to angular GRAVEL | | |
| 7 | | Sonic | 67 | 0.0 | 20-40" Moist, brown fine to medium SAND, some Marble (debris), little Silt | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | 0.1 | 0-30" Wet, brown, fine to medium SAND, some fine to coarse angular to sub-round Gravel, trace Rope and Wood | | |
| 11 | | | | | | | |
| 12 | | Sonic | 80 | 0.1 | 30-48" Dry, brown/grey fine to medium SAND and SHALE (debris) | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | 0.1 | 0-20" Moist, brown/grey fine to medium SAND and SHALE (debris), some gneissic Schist, little Asphalt | | |
| 16 | | | | | | | |
| 17 | | Sonic | 33 | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | 0.0 | Moist, dark grey, fine to medium SAND and angular coarse GRAVEL, some gneissic Schist and Concrete | | |
| 21 | | | | | | | |
| 22 | | Sonic | 27 | | | | |
| 23 | | | | | | | |
| 24 | | | | | | | |
| 25 | | | | 0.2 | 0-12" Moist, dark grey, fine to medium SAND and angular coarse GRAVEL, some gneissic Schist and Concrete | | |
| 26 | | | | | | | |
| 27 | | Sonic | 83 | 0.2 | 12-40" Black gneissic SCHIST | | |
| 28 | | | | 0.2 | 40-50" Dry, red/brown medium SAND | | |
| 29 | | | | | | | |
| 30 | | | | 0.2 | 0-20" Dry, orange, fine SAND, little sub-round Gravel, trace Silt | | |
| 31 | | | | 0.2 | 20-60" Dry, orange/brown, medium to coarse SAND, little fine to coarse sub-angular to sub-round Gravel | | |
| 32 | | Sonic | 100 | | | | |
| 33 | | | | | | | |
| 34 | | | | | | | |
| 35 | | | | 0.0 | 0-14" Moist, orange, fine SAND, some Silt, little fine to coarse sub-angular to sub-round Gravel | | |
| 36 | | | | | 14-42" Moist-wet, orange, fine SAND and SILT, trace Clay | | |
| 37 | | Sonic | 100 | | 42-60" Moist-wet, dark orange, fine SAND, little Silt, trace Mica | | |
| 38 | SB-14 (38-40) | | | | | | |
| 39 | | | | | | | |
| 40 | | | | 0.2 | Moist-wet, dark orange, fine SAND, little Silt, trace Mica | | |
| 41 | | | | | | | |
| 42 | | Sonic | 80 | | | | |
| 43 | | | | | | | |
| 44 | | | | | | | Hard Drilling from 44-45 ft bgs |
| 45 | SB-14 (45-47) | | | 0.0 | 0-14" Moist-wet, dark orange, fine SAND, little Silt, trace Mica | | |
| 46 | | Sonic | 60 | | 14-33" Moist, orange/brown, fine to medium SAND | | Very hard drilling from 47-48 ft bgs |
| 47 | | | | | 33-36" SCHIST | | |
| 48 | End of boring at 48 ft bgs | | | | | | |

**SAMPLING METHOD**
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WH = WEIGHT OF HAMMER (RODS)

Hand cleared to 5 ft bgs; Sonic drilled from 5 to 48 ft bgs

**PARSONS**
**DRILLING RECORD**

**BORING/WELL ID: SB-16**
Sheet 1 of 1

**Contractor:** Aquifer Drilling & Testing
**Driller:** Jeremey Meyers
**Inspector:** Zohar Lavy
**Rig Type:** Track Mounted Sonic Rig

**PROJECT NAME:** Consolidated Edison - Former Ludlow Street Works
**PROJECT NUMBER:** 446110-04000

**Location Description:**
Approximately 40' north of Yonkers DPW concrete retaining wall and approximately 70' west of Waverly Properties western boundary.

**Location Plan**
See Site Plan

**Weather:** Partly cloudy, mid 40s, 0-5 mph North
**Date/Time Start:** 12-20-2012/1035
**Date/Time Finish:** 12-20-2012/1710

| GROUNDWATER OBSERVATIONS | | | | |
|---|---|---|---|---|
| Water Level | DTW ~30' bgs | DTW | | |
| Date | 12-20-2012 | | | |
| Time | 1610 | | | |
| Meas. From | ft bgs - Soil cuttings | Top of Casing | | |

| Sample Depth | Location/ Sample I.D. | SPT | Rec. (%) | PID (ppm) | FIELD IDENTIFICATION OF MATERIAL | SCHEMATIC | COMMENTS |
|---|---|---|---|---|---|---|---|
| +2 | | | | | | | |
| +1 | | | | | | | |
| 0 | | Vactron | NA | 0.0 | 0-12" Moist, dark brown, fine to medium SAND and fine to coarse GRAVEL, some Organics (roots) | | |
| 1 | | Vactron | NA | 0.0 | 12"-5' Moist, brown fine to coarse SAND, some Boulder, little Gravel | | |
| 2 | | Vactron | NA | | | | |
| 3 | | Vactron | NA | | | | |
| 4 | | Vactron | NA | | | | |
| 5 | | | | | 0-10" Moist, brown/grey fine to medium SAND, some Concrete | | |
| 6 | | | | | 10-48" Dry, brown, fine to coarse SAND, some fine to coarse angular to sub-round Gravel, little | | |
| 7 | | Sonic | 80 | 1.1 | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | 0-24" Dry, brown, fine to coarse SAND, some fine to coarse angular to sub-round Gravel, little Asphalt, trace Silt and Organics (wood) | | |
| 11 | | | | | | | |
| 12 | | Sonic | 100 | 0.8 | 24-50" Dry, brown, fine to medium SAND and weathered gneissic SCHIST | | |
| 13 | | | | | 50-60" Dry, brown, fine to medium SAND and weathered gneissic SCHIST, some Concrete | | |
| 14 | | | | | | | |
| 15 | | | | | 0-12" Moist, dark brown, fine to medium SAND, little Silt, little round to angular Gravel, trace | | |
| 16 | | | | | 12-24" SCHIST | | |
| 17 | | Sonic | 50 | 1.4 | | | Very hard drilling from 17-19 ft bgs. Casing advanced to 20 ft bgs |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | 0-30" Moist, fine to coarse sub-angular GRAVEL and SCHIST, little fine to coarse brown Sand | | |
| 21 | | | | | 30-60" BRICK | | |
| 22 | | Sonic | 100 | 5.7 | | | |
| 23 | | | | | | | |
| 24 | | | | | | | |
| 25 | | | | | No Recovery | | |
| 26 | | | | | | | Very hard drilling from 25-30 ft bgs. Casing advanced to 30 ft bgs |
| 27 | | Sonic | 0 | NA | | | |
| 28 | | | | | | | |
| 29 | | | | | | | |
| 30 | | | | | Wet, BRICK and fine to coarse angular to sub-angular GRAVEL, little fine to medium SAND, NAPL | | |
| 31 | SB-16 (30-33) | | | | blebs, moderate hydrocarbon odor, sheens | | |
| 32 | | Sonic | 80 | 1406.0 | | | |
| 33 | | | | | | | |
| 34 | | | | | | | |
| 35 | | | | | 0-14"Wet, BRICK and fine to coarse angular to sub-angular GRAVEL, little fine to medium SAND, little Silt, NAPL blebs, slight hydrocarbon odor, sheens | | |
| 36 | | | | | | | |
| 37 | | Sonic | 60 | 370.0 | 14-24" CONCRETE | | |
| 38 | | | | | 24-36" Wet, dark brown/black, medium to coarse SAND, slight hydrocarbon odor and staining | | |
| 39 | | | | | | | |
| 40 | | | | | 0-40" Moist, orange/brown fine to medium SAND, slight hydrocarbon odor | | |
| 41 | | | | | 40-60" Moist, brown/grey, fine SAND, little Silt | | |
| 42 | | Sonic | 100 | 0.9 | | | |
| 43 | | | | | | | |
| 44 | | | | | | | |
| 45 | SB-16 (45-47) | Sonic | 100 | 0.7 | 0-20" Moist, brown/grey, fine SAND, some Silt | | |
| 46 | | | | | 20-24" SCHIST | | |
| 47 | End of boring at 47 ft bgs | | | | | | |

**SAMPLING METHOD**
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WH = WEIGHT OF HAMMER (RODS)

NAPL encountered from 30-36 ft bgs
Hand cleared to 5 ft bgs; Sonic drilled from 5 to 47 ft bgs

**PARSONS**
**DRILLING RECORD**

**BORING/WELL ID: SB-17**
Sheet 1 of 1

**Contractor:** Aquifer Drilling & Testing
**Driller:** Jeremey Meyers
**Inspector:** Zohar Lavy
**Rig Type:** Track Mounted Sonic Rig

**PROJECT NAME:** Consolidated Edison - Former Ludlow Street Works
**PROJECT NUMBER:** 446110-04000

**Location Description:** Approximately 125' north of Yonkers DPW concrete retaining wall and approximately 45' west of Waverly Properties western boundary.

**Location Plan**
See Site Plan

**Weather:** Partly cloudy, mid 40s, 0-5 mph North
**Date/Time Start:** 12-21-2012/1250
**Date/Time Finish:** 12-21-2012/1530

GROUNDWATER OBSERVATIONS

| | | | | |
|---|---|---|---|---|
| Water Level | DTW ~40' bgs | DTW | | |
| Date | 12-21-2012 | | | |
| Time | 1520 | | | |
| Meas. From | ft bgs - Soil cuttings | Top of Casing | | |

| Sample Depth | Location/ Sample I.D. | SPT | Rec. (%) | PID (ppm) | FIELD IDENTIFICATION OF MATERIAL | SCHEMATIC | COMMENTS |
|---|---|---|---|---|---|---|---|
| +2 | | | | | | | |
| +1 | | | | | | | |
| 0 | | Vactron | NA | 0.0 | 0-5' Moist, orange/brown, fine to coarse SAND and BOULDERS, some fine to coarse Gravel, little Concrete | | |
| 1 | | Vactron | NA | 0.0 | | | |
| 2 | | Vactron | NA | | | | |
| 3 | | Vactron | NA | | | | |
| 4 | | Vactron | NA | | | | |
| 5 | | Sonic | 100 | 0.0 | 0-12" Wet, grey/brown, fine to medium SAND, some angular to sub-round fine to coarse Gravel<br>12-20" BOULDER<br>20-60" Dry, dark brown, fine to coarse SAND and angular to sub-round fine to coarse GRAVEL, little Brick | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | Very hard drilling from 10-13 ft bgs. Casing advanced to 13 ft bgs |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | Sonic | 50 | 0.0 | Gneissic SCHIST and CONCRETE, trace Wood | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| 16 | | | | | | | |
| 17 | | | | | | | Very hard drilling from 18-20 ft bgs. Casing advanced to 20 ft bgs |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | Sonic | 67 | 0.0 | Gneissic SCHIST and CONCRETE, trace Wood | | |
| 21 | | | | | | | |
| 22 | | | | | | | |
| 23 | | | | | | | |
| 24 | | | | | | | |
| 25 | | Sonic | 33 | 0.0 | Gneissic SCHIST and CONCRETE | | |
| 26 | | | | | | | |
| 27 | | | | | | | |
| 28 | | | | | | | |
| 29 | | | | | | | |
| 30 | | Sonic | 100 | 0.1 | 0-34" Gneissic SCHIST and CONCRETE<br>34-60" Dry, orange/brown, medium to coarse SAND and fine to medium sub-angular to sub-round Gravel | | |
| 31 | | | | | | | |
| 32 | | | | | | | |
| 33 | SB-17 (33-35) | | | | | | |
| 34 | | | | | | | |
| 35 | | Sonic | 0 | NA | No Recovery | | |
| 36 | | | | | | | |
| 37 | | | | | | | |
| 38 | | | | | | | |
| 39 | | | | | | | |
| 40 | | Sonic | 20 | 0.0 | Moist/wet, brown/grey medium to coarse SAND, some fine to medium sub-angular to sub-round Gravel, trace Silt | | |
| 41 | | | | | | | |
| 42 | | | | | | | |
| 43 | | | | | | | |
| 44 | | | | | | | |
| 45 | SB-17 (45-47) | Sonic | 50 | 0.0 | 0-24" Moist, brown/grey medium to coarse SAND, some fine to medium sub-angular to sub-round Gravel, trace Silt | | Very hard drilling from 47 48 ft bgs |
| 46 | | | | | | | |
| 47 | | | | | 24-30" Moist, brown/grey medium to coarse SAND, some fine to medium sub-angular to sub-round Gravel, little weathered Schist trace Silt | | |
| 48 | End of boring at 48 ft bgs | | | | | | |

**SAMPLING METHOD**
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WH = WEIGHT OF HAMMER (RODS)

Hand cleared to 5 ft bgs; Sonic drilled from 5 to 48 ft bgs

**PARSONS**
**DRILLING RECORD**

**BORING/WELL ID: MW-2 (alt.)**
Sheet 1 of 1

**Contractor:** Aquifer Drilling & Testing
**Driller:** Jeremey Meyers
**Inspector:** Zohar Lavy
**Rig Type:** Track Mounted Sonic Rig

**PROJECT NAME:** Consolidated Edison - Former Ludlow Street Works
**PROJECT NUMBER:** 446110-04000

**Location Description:** Southeast portion of the Yonkers DPW yard

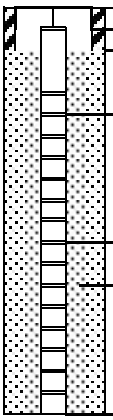
| GROUNDWATER OBSERVATIONS | | | | |
|---|---|---|---|---|
| Water Level | DTW | DTW | | |
| | | 6.87 | | |
| Date | | 12-26-12 | | |
| Time | | 0930 | | |
| Meas. From | | Top of Casing | | |

**Weather:** Partly cloudy, high 40s
**Date/Time Start:** 12-19-2012/1340
**Date/Time Finish:** 12-19-2012/1410

**Location Plan**
See Site Plan

| Sample Depth | Location/ Sample I.D. | SPT | Rec. (%) | PID (ppm) | FIELD IDENTIFICATION OF MATERIAL |
|---|---|---|---|---|---|
| +2 | | | | | |
| +1 | | | | | |
| 0 | | Vac-tron | NA | 0.0 | 0-12" Moist, black, fine to coarse SAND and ASPHALT |
| 1 | | Vac-tron | NA | 0.0 | 12"-5' Moist, dark brown, fine to coarse SAND, some Brick, little Cobble, trace Metal, trace Silt |
| 2 | | Vac-tron | NA | | |
| 3 | | Vac-tron | NA | | |
| 4 | | Vac-tron | NA | | |
| 5 | | | | NA | Large piece of Metal |
| 6 | | | | | |
| 7 | | Sonic | 13 | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | No Recovery |
| 11 | | | | | |
| 12 | | Sonic | 0 | NA | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | No Recovery |
| 16 | | | | | |
| 17 | | Sonic | 0 | NA | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | 0-30" Wet, dark brown/orange, fine to coarse SAND, little Silt, little fine to coarse sub-angular to sub-round Gravel |
| 21 | | | | | |
| 22 | | Sonic | 100 | 10.7 | 30-60" Moist, orange, fine SAND and SILT, some fine sub-angular to sub-round Gravel, trace Clay |
| 23 | | | | | |
| 24 | | | | | |
| 25 | End of boring at 25' bgs | | | | |

**SCHEMATIC**




**COMMENTS**
Hand cleared to 5' bgs, sonic drilled from 5' to 25' bgs.

**SAMPLING METHOD**
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WH = WEIGHT OF HAMMER (RODS)

**PARSONS**
**DRILLING RECORD**

**BORING/WELL ID: MW-5 (alt.)**
Sheet 1 of 1

**Contractor:** Aquifer Drilling & Testing
**Driller:** Jeremey Meyers
**Inspector:** Zohar Lavy
**Rig Type:** Track Mounted Sonic Rig

**PROJECT NAME:** Consolidated Edison - Former Ludlow Street Works
**PROJECT NUMBER:** 446110-04000

**Location Description:** Northwest portion of the Yonkers DPW yard

| GROUNDWATER OBSERVATIONS | | | | |
|---|---|---|---|---|
| Water Level | DTW ~10 ft bgs | DTW 11.12 | | |
| Date | 12-19-12 | 12-26-12 | | |
| Time | 1140 | 1315 | | |
| Meas. From | ft bgs - Soil cuttings | Top of Casing | | |

**Weather:** Partly cloudy, high 40s
**Date/Time Start:** 12-19-12/ 1120
**Date/Time Finish:** 12-19-12/ 1200

**Location Plan**
See Site Plan

| Sample Depth | Location/ Sample I.D. | SPT | Rec. (%) | PID (ppm) | FIELD IDENTIFICATION OF MATERIAL | SCHEMATIC | COMMENTS |
|---|---|---|---|---|---|---|---|
| +2 | | | | | | | |
| +1 | | | | | | | Locking J-plug on casing |
| 0 | | Vac-tron | NA | 0.0 | 0-5' Moist, dark brown fine to coarse SAND, some Cobble, little fine to coarse sub-angular to round Gravel, little Brick, trace Metal | | Flushmount manhole |
| 1 | | Vac-tron | NA | | | | Bentonite (1-5') |
| 2 | | Vac-tron | NA | | | | |
| 3 | | Vac-tron | NA | | | | |
| 4 | | Vac-tron | NA | | | | |
| 5 | | Sonic | 80 | 0.3 | Moist, brown fine to coarse SAND, some sub-angular to round fine to medium Gravel, trace Fabric | | 2" PVC riser (0.5-7') |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | 2" ID PVC well screen |
| 10 | | Sonic | 100 | 2.0 | 0-36" Wet, orange/brown fine SAND, some Silt, trace Clay | | 0.002" slot (7-22') |
| 11 | | | | | 36-48" Wet, orange/brown fine SAND and WOOD, little Silt | | |
| 12 | | | | 327.0 | 48-60" Black stained WOOD, strong Cresote odor | | #2 silica (5-22') |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | Sonic | 100 | 2.5 | 0-38" Moist, orange SILT, some olive Clay, little fine Sand, trace round fine to medium Gravel | | |
| 16 | | | | | 38-60" Moist, orange/brown medium to coarse SAND | | |
| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | Sonic | 100 | 2.5 | Moist, orange/brown medium to coarse SAND, trace fine sub-round to round Gravel | | |
| 21 | | | | | | | PVC end cap 22' |
| 22 | | | | | | | |
| 23 | | | | | | | |
| 24 | | | | | | | |
| 25 | End of boring at 25' bgs | | | | | | |

**SAMPLING METHOD**
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WH = WEIGHT OF HAMMER (RODS)

Hand cleared to 5' bgs, sonic drilled from 5' to 25' bgs.

**PARSONS**
**DRILLING RECORD**

**BORING/WELL ID: MW-7**
Sheet 1 of 1

**Contractor:** Aquifer Drilling & Testing
**Driller:** Greg Rivera
**Inspector:** Zohar Lavy
**Rig Type:** Track Mounted Sonic Rig

**PROJECT NAME:** Consolidated Edison - Former Ludlow Street Works
**PROJECT NUMBER:** 446110-04000

**Location Description:** Approx. 58' N of Yonkers DPW yard concrete retaining wall, 70' W of Wavery Prop. Boundary

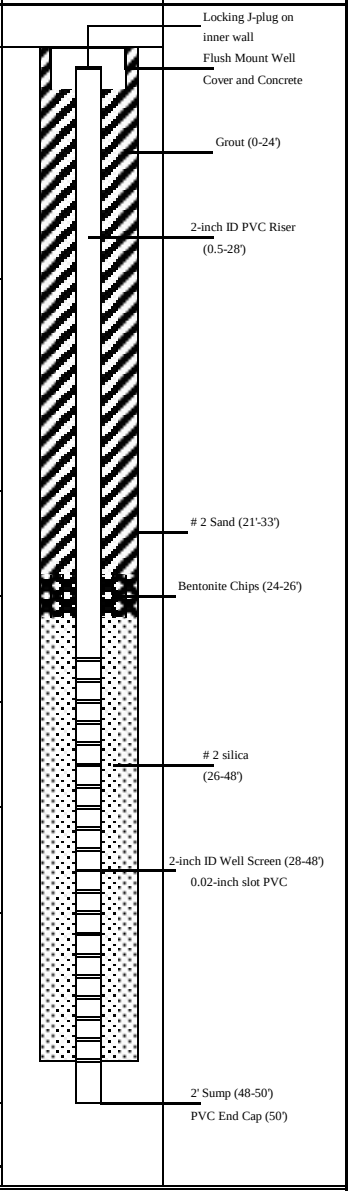
**Location Plan**
See Site Plan

**Weather:** Overcast, low 60s
**Date/Time Start:** 10-26-2012/0810
**Date/Time Finish:** 10-26-2012/0920

GROUNDWATER OBSERVATIONS

| | | | | |
|---|---|---|---|---|
| Water Level | DTW | DTW 38.69' | | |
| Date | | 11-09-2012/0745 | | |
| Time | | | | |
| Meas. From | ft bgs - Split Spoon | Top of Casing | | |

| Sample Depth | Location/ Sample I.D. | SPT | Rec. (%) | PID (ppm) | FIELD IDENTIFICATION OF MATERIAL |
|---|---|---|---|---|---|
| +2 | | | | | |
| +1 | | | | | |
| 0 | | Vac-tron | NA | 0.0 | 0-6" Moist, dark brown fine to coarse SAND and ORGANICS, some fine to coarse Gravel, trace Silt and Asphalt |
| 1 | | Vac-tron | NA | | |
| 2 | | Vac-tron | NA | 0.0 | 6"-3' Moist, dark brown fine to coarse SAND and ORGANICS, some Cobble, little fine to coarse Gravel |
| 3 | | Vac-tron | NA | 0.0 | 3'-5' Moist/dry brown, medium to fine SAND, some fine to coarse Gravel, trace Brick |
| 4 | | Vac-tron | NA | | |
| 5 | | | | 5.6 | 0-36" Dry, brown, fine to coarse SAND, some sub-angular to round fine to coarse Gravel, trace Wood and Cobble |
| 6 | | | | | |
| 7 | | Sonic | | 4.2 | 36-48" Dry, brown, fine to coarse SAND, some sub-angular to round fine to coarse Gravel, littleWood, trace Cobble |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | 0-20" Wet, brown/gray fine to medium SAND, little Silt, trace Wood & Concrete |
| 12 | | | | | 20-36" Gneiss BOULDER |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | Sonic | 30 | 20.7 | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | 0-24" Wet, brown/gray fine to coarse SAND, some fine to coarse angular to sub-angular Gravel, trace Silt and Wood |
| 22 | | | | | |
| 23 | | Sonic | 40 | 14.7 | |
| 24 | | | | | |
| 25 | | | | | |
| 26 | | | | 7.1 | 0-24" Moist, brown/gray fine to coarse SAND, some fine to coarse angular to sub-angular Gravel, trace Silt and Wood |
| 27 | | | | | |
| 28 | | Sonic | 80 | | 24-36" Dry, black, medium to fine SAND and fine to coarse angular to sub-round GRAVEL, some Concrete, trace Coal fragments |
| 29 | | | | 11.6 | |
| 30 | | | | | 36-48" Dry, orange medium to fine SAND, trace angular to sub-angular fine Gravel |
| 31 | | | | 5.2 | 0-30" Moist, orange/brown fine to coarse SAND and angular to round GRAVEL |
| 32 | | | | 11.5 | 30-60" Wet, orange medium to fine SAND, trace Silt |
| 33 | | Sonic | 100 | | |
| 34 | | | | | |
| 35 | | | | | |
| 36 | MW-7 (36-38) | | | | 0-56" Moist, orange fine SAND and SILT, some medium - fine Sand veins transmitting NAPL, striated tan Clay laminations, strong hydrocarbon odor |
| 37 | | | | | |
| 38 | | Sonic | 100 | 1175.0 | 56-60" Wet, dark gray, medium to coarse SAND, strong hydrocarbon odor |
| 39 | | | | | |
| 40 | | | | | |
| 41 | | | | 209.0 | 0-60" Wet, brown medium to fine SAND, some orange Silt lenses, some black staining, slight hydrocarbon odor |
| 42 | | | | | |
| 43 | | | | 19.5 | 60-100" Wet, orange/brown medium to coarse SAND, trace fine round Gravel |
| 44 | | | | | |
| 45 | | Sonic | 83 | | |
| 46 | | | | | |
| 47 | | | | | |
| 48 | MW-7 (48-50) | | | | |
| 49 | | | | | |
| 50 | | | | | No Recovery |
| 51 | | Sonic | 0 | NA | |
| 52 | | | | | |
| 53 | | | | | End of boring at 53' bgs |




**SAMPLING METHOD**
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WH = WEIGHT OF HAMMER (RODS)

NAPL observed 35' - 40' bgs
Hard drilling from 10-20 ft bgs. Casing advanced to 20 ft bgs. Drilled through rock from 50 to 53 ft bgs. No rock retrieved from 50 to 53 ft bgs
Hand cleared to 5' bgs, sonic drilled from 5' to 53' bgs

**PARSONS**
**DRILLING RECORD**

**BORING/WELL ID: MW-8**
Sheet 1 of 1

**Contractor:** Aquifer Drilling & Testing
**Driller:** Greg Rivera
**Inspector:** Matt Bruno
**Rig Type:** Track Mounted Sonic Rig

**PROJECT NAME:** Consolidated Edison - Former Ludlow Street Works
**PROJECT NUMBER:** 446110-04000

**Location Description:**
On MTA/Metro North Property. Approximately 40' west of railroad track, 500' south of Domino Sugar Refining southern property boundary.

**Location Plan**
See Site Plan

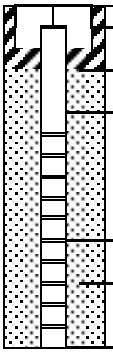
**Weather:** Partly cloudy, 40s
**Date/Time Start:** 11-06-2012/1345
**Date/Time Finish:** 11-06-2012/1400

GROUNDWATER OBSERVATIONS

| | | | | |
|---|---|---|---|---|
| Water Level | DTW ~6' bgs | DTW 4.68 | | |
| Date | 10-18-2012 | 11-9-12 | | |
| Time | 1430 | 1322 | | |
| Meas. From | ft bgs - Soil cuttings | Top of Casing | | |

| Sample Depth | Location/ Sample I.D. | SPT | Rec. (%) | PID (ppm) | FIELD IDENTIFICATION OF MATERIAL |
|---|---|---|---|---|---|
| +2 | | | | | |
| +1 | | | | | |
| 0 | | Vac-tron | NA | 0.0 | 0-12" Dry, gray fine to medium SAND and sub-angular to sub-round GRAVEL |
| 1 | | Vac-tron | NA | 0.0 | 12"-5.5' Dry, dark brown, fine to coarse SAND, some Cobble, little Gravel, little Boulder, trace Brick and Silt |
| 2 | | Vac-tron | NA | | |
| 3 | | Vac-tron | NA | 0.0 | 5.5'-6' Moist, dark brown, fine to medium SAND and BOULDER, little Silt |
| 4 | | Vac-tron | NA | | |
| 5 | | | | 0.0 | 0-24" Moist, tan/brown SILT, some sub-angular Gravel, little round Gravel |
| 6 | | | | 3.7 | 24-36" Moist-wet, black/dark gray sub-angular to sub-round COBBLE/GRAVEL, some Silt and fine to coarse Sand, hydrocarbon odor |
| 7 | | Sonic | 60 | | |
| 8 | | | | | |
| 9 | MW-8 (9.5-10) | | | | |
| 10 | | | | 3.8 | 0-12" Wet, soft, black/dark brown SILT, little fine to medium Sand, trace sub-round Gravel |
| 11 | | | | 0.0 | 12-30" Wet, dark brown/black fine to medium SAND, some Silt, little sub-angular Cobble/Gravel |
| 12 | | | | 0.0 | 30-66" Moist, soft, red/brown fine to medium SAND, little Silt, trace Clay |
| 13 | | | | | |
| 14 | | Sonic | 46 | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | 0-20" Wet, soft. brown/red fine to medium SAND, little Silt |
| 21 | | | | | 20-36" Dry-moist, brown/red SILT, little fine Sand, orange/tan Silt lenses, trace sub-round Gravel |
| 22 | | Sonic | 60 | 0.0 | |
| 23 | | | | | |
| 24 | MW-8 (24.5-25) | | | | |
| 25 | | | | | End of boring at 25' bgs |

**SCHEMATIC**




**COMMENTS**

**SAMPLING METHOD**
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WH = WEIGHT OF HAMMER (RODS)

Hand cleared to 5' bgs, sonic drilled from 5' to 25' bgs.

**PARSONS**
**DRILLING RECORD**

**BORING/WELL ID: MW-9**
Sheet 1 of 1

**Contractor:** Aquifer Drilling & Testing
**Driller:** Greg Rivera
**Inspector:** Matt Bruno
**Rig Type:** Track Mounted Sonic Rig

**PROJECT NAME:** Consolidated Edison - Former Ludlow Street Works
**PROJECT NUMBER:** 446110-04000

**Location Description:**
Located approximately 30' west of MTA rail line and approximately 50' south of Domino Sugar Refining southern property boundary.

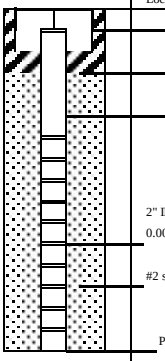
**Location Plan**
See Site Plan

**Weather:** Clear, 40s
**Date/Time Start:** 11-07-2012/0845
**Date/Time Finish:** 11-07-2012/1005

GROUNDWATER OBSERVATIONS

| | | | | |
|---|---|---|---|---|
| Water Level | DTW | DTW 3.89 | | |
| Date | | 11-9-12 | | |
| Time | | 1135 | | |
| Meas. From | | Top of Casing | | |

| Sample Depth | Location/ Sample I.D. | SPT | Rec. (%) | PID (ppm) | FIELD IDENTIFICATION OF MATERIAL |
|---|---|---|---|---|---|
| +2 | | | | | |
| +1 | | | | | |
| 0 | | Vac-tron/Sonic | NA | 0.0 | 0-12": Dry, brown/gray fine to medium SAND and sub-angular to sub-round GRAVEL, trace Metal |
| 1 | | Vac-tron/Sonic | NA | | 12"-5' Dry, brown/black fine to coarse SAND and COBBLE, some fine to coarse sub-angular to sub-round Gravel |
| 2 | | Vac-tron/Sonic | NA | 0.0 | |
| 3 | | Vac-tron/Sonic | NA | | 5-5.5' Moist, brown/black fine to coarse SAND and COBBLE, some fine to coarse sub-angular to sub-round Gravel |
| 4 | | Vac-tron/Sonic | NA | | |
| 5 | | | | | No Recovery |
| 6 | | | | | |
| 7 | | Sonic | 0 | NA | |
| 8 | | | | | |
| 9 | MW-9 (9-9.5) | | | | |
| 10 | | | | | 0-12" Wet, dark brown/black GRAVEL, some sub-round Boulders and Cobbles, little fine Sand and Silt |
| 11 | | | | | |
| 12 | | Sonic | 20 | 3.7 | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | 0.5 | 0-12" Wet, dark brown/black GRAVEL, some sub-round Boulders and Cobbles, little fine Sand and Silt, trace Metal wire fragment |
| 16 | | | | | |
| 17 | | Sonic | 60 | 1.6 | 12-36" Moist, black SILT and fine SAND, little Shell fragments |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | 0-36" Wet, very soft, red/brown fine SAND, some Silt |
| 21 | | | | | |
| 22 | | Sonic | 60 | 0.0 | |
| 23 | | | | | |
| 24 | | | | | |
| 25 | | | | 0.0 | 0-12" Wet, very soft, red/brown SILT, some fine Sand |
| 26 | | | | 0.3 | 12-24" Moist, medium dense, red/brown SILT, some Clay |
| 27 | | Sonic | 90 | 0.0 | 24-36" Moist, red/brown SILT and sub-round GRAVEL |
| 28 | | | | 0.0 | 36-54" Wet, red/tan, medium to coarse SAND, little sub-round Gravel, little Silt |
| 29 | | | | | |
| 30 | | | | 0.0 | 0-30" Wet, red/tan, medium to coarse SAND, some sub-angular Cobble and Boulder, little sub-round Gravel, little Silt |
| 31 | | | | | |
| 32 | | Sonic | 66 | 0.2 | 30-35" Moist, red/orange SILT, trace sub-round Gravel |
| 33 | | | | 0.0 | 35-40" Wet, red/orange medium SAND, little Silt, trace sub-round Cobble/Gravel |
| 34 | | | | | |
| 35 | MW-9(35-35.5) | | | | 0-12" Wet, red/orange medium SAND, little Silt, trace sub-round Cobble/Gravel |
| 36 | | | | | 12-24" Moist, med-dense, red/orange fine SAND, some Silt, trace sub-round Gravel |
| 37 | | Sonic | 80 | 0.0 | 24-30" Moist, med-dense, red/orange fine SAND, some Silt, trace sub-angular Gravel |
| 38 | | | | | 30-48" Dry, red/brown SILT, little white medium Sand lenses |
| 39 | | | | | |
| 40 | | | | | End of boring at 40' bgs |




**SAMPLING METHOD**
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED
WH = WEIGHT OF HAMMER (RODS)

Hand cleared to 5' bgs, sonic drilled from 5' to 40' bgs

# PARSONS
## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 11-26-12
**Sampling Date:** 11-26-12
**Samplers:** Zohar Lavy of Parsons / Somerset, NJ

**SAMPLE ID:** MW-1
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 14.12
Depth to Well Bottom (TOC): 20.20
**CALCULATIONS:** Ft. of Water in Well _____ X (GAL / FT) = _____ Gallons
**2-inch Casing:** Ft. of Water in Well _____ x 0.16 = _____ Gallons
3-inch Casing: Ft. of Water in Well _____ x 0.32 = _____ Gallons
4-inch Casing: Ft. of Water in Well _____ x 0.64 = _____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : No Odor
Other : Clear

**FIELD TESTS**

| | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE |
|---|---|---|---|---|---|---|---|---|
| Time | 0940 | 0950 | 0955 | 1005 | 1010 | 1015 | 1020 | 1025 |
| Depth To Water (TOC) (ft) | 18.90 | Below Pump | | | | | | |
| Depth To Pump (TOC) (ft) | 19.20 | 19.20 | 19.20 | 19.20 | 19.20 | 19.20 | 19.20 | 19.20 |
| Flow Rate (ml/min) | ~250 | ~100 | ~100 | ~100 | ~100 | ~100 | ~100 | ~100 |
| Volume of Water Purged | ~0.5 | ~0.75 | ~1 | ~1.25 | ~1.5 | ~1.75 | ~2 | ~2.25 |
| pH (s.u.) | 7.03 | 7.00 | 7.01 | 7.01 | 7.02 | 7.03 | 7.03 | 7.03 |
| Conductivity (mS/cm) | 2.36 | 2.68 | 2.63 | 2.57 | 2.54 | 2.50 | 2.49 | 2.48 |
| Turbidity (NTUs) | 495 | 740 | 548 | 226 | 118 | 54 | 36.7 | 12.9 |
| Dissolved Oxygen (mg/L) | 13.37 | 9.48 | 9.44 | 9.61 | 9.70 | 9.79 | 10.03 | 10.03 |
| Temperature (Degrees C) | 16.49 | 16.67 | 15.66 | 15.86 | 16.00 | 16.03 | 16.06 | 16.35 |
| ORP (mV) | 89 | 87 | 100 | 46 | 33 | 20 | 19 | 18 |
| Salinity (%) | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| TDS (g/L) | 1.73 | 1.71 | 1.68 | 1.64 | 1.62 | 1.60 | 1.60 | 1.59 |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 1030; purged approximately 2.5 gallons

# PARSONS

## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 11-26-12
**Sampling Date:** 11-26-12
**Samplers:** Zohar Lavy of Parsons / Somerset, NJ

**SAMPLE ID:** MW-1
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 14.12
Depth to Well Bottom (TOC): 20.20

**CALCULATIONS:** Ft. of Water in Well _____ X (GAL / FT) = _____ Gallons
**2-inch Casing:** Ft. of Water in Well _____ x 0.16 = _____ Gallons
3-inch Casing: Ft. of Water in Well _____ x 0.32 = _____ Gallons
4-inch Casing: Ft. of Water in Well _____ x 0.64 = _____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : No Odor
Other : Clear

**FIELD TESTS**

| | SAMPLE |
|---|---|
| Time | 1030 |
| Depth To Water (TOC) (ft) | Below Pump |
| Depth To Pump (TOC) (ft) | 19.20 |
| Flow Rate (ml/min) | ~100 |
| Volume of Water Purged | ~2.50 |
| pH (s.u.) | 7.03 |
| Conductivity (mS/cm) | 2.43 |
| Turbidity (NTUs) | 8.6 |
| Dissolved Oxygen (mg/L) | 10.05 |
| Temperature (Degrees C) | 16.34 |
| ORP (mV) | 17 |
| Salinity (%) | 0.9 |
| TDS (g/L) | 1.59 |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 1030; purged approximately 2.5 gallons

# PARSONS
## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 11-27-12
**Sampling Date:** 11-27-12
**Samplers:** Zohar Lavy of Parsons / Somerset, NJ

**SAMPLE ID:** MW-3
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 16.58
Depth to Well Bottom (TOC): 29.90
**CALCULATIONS:** Ft. of Water in Well _____ X (GAL / FT) = _____ Gallons
**2-inch Casing:** Ft. of Water in Well _____ x 0.16 = _____ Gallons
3-inch Casing: Ft. of Water in Well _____ x 0.32 = _____ Gallons
4-inch Casing: Ft. of Water in Well _____ x 0.64 = _____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : Strong hydrocarbon odor
Other : Clear, Sheen

**FIELD TESTS**

| | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE |
|---|---|---|---|---|---|---|---|---|
| Time | 1430 | 1435 | 1440 | 1445 | 1450 | 1455 | 1500 | 1505 |
| Depth To Water (TOC) (ft) | 17.25 | 16.82 | 16.80 | 16.78 | 16.79 | 16.78 | 16.79 | 16.81 |
| Depth To Pump (TOC) (ft) | 26.00 | 26.00 | 26.00 | 26.00 | 26.00 | 26.00 | 26.00 | 26.00 |
| Flow Rate (ml/min) | ~300 | ~300 | ~350 | ~350 | ~300 | ~350 | ~350 | ~350 |
| Volume of Water Purged | ~0.5 | ~1.0 | ~1.5 | ~2.25 | ~3.0 | ~3.5 | ~4.25 | ~5.0 |
| pH (s.u.) | 7.22 | 7.21 | 7.21 | 7.20 | 7.20 | 7.20 | 7.20 | 7.19 |
| Conductivity (mS/cm) | 27.3 | 23.7 | 20.2 | 18.5 | 15.25 | 14.65 | 13.31 | 13.18 |
| Turbidity (NTUs) | 572 | 393 | 114 | 17.9 | 10.5 | 5.7 | 4.2 | 3.1 |
| Dissolved Oxygen (mg/L) | 14.70 | 13.25 | 12.36 | 11.63 | 10.98 | 10.11 | 9.86 | 9.79 |
| Temperature (Degrees C) | 13.16 | 11.23 | 10.12 | 10.61 | 11.90 | 12.03 | 12.16 | 13.80 |
| ORP (mV) | -57 | -53 | -50 | -49 | -49 | -49 | -50 | -50 |
| Salinity (%) | 13.8 | 11.2 | 10.5 | 9.4 | 8.1 | 6.9 | 6.5 | 6.0 |
| TDS (g/L) | 15.7 | 14.1 | 12.7 | 11.6 | 9.2 | 8.19 | 8.07 | 8.0 |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 1510; purged approximately 5.5 gallons; NAPL in purge water

# PARSONS

## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 11-27-12
**Sampling Date:** 11-27-12
**Samplers:** Zohar Lavy of Parsons / Somerset, NJ

**SAMPLE ID:** MW-3
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 16.58
Depth to Well Bottom (TOC): 29.90

| | | | | |
|---|---|---|---|---|
| **CALCULATIONS:** | Ft. of Water in Well | X (GAL / FT) = | | Gallons |
| **2-inch Casing:** | Ft. of Water in Well | x 0.16 = | | Gallons |
| 3-inch Casing: | Ft. of Water in Well | x 0.32 = | | Gallons |
| 4-inch Casing: | Ft. of Water in Well | x 0.64 = | | Gallons |

Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : Strong hydrocarbon odor
Other : Clear, Sheen

**FIELD TESTS**

| | SAMPLE |
|---|---|
| Time | 1510 |
| Depth To Water (TOC) (ft) | 16.81 |
| Depth To Pump (TOC) (ft) | 26.00 |
| Flow Rate (ml/min) | ~350 |
| Volume of Water Purged | ~5.5 |
| pH (s.u.) | 7.19 |
| Conductivity (mS/cm) | 13.00 |
| Turbidity (NTUs) | 1.1 |
| Dissolved Oxygen (mg/L) | 9.32 |
| Temperature (Degrees C) | 14.18 |
| ORP (mV) | -50 |
| Salinity (%) | 6.0 |
| TDS (g/L) | 7.91 |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 1510; purged approximately 5.5 gallons; NAPL in purge water

# PARSONS

## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 11-27-12
**Sampling Date:** 11-27-12
**Samplers:** Zohar Lavy of Parsons / Somerset, NJ

**SAMPLE ID:** MW-4
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 14.30
Depth to Well Bottom (TOC): 18.35
**CALCULATIONS:** Ft. of Water in Well _____ X (GAL / FT) = _____ Gallons
**2-inch Casing:** Ft. of Water in Well _____ x 0.16 = _____ Gallons
3-inch Casing: Ft. of Water in Well _____ x 0.32 = _____ Gallons
4-inch Casing: Ft. of Water in Well _____ x 0.64 = _____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : No odor
Other : Very turbid

**FIELD TESTS**

| | PURGE | PURGE | PURGE | PURGE | PURGE | SAMPLE |
|---|---|---|---|---|---|---|
| Time | 1120 | 1125 | 1130 | 1140 | 1145 | 1150 |
| Depth To Water (TOC) (ft) | 16.22 | Below Pump | Dry | Below Pump | Dry | Below Pump |
| Depth To Pump (TOC) (ft) | 17.35 | 17.35 | 17.35 | 17.35 | 17.35 | 17.35 |
| Flow Rate (ml/min) | ~250 | ~350 | NA | ~100 | NA | ~100 |
| Volume of Water Purged | ~0.25 | ~0.75 | NA | ~1.0 | NA | ~1.25 |
| pH (s.u.) | 6.42 | 7.37 | NA | 7.85 | NA | 7.56 |
| Conductivity (mS/cm) | 2.61 | 2.07 | NA | 1.87 | NA | 1.62 |
| Turbidity (NTUs) | Error | Error | NA | Error | NA | Error |
| Dissolved Oxygen (mg/L) | 23.4 | 24.73 | NA | 24.33 | NA | 24.11 |
| Temperature (Degrees C) | 12.13 | 11.88 | NA | 10.67 | NA | 11.36 |
| ORP (mV) | 163 | 158 | NA | 170 | NA | 152 |
| Salinity (%) | 0.8 | 0.6 | NA | 0.6 | NA | 0.6 |
| TDS (g/L) | 1.62 | 1.32 | NA | 1.2 | NA | 1.18 |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 1150; purged approximately 1.25 gallons; well ran dry two times prior to sampling

# PARSONS
## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 11-27-12
**Sampling Date:** 11-27-12
**Samplers:** Zohar Lavy of Parsons / Somerset, NJ

**SAMPLE ID:** MW-7
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 39.32
Depth to Well Bottom (TOC): 51.77
**CALCULATIONS:** Ft. of Water in Well _____ X (GAL / FT) = _____ Gallons
**2-inch Casing:** Ft. of Water in Well _____ x 0.16 = _____ Gallons
3-inch Casing: Ft. of Water in Well _____ x 0.32 = _____ Gallons
4-inch Casing: Ft. of Water in Well _____ x 0.64 = _____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : Slight hydrocarbon odor
Other : Clear, Sheen

**FIELD TESTS**

| | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | SAMPLE |
|---|---|---|---|---|---|---|---|---|
| Time | 1240 | 1245 | 1250 | 1255 | 1300 | 1305 | 1310 | 1315 |
| Depth To Water (TOC) (ft) | 39.45 | 39.45 | 39.46 | 39.47 | 39.45 | 39.46 | 39.45 | 39.45 |
| Depth To Pump (TOC) (ft) | 48.77 | 48.77 | 48.77 | 48.77 | 48.77 | 48.77 | 48.77 | 48.77 |
| Flow Rate (ml/min) | ~350 | ~300 | ~300 | ~300 | ~250 | ~300 | ~300 | ~350 |
| Volume of Water Purged | ~0.5 | ~1.0 | ~1.5 | ~2.0 | ~2.5 | ~3.0 | ~3.5 | ~4.0 |
| pH (s.u.) | 7.21 | 7.18 | 7.17 | 7.16 | 7.16 | 7.17 | 7.17 | 7.18 |
| Conductivity (mS/cm) | 3.85 | 3.84 | 3.84 | 3.82 | 3.81 | 3.81 | 3.80 | 3.80 |
| Turbidity (NTUs) | 482 | 303 | 212 | 165 | 92.5 | 33.2 | 20.6 | 17.5 |
| Dissolved Oxygen (mg/L) | 11.73 | 10.27 | 9.31 | 8.08 | 7.34 | 7.17 | 7.04 | 6.98 |
| Temperature (Degrees C) | 14.49 | 14.61 | 14.52 | 14.55 | 14.63 | 14.59 | 14.47 | 14.51 |
| ORP (mV) | 0 | -1 | -3 | -4 | -4 | -4 | -4 | -4 |
| Salinity (%) | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| TDS (g/L) | 2.46 | 2.45 | 2.45 | 2.44 | 2.44 | 2.43 | 2.43 | 2.42 |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 1315; purged approximately 4.0 gallons

# PARSONS
## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 11-26-12
**Sampling Date:** 11-26-12
**Samplers:** Zohar Lavy of Parsons / Somerset, NJ

**SAMPLE ID:** MW-8 and MW-18 (duplicate)
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 5.27
Depth to Well Bottom (TOC): 13.15
**CALCULATIONS:** Ft. of Water in Well _____ X (GAL / FT) = _____ Gallons
**2-inch Casing:** Ft. of Water in Well _____ x 0.16 = _____ Gallons
3-inch Casing: Ft. of Water in Well _____ x 0.32 = _____ Gallons
4-inch Casing: Ft. of Water in Well _____ x 0.64 = _____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : No Odor
Other : Clear

**FIELD TESTS**

| | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE |
|---|---|---|---|---|---|---|---|---|
| Time | 1205 | 1215 | 1220 | 1225 | 1230 | 1235 | 1240 | 1245 |
| Depth To Water (TOC) (ft) | 5.38 | 5.45 | 5.45 | 5.45 | 5.45 | 5.46 | 5.46 | 5.47 |
| Depth To Pump (TOC) (ft) | 12.15 | 12.15 | 12.15 | 12.15 | 12.15 | 12.15 | 12.15 | 12.15 |
| Flow Rate (ml/min) | ~150 | ~150 | ~250 | ~200 | ~250 | ~250 | ~250 | ~250 |
| Volume of Water Purged | ~0.25 | ~0.5 | ~1.0 | ~1.25 | ~1.75 | ~2.25 | ~2.5 | ~2.75 |
| pH (s.u.) | 7.05 | 7.00 | 6.96 | 6.98 | 6.98 | 6.98 | 6.99 | 6.99 |
| Conductivity (mS/cm) | 4.84 | 4.70 | 4.60 | 4.59 | 4.59 | 4.59 | 4.59 | 4.59 |
| Turbidity (NTUs) | Error | Error | Error | 769 | 503 | 411 | 282 | 146 |
| Dissolved Oxygen (mg/L) | 11.69 | 10.54 | 9.15 | 8.82 | 8.73 | 8.65 | 8.48 | 8.04 |
| Temperature (Degrees C) | 14.59 | 16.04 | 17.05 | 17.06 | 17.03 | 17.14 | 17.29 | 17.46 |
| ORP (mV) | 176 | 147 | 119 | 110 | 107 | 102 | 95 | 89 |
| Salinity (%) | 1.8 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| TDS (g/L) | 3.11 | 2.99 | 2.94 | 2.94 | 2.94 | 2.93 | 2.94 | 2.94 |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 1320; purged approximately 6.25 gallons

# PARSONS
## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 11-26-12
**Sampling Date:** 11-26-12
**Samplers:** Zohar Lavy of Parsons / Somerset, NJ

**SAMPLE ID:** MW-8 and MW-18 (duplicate)
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 5.27
Depth to Well Bottom (TOC): 13.15
**CALCULATIONS:** Ft. of Water in Well _____ X (GAL / FT) = _____ Gallons
**2-inch Casing:** Ft. of Water in Well _____ x 0.16 = _____ Gallons
3-inch Casing: Ft. of Water in Well _____ x 0.32 = _____ Gallons
4-inch Casing: Ft. of Water in Well _____ x 0.64 = _____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : No Odor
Other : Clear

**FIELD TESTS**

| | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | SAMPLE |
|---|---|---|---|---|---|---|---|
| Time | 1250 | 1255 | 1300 | 1305 | 1310 | 1315 | 1320 |
| Depth To Water (TOC) (ft) | 5.47 | 5.47 | 5.7 | 5.48 | 5.47 | 5.47 | 5.47 |
| Depth To Pump (TOC) (ft) | 12.15 | 12.15 | 12.15 | 12.15 | 12.15 | 12.15 | 12.15 |
| Flow Rate (ml/min) | ~250 | ~250 | ~350 | ~200 | ~300 | ~300 | ~250 |
| Volume of Water Purged | ~3.25 | ~3.75 | ~4.5 | ~4.75 | ~5.25 | ~5.75 | ~6.25 |
| pH (s.u.) | 6.99 | 6.99 | 6.99 | 6.99 | 6.99 | 6.99 | 6.99 |
| Conductivity (mS/cm) | 4.60 | 4.58 | 4.62 | 4.63 | 4.64 | 4.61 | 4.58 |
| Turbidity (NTUs) | 137 | 161 | 98.9 | 73.2 | 59.4 | 43.6 | 35.8 |
| Dissolved Oxygen (mg/L) | 7.83 | 7.51 | 7.31 | 7.28 | 7.19 | 7.12 | 7.01 |
| Temperature (Degrees C) | 17.60 | 17.87 | 17.83 | 17.86 | 17.88 | 17.89 | 17.91 |
| ORP (mV) | 86 | 85 | 84 | 85 | 84 | 83 | 82 |
| Salinity (%) | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| TDS (g/L) | 2.95 | 2.94 | 2.95 | 2.94 | 2.94 | 2.94 | 2.94 |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 1320; purged approximately 6.25 gallons

# PARSONS
## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 11-26-12
**Sampling Date:** 11-26-12
**Samplers:** Zohar Lavy of Parsons / Somerset, NJ

**SAMPLE ID:** MW-9, MW-9MS, MW-9MSD
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 4.45
Depth to Well Bottom (TOC): 12.15
**CALCULATIONS:** Ft. of Water in Well _____ X (GAL / FT) = _____ Gallons
**2-inch Casing:** Ft. of Water in Well _____ x 0.16 = _____ Gallons
3-inch Casing: Ft. of Water in Well _____ x 0.32 = _____ Gallons
4-inch Casing: Ft. of Water in Well _____ x 0.64 = _____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : Slight hydrocarbon odor
Other : Clear

**FIELD TESTS**

| | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | SAMPLE |
|---|---|---|---|---|---|---|---|---|
| Time | 1410 | 1415 | 1420 | 1425 | 1430 | 1435 | 1440 | 1445 |
| Depth To Water (TOC) (ft) | 4.49 | 4.49 | 4.49 | 4.52 | 4.51 | 4.51 | 4.51 | 4.52 |
| Depth To Pump (TOC) (ft) | 11.15 | 11.15 | 11.15 | 11.15 | 11.15 | 11.15 | 11.15 | 11.15 |
| Flow Rate (ml/min) | ~350 | ~350 | ~350 | ~350 | ~350 | ~300 | ~300 | ~350 |
| Volume of Water Purged | ~1.0 | ~1.5 | ~2.0 | ~2.5 | ~3.0 | ~3.5 | ~4.0 | ~4.5 |
| pH (s.u.) | 7.29 | 7.29 | 7.29 | 7.28 | 7.29 | 7.27 | 7.27 | 7.26 |
| Conductivity (mS/cm) | 9.59 | 9.62 | 9.74 | 9.83 | 9.90 | 9.88 | 9.83 | 9.81 |
| Turbidity (NTUs) | 32.7 | 8.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dissolved Oxygen (mg/L) | 9.56 | 7.45 | 6.6 | 6.24 | 6.01 | 5.89 | 5.81 | 5.76 |
| Temperature (Degrees C) | 15.07 | 14.92 | 14.89 | 14.90 | 14.88 | 14.72 | 14.71 | 14.74 |
| ORP (mV) | -133 | -133 | -133 | -133 | -134 | -134 | -133 | -134 |
| Salinity (%) | 4.2 | 4.3 | 4.3 | 4.4 | 4.3 | 4.4 | 4.3 | 4.3 |
| TDS (g/L) | 6.04 | 6.08 | 6.15 | 6.19 | 6.23 | 6.22 | 6.21 | 6.21 |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 1445; purged approximately 4.5 gallons

# PARSONS

## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 4-5-13
**Sampling Date:** 4-8-13
**Samplers:** Zohar Lavy of Parsons / Somerset, NJ

**SAMPLE ID:** MW-1
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 13.36
Depth to Well Bottom (TOC): 20.30
**CALCULATIONS:** Ft. of Water in Well _____ X (GAL / FT) = _____ Gallons
**2-inch Casing:** Ft. of Water in Wel _____ x 0.16 = _____ Gallons
3-inch Casing: Ft. of Water in Well _____ x 0.32 = _____ Gallons
4-inch Casing: Ft. of Water in Well _____ x 0.64 = _____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : No odor
Other : Very turbid

**FIELD TESTS**

| | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | SAMPLE |
|---|---|---|---|---|---|---|---|
| Time | 1210 | 1215 | 1220 | 1225 | 1240 | 1245 | 1300 |
| Depth To Water (TOC) (ft) | 16.25 | 17.22 | 17.79 | Below Pump | 17.4 | Dry | 17.8 |
| Depth To Pump (TOC) (ft) | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 |
| Flow Rate (ml/min) | ~150 | ~100 | ~100 | NA | ~100 | NA | ~100 |
| Volume of Water Purged | ~0.5 | ~0.75 | ~1 | ~1 | ~1.5 | ~1.5 | ~1.75 |
| pH (s.u.) | 7.17 | 7.09 | 7.09 | NA | 7.23 | NA | 7.18 |
| Conductivity (mS/cm) | 1.98 | 1.96 | 1.98 | NA | 1.89 | NA | 1.88 |
| Turbidity (NTUs) | 166 | 122 | 125 | NA | 130 | NA | 122 |
| Dissolved Oxygen (mg/L) | 9.15 | 3.36 | 3.27 | NA | 5.03 | NA | 3.44 |
| Temperature (Degrees C) | 14.46 | 15.22 | 14.97 | NA | 15.6 | NA | 15.84 |
| ORP (mV) | 77 | 88 | 89 | 89 | 45 | NA | 41 |
| Salinity (%) | 1.0 | 1.0 | 1.0 | NA | 1.0 | NA | 1.0 |
| TDS (g/L) | 1.27 | 1.26 | 1.27 | NA | 1.21 | NA | 1.20 |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide, dissolved Metals

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 1300; purged approximately 1.75 gallons; well ran dry several times prior to sampling

# PARSONS

## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 4-8-13
**Sampling Date:** 4-8-13
**Samplers:** Zohar Lavy, Dennis Miller of Parsons / Somerset, NJ

**SAMPLE ID:** MW-2
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 10.95
Depth to Well Bottom (TOC): 19.30
**CALCULATIONS:** Ft. of Water in Well _____ X (GAL / FT) = _____ Gallons
**2-inch Casing:** Ft. of Water in Wel _____ x 0.16 = _____ Gallons
3-inch Casing: Ft. of Water in Well _____ x 0.32 = _____ Gallons
4-inch Casing: Ft. of Water in Well _____ x 0.64 = _____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : No Odor
Other : Clear

**FIELD TESTS**

| | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | SAMPLE |
|---|---|---|---|---|---|---|---|
| Time | 0752 | 0757 | 0802 | 0807 | 0812 | 0817 | 0822 |
| Depth To Water (TOC) (ft) | 11.50 | 11.87 | 12.15 | 12.40 | 12.45 | 12.30 | 12.35 |
| Depth To Pump (TOC) (ft) | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 |
| Flow Rate (ml/min) | 100 | 100 | 200 | 250 | 250 | 250 | 250 |
| Volume of Water Purged | 0.125 | 0.25 | 0.375 | 0.5 | 0.75 | 1.0 | 1.25 |
| pH (s.u.) | 5.61 | 5.79 | 5.92 | 5.96 | 6.0 | 6.04 | 6.06 |
| Conductivity (mS/cm) | Error | Error | Error | Error | Error | Error | Error |
| Turbidity (NTUs) | 162 | 34.2 | 12.0 | 3.4 | 0.0 | 0.0 | 0.0 |
| Dissolved Oxygen (mg/L) | 2.96 | 2.45 | 2.06 | 1.66 | 1.44 | 1.34 | 1.24 |
| Temperature (Degrees C) | 10.02 | 10.05 | 10.10 | 10.39 | 10.64 | 10.62 | 10.78 |
| ORP (mV) | 110 | 60 | 40 | 23 | 8 | -2 | -11 |
| Salinity (%) | Error | Error | Error | Error | Error | Error | Error |
| TDS (g/L) | Error | Error | Error | Error | Error | Error | Error |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 0822; purged approximately 1.25 gallons

# PARSONS

## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 4-8-13
**Sampling Date:** 4-8-13
**Samplers:** Zohar Lavy, Dennis Miller of Parsons / Somerset, NJ

**SAMPLE ID:** MW-3 and duplicate
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 16.40
Depth to Well Bottom (TOC): 29.95
**CALCULATIONS:** Ft. of Water in Well _____ X (GAL / FT) = _____ Gallons
**2-inch Casing:** Ft. of Water in Wel _____ x 0.16 = _____ Gallons
3-inch Casing: Ft. of Water in Well _____ x 0.32 = _____ Gallons
4-inch Casing: Ft. of Water in Well _____ x 0.64 = _____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : Strong hydrocarbon odor
Other : Clear, Sheen, NAPL Blebs

**FIELD TESTS**

| | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | SAMPLE |
|---|---|---|---|---|---|---|---|
| Time | 0924 | 0929 | 0934 | 0939 | 0944 | 0949 | 0954 |
| Depth To Water (TOC) (ft) | 17.05 | 16.95 | 16.92 | 16.90 | 16.89 | 16.91 | 16.90 |
| Depth To Pump (TOC) (ft) | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 |
| Flow Rate (ml/min) | 250 | 250 | 250 | 250 | 250 | 250 | 250 |
| Volume of Water Purged | 0.25 | 0.5 | 1.0 | 1.25 | 1.5 | 1.75 | 2.0 |
| pH (s.u.) | 6.73 | 6.9 | 6.95 | 6.96 | 6.97 | 6.96 | 6.92 |
| Conductivity (mS/cm) | 86 | 46.9 | 37.1 | 33.7 | 31.6 | 28.6 | 30.7 |
| Turbidity (NTUs) | 105 | 46.8 | 38.3 | 37.9 | 30.0 | 31.1 | 32.2 |
| Dissolved Oxygen (mg/L) | 7.94 | 8.24 | 7.37 | 6.66 | 5.98 | 5.60 | 5.44 |
| Temperature (Degrees C) | 14.20 | 14.90 | 14.96 | 15.01 | 15.02 | 14.72 | 14.49 |
| ORP (mV) | -26 | -26 | -31 | -30 | -31 | -28 | -26 |
| Salinity (%) | 57.2 | 29.1 | 22.9 | 20.8 | 18.1 | 17.6 | 16.9 |
| TDS (g/L) | 49.1 | 27.5 | 22.3 | 20.5 | 18.3 | 17.8 | 17.1 |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 0954; purged approximately 2 gallons; NAPL in purge water

# PARSONS

## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 4-8-13
**Sampling Date:** 4-8-13
**Samplers:** Zohar Lavy, Dennis Miller of Parsons / Somerset, NJ

**SAMPLE ID:** MW-4
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 14.30
Depth to Well Bottom (TOC): 18.35
**CALCULATIONS:** Ft. of Water in Well _____ X (GAL / FT) = _____ Gallons
**2-inch Casing:** Ft. of Water in Wel _____ x 0.16 = _____ Gallons
3-inch Casing: Ft. of Water in Well _____ x 0.32 = _____ Gallons
4-inch Casing: Ft. of Water in Well _____ x 0.64 = _____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : No odor
Other : Very turbid

**FIELD TESTS**

| | PURGE | PURGE | PURGE | PURGE | PURGE | SAMPLE |
|---|---|---|---|---|---|---|
| Time | 0750 | 0755 | 0800 | 0810 | 0815 | 0840 |
| Depth To Water (TOC) (ft) | 16.4 | Dry | Dry | Dry | Dry | Below Pump |
| Depth To Pump (TOC) (ft) | 17.4 | 17.4 | 17.4 | 17.4 | 17.4 | 17.4 |
| Flow Rate (ml/min) | ~100 | ~100 | ~100 | ~100 | ~100 | ~100 |
| Volume of Water Purged | ~0.25 | NA | NA | NA | NA | ~0.75 |
| pH (s.u.) | 8.12 | NA | NA | NA | NA | 8.05 |
| Conductivity (mS/cm) | 4.91 | NA | NA | NA | NA | 4.86 |
| Turbidity (NTUs) | Error | NA | NA | NA | NA | Error |
| Dissolved Oxygen (mg/L) | 13.58 | NA | NA | NA | NA | 9.87 |
| Temperature (Degrees C) | 11.06 | NA | NA | NA | NA | 10.67 |
| ORP (mV) | 4.48 | NA | NA | NA | NA | 169 |
| Salinity (%) | 2.6 | NA | NA | NA | NA | 2.6 |
| TDS (g/L) | 3.14 | NA | NA | NA | NA | 3.12 |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide, dissolved Metals

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 0840; purged approximately 0.75 gallons; well ran dry several times prior to sampling

# PARSONS

## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 4-5-13
**Sampling Date:** 4-5-13
**Samplers:** Zohar Lavy of Parsons / Somerset, NJ

**SAMPLE ID:** MW-5, MW-5MS, MW-5 MSD
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 12.05
Depth to Well Bottom (TOC): 21.30
**CALCULATIONS:** Ft. of Water in Well _____ X (GAL / FT) = _____ Gallons
**2-inch Casing:** Ft. of Water in Wel _____ x 0.16 = _____ Gallons
3-inch Casing: Ft. of Water in Well _____ x 0.32 = _____ Gallons
4-inch Casing: Ft. of Water in Well _____ x 0.64 = _____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : Slight hydrocarbon Odor
Other : Clear

**FIELD TESTS**

| | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | SAMPLE |
|---|---|---|---|---|---|---|---|---|
| Time | 1335 | 1340 | 1345 | 1350 | 1355 | 1400 | 1405 | 1410 |
| Depth To Water (TOC) (ft) | 12.7 | 12.73 | 12.72 | 12.72 | 12.75 | 12.73 | 12.72 | 12.73 |
| Depth To Pump (TOC) (ft) | 20.3 | 20.3 | 20.3 | 20.3 | 20.3 | 20.3 | 20.3 | 20.3 |
| Flow Rate (ml/min) | ~300 | ~350 | ~350 | ~350 | ~350 | ~350 | ~350 | ~350 |
| Volume of Water Purged | ~0.75 | ~1.5 | ~2.25 | ~3.0 | ~3.75 | ~3.5 | ~5.0 | ~5.5 |
| pH (s.u.) | 6.91 | 6.94 | 6.98 | 6.98 | 6.98 | 6.99 | 6.99 | 6.99 |
| Conductivity (mS/cm) | Error | Error | Error | Error | Error | Error | Error | Error |
| Turbidity (NTUs) | 117 | 165 | 125 | 102 | 90.1 | 62.5 | 51.3 | 32.6 |
| Dissolved Oxygen (mg/L) | 5.29 | 1.53 | 0.99 | 0.87 | 0.82 | 0.77 | 0.75 | 0.73 |
| Temperature (Degrees C) | 13.93 | 13.65 | 13.71 | 13.72 | 13.75 | 13.78 | 13.74 | 13.76 |
| ORP (mV) | -40 | -49 | -60 | -61 | -62 | -64 | -65 | -66 |
| Salinity (%) | Error | Error | Error | Error | Error | Error | Error | Error |
| TDS (g/L) | Error | Error | Error | Error | Error | Error | Error | Error |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 1410; purged approximately 5.5 gallons

# PARSONS

## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 4-8-13
**Sampling Date:** 4-8-13
**Samplers:** Zohar Lavy, Dennis Miller of Parsons / Somerset, NJ

**SAMPLE ID:** MW-7
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 34.50
Depth to Well Bottom (TOC): 51.00
**CALCULATIONS:** Ft. of Water in Well _____ X (GAL / FT) = _____ Gallons
**2-inch Casing:** Ft. of Water in Wel _____ x 0.16 = _____ Gallons
3-inch Casing: Ft. of Water in Well _____ x 0.32 = _____ Gallons
4-inch Casing: Ft. of Water in Well _____ x 0.64 = _____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : Strong hydrocarbon odor
Other : Clear, Sheen, NAPL blebs

**FIELD TESTS**

| | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE |
|---|---|---|---|---|---|---|---|---|
| Time | 1112 | 1117 | 1122 | 1127 | 1132 | 1137 | 1142 | 1147 |
| Depth To Water (TOC) (ft) | 36.51 | 37.00 | 39.05 | 39.00 | 38.50 | 38.20 | 38.00 | 37.90 |
| Depth To Pump (TOC) (ft) | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 |
| Flow Rate (ml/min) | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| Volume of Water Purged | 0.75 | 1.5 | 2.25 | 3.0 | 3.75 | 4.5 | 5.25 | 6.0 |
| pH (s.u.) | 6.94 | 7.02 | 7.03 | 7.04 | 7.04 | 7.08 | 7.09 | 7.10 |
| Conductivity (mS/cm) | 23.7 | 18.3 | 16.6 | 15.4 | 15.1 | 12.3 | 11.9 | 11.6 |
| Turbidity (NTUs) | 96.9 | 61.4 | 52.0 | 55.1 | 58.5 | 78.0 | 125 | 178 |
| Dissolved Oxygen (mg/L) | 1.34 | 0.92 | 0.78 | 0.69 | 0.68 | 0.67 | 0.66 | 0.65 |
| Temperature (Degrees C) | 16.05 | 16.14 | 16.11 | 16.34 | 16.37 | 16.81 | 16.90 | 17.10 |
| ORP (mV) | -14 | -17 | -19 | -21 | -24 | -27 | -29 | -32 |
| Salinity (%) | 13.2 | 10.7 | 9.6 | 8.9 | 8.6 | 8.0 | 7.1 | 6.5 |
| TDS (g/L) | 13.6 | 11.2 | 10.2 | 9.5 | 9.2 | 8.9 | 8.2 | 7.8 |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 1232; purged approximately 12.25 gallons. Flow cell cleaned out at 1227.

# PARSONS

## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 4-8-13
**Sampling Date:** 4-8-13
**Samplers:** Zohar Lavy of Parsons / Somerset, NJ

**SAMPLE ID:** MW-7
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 34.50
Depth to Well Bottom (TOC): 51.00
**CALCULATIONS:** Ft. of Water in Well ____ X (GAL / FT) = ____ Gallons
**2-inch Casing:** Ft. of Water in Wel ____ x 0.16 = ____ Gallons
3-inch Casing: Ft. of Water in Well ____ x 0.32 = ____ Gallons
4-inch Casing: Ft. of Water in Well ____ x 0.64 = ____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : Strong hydrocarbon odor
Other : Clear, Sheen, NAPL blebs

**FIELD TESTS**

| | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE |
|---|---|---|---|---|---|---|---|---|
| Time | 1152 | 1157 | 1202 | 1207 | 1212 | 1217 | 1222 | 1227 |
| Depth To Water (TOC) (ft) | 37.75 | 37.60 | 37.60 | 37.60 | 37.60 | 37.60 | 37.60 | 37.60 |
| Depth To Pump (TOC) (ft) | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 | 46.00 |
| Flow Rate (ml/min) | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| Volume of Water Purged | 6.75 | 7.5 | 8.25 | 9.0 | 9.75 | 10.5 | 11.25 | 12.0 |
| pH (s.u.) | 7.11 | 7.13 | 7.10 | 7.08 | 7.09 | 7.09 | 7.10 | 7.11 |
| Conductivity (mS/cm) | 11.4 | 11.0 | 12.2 | 11.5 | 11.1 | 11.0 | 10.9 | 11.1 |
| Turbidity (NTUs) | 173 | 182 | 188 | 193 | 210 | 240 | 267 | NA |
| Dissolved Oxygen (mg/L) | 0.63 | 0.61 | 0.60 | 0.59 | 0.59 | 0.58 | 0.62 | 0.68 |
| Temperature (Degrees C) | 17.20 | 17.00 | 16.70 | 16.47 | 16.50 | 16.53 | 16.57 | 16.51 |
| ORP (mV) | -33 | -34 | -34 | -34 | -36 | -37 | -38 | -37 |
| Salinity (%) | 6.3 | 5.8 | 6.0 | 6.5 | 6.4 | 6.3 | 6.1 | 6.3 |
| TDS (g/L) | 7.2 | 6.4 | 6.8 | 7.1 | 6.9 | 6.8 | 6.7 | 6.9 |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 1232; purged approximately 12.25 gallons. Flow cell cleaned out at 1227.

# PARSONS

## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 4-8-13
**Sampling Date:** 4-8-13
**Samplers:** Zohar Lavy of Parsons / Somerset, NJ

**SAMPLE ID:** MW-7
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 34.50
Depth to Well Bottom (TOC): 51.00
**CALCULATIONS:** Ft. of Water in Well ____ X (GAL / FT) = ____ Gallons
**2-inch Casing:** Ft. of Water in Wel ____ x 0.16 = ____ Gallons
3-inch Casing: Ft. of Water in Well ____ x 0.32 = ____ Gallons
4-inch Casing: Ft. of Water in Well ____ x 0.64 = ____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : Strong hydrocarbon odor
Other : Clear, Sheen, NAPL blebs

**FIELD TESTS**

| | SAMPLE |
|---|---|
| Time | 1232 |
| Depth To Water (TOC) (ft) | 37.60 |
| Depth To Pump (TOC) (ft) | 46.00 |
| Flow Rate (ml/min) | 500 |
| Volume of Water Purged | 12.25 |
| pH (s.u.) | 7.15 |
| Conductivity (mS/cm) | 11.3 |
| Turbidity (NTUs) | 17.9 |
| Dissolved Oxygen (mg/L) | 0.73 |
| Temperature (Degrees C) | 16.47 |
| ORP (mV) | -38 |
| Salinity (%) | 6.4 |
| TDS (g/L) | 7.0 |

**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide

Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 1232; purged approximately 12.25 gallons. Flow cell cleaned out at 1227.

# PARSONS

## GROUNDWATER SAMPLING RECORD

**SITE NAME:** Con Edison (Ludlow)
**PROJECT NUMBER:** 446110-04000
**Purge Date:** 4-5-13
**Sampling Date:** 4-5-13
**Samplers:** Zohar Lavy of Parsons / Somerset, NJ

**SAMPLE ID:** MW-9
**Sampling Method:** Low flow purge (Monsoon Pump)

**WELL PURGING**

Static Water Level (TOC): 4.15
Depth to Well Bottom (TOC): 10.35
**CALCULATIONS:** Ft. of Water in Well _____ X (GAL / FT) = _____ Gallons
**2-inch Casing:** Ft. of Water in Wel _____ x 0.16 = _____ Gallons
3-inch Casing: Ft. of Water in Well _____ x 0.32 = _____ Gallons
4-inch Casing: Ft. of Water in Well _____ x 0.64 = _____ Gallons
Method: Low Flow Pump

**SAMPLE DESCRIPTION**

Odor : No Odor
Other : Clear

**FIELD TESTS**

| | PURGE | PURGE | PURGE | PURGE | PURGE | PURGE | SAMPLE |
|---|---|---|---|---|---|---|---|
| Time | 1005 | 1010 | 1015 | 1020 | 1025 | 1030 | 1035 |
| Depth To Water (TOC) (ft) | 4.1 | 4.11 | 4.12 | 4.11 | 4.11 | 4.12 | 4.1 |
| Depth To Pump (TOC) (ft) | 9.35 | 9.35 | 9.35 | 9.35 | 9.35 | 9.35 | 9.35 |
| Flow Rate (ml/min) | ~300 | ~350 | ~350 | ~350 | ~300 | ~300 | ~300 |
| Volume of Water Purged | ~1 | ~1.75 | ~2.5 | ~3.0 | ~3.5 | ~4.0 | ~4.5 |
| pH (s.u.) | 7.1 | 7.12 | 7.15 | 7.14 | 7.14 | 7.14 | 7.15 |
| Conductivity (mS/cm) | 6.56 | 6.88 | 6.55 | 6.35 | 6.35 | 6.53 | 6.61 |
| Turbidity (NTUs) | 82.9 | 22.5 | 2.0 | 0 | 0 | 0 | 0 |
| Dissolved Oxygen (mg/L) | 6.58 | 2.95 | 2.26 | 1.93 | 1.89 | 1.68 | 1.63 |
| Temperature (Degrees C) | 10.59 | 10.37 | 10.11 | 10.05 | 10.08 | 10.32 | 10.31 |
| ORP (mV) | -51 | -63 | -73 | -77 | -77 | -82 | -85 |
| Salinity (%) | 3.5 | 3.7 | 3.5 | 3.4 | 3.4 | 3.5 | 3.6 |
| TDS (g/L) | 4.14 | 4.34 | 4.12 | 4.0 | 4.0 | 4.14 | 4.15 |

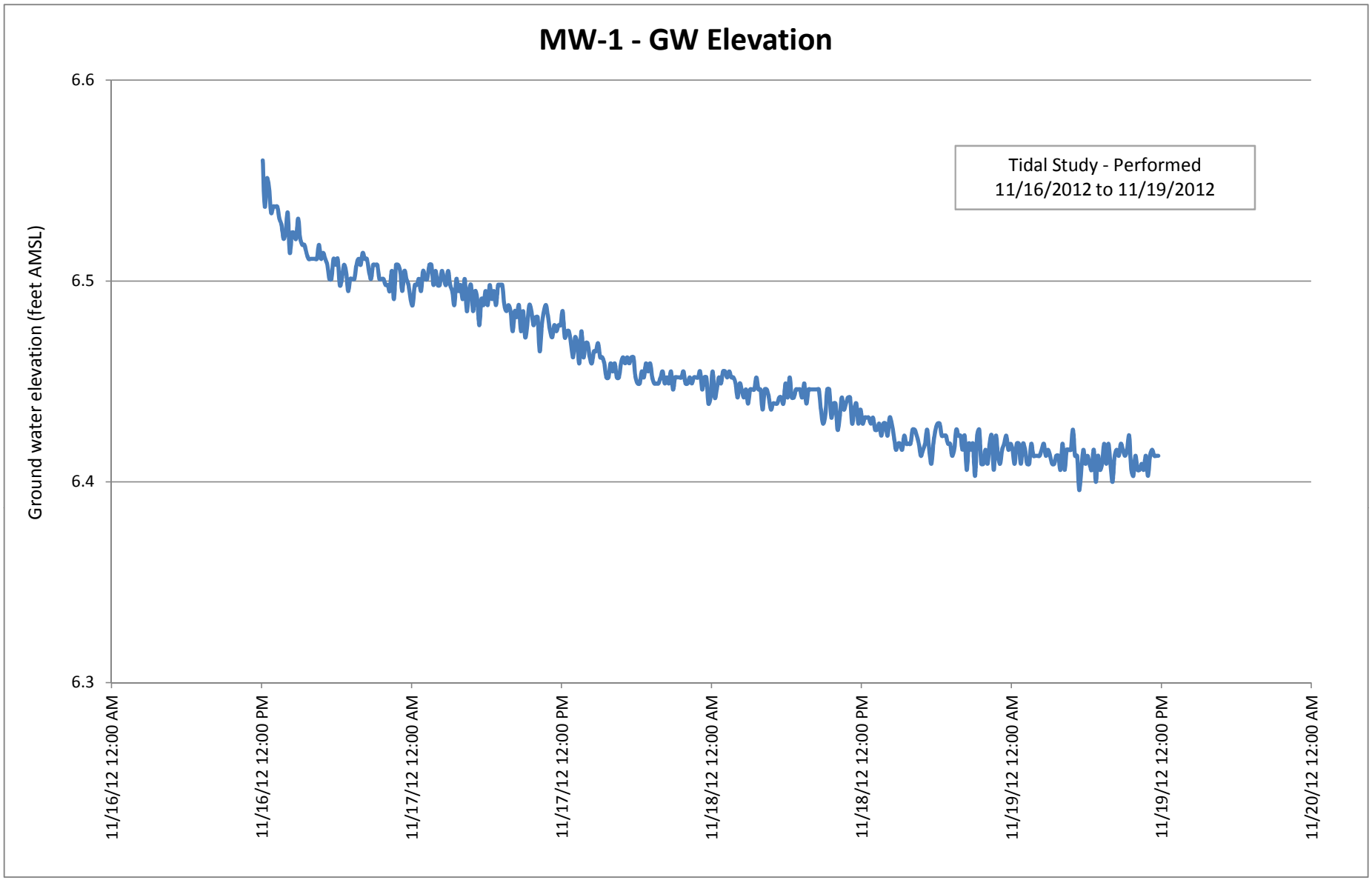
**SAMPLE ANALYSIS / LABORATORY**

Analyze For: TCL VOC's , TCL SVOCs, TAL Metals, Cyanide

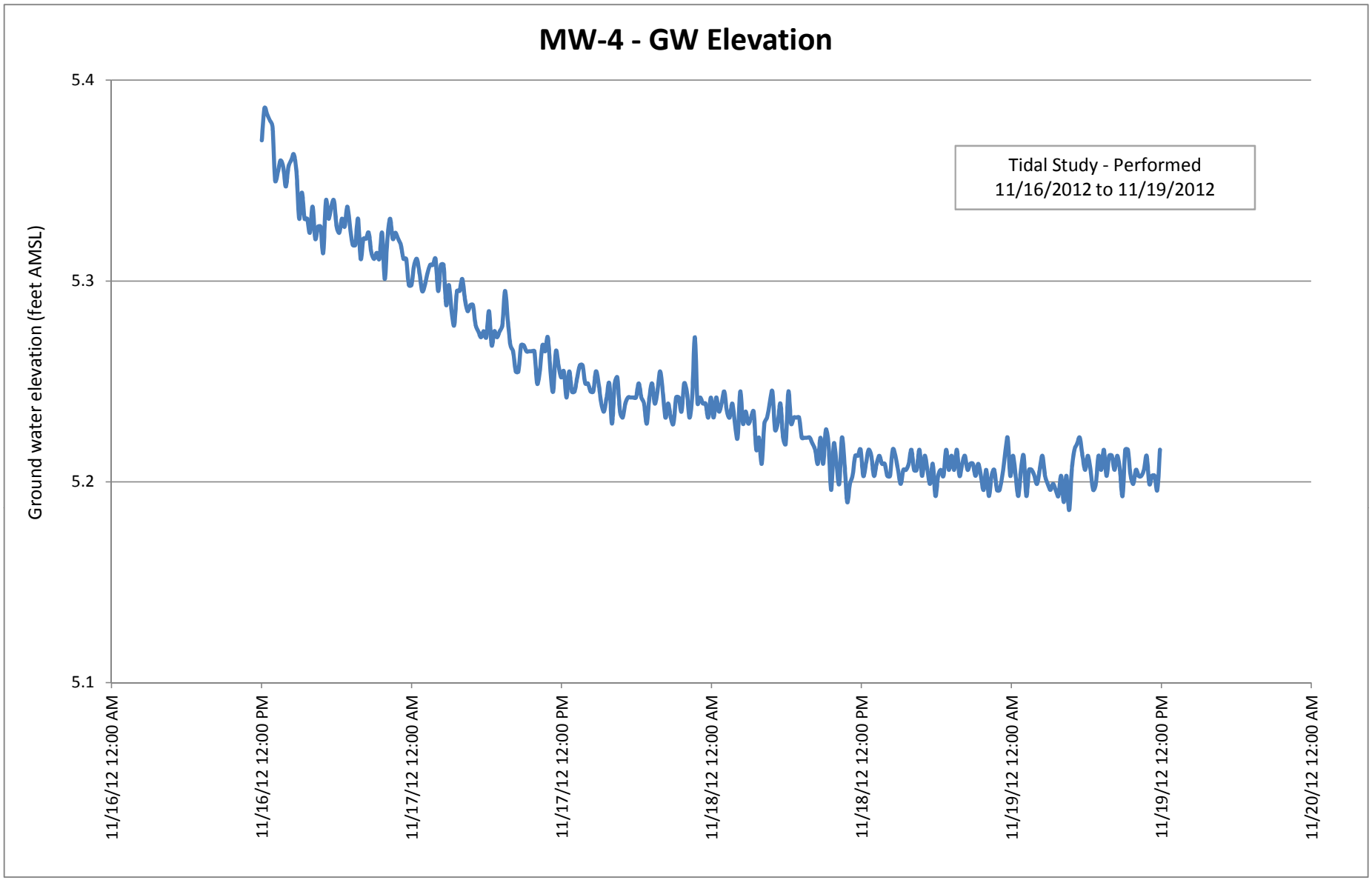
Shipped Via: Chemtech
Laboratory

Other Notes: Sample collected at 1035; purged approximately 4.5 gallons; began purging at 0950

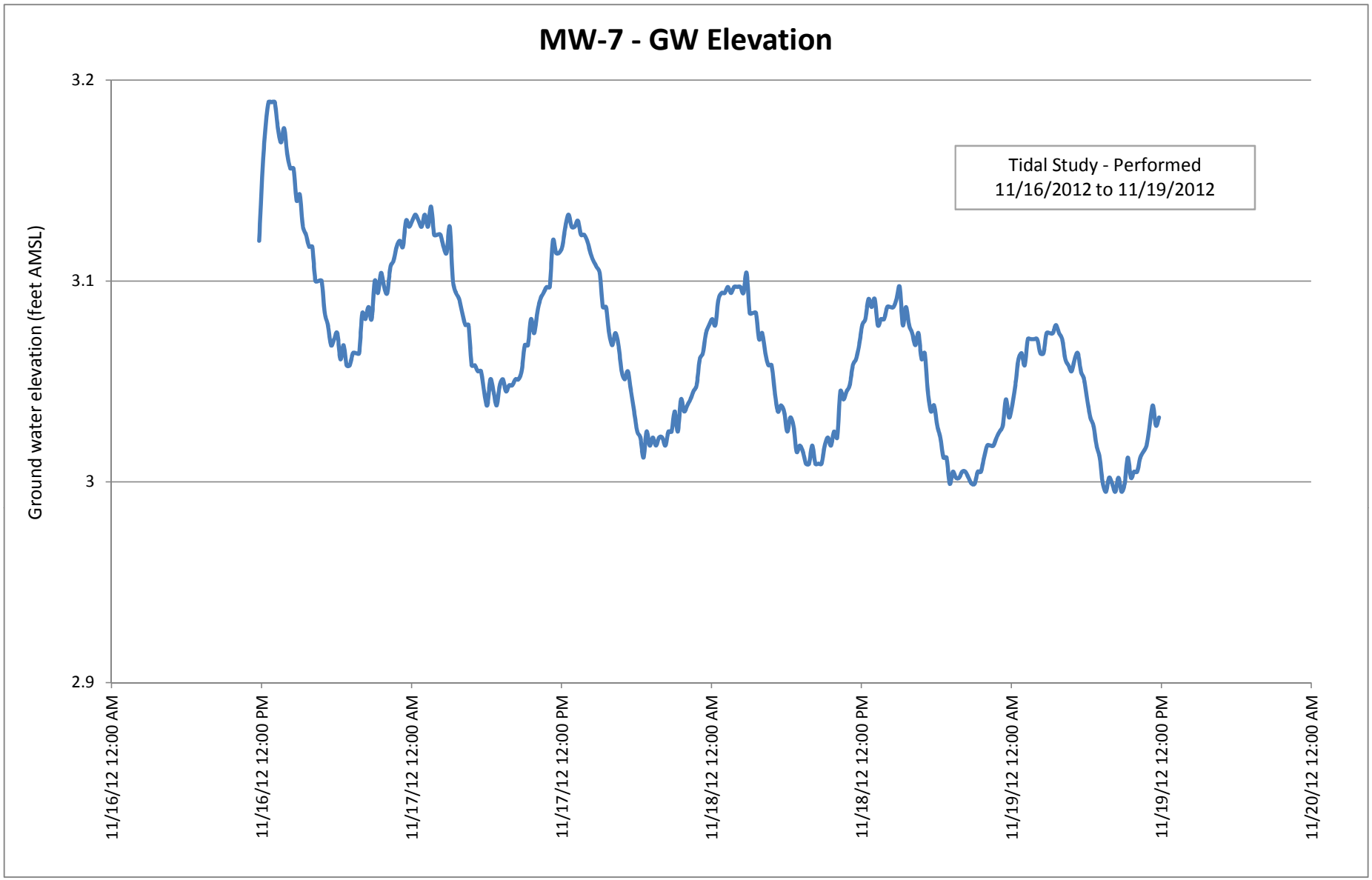
Remedial Investigation - Former Ludlow Street Works
Consolidated Edison Company of New York



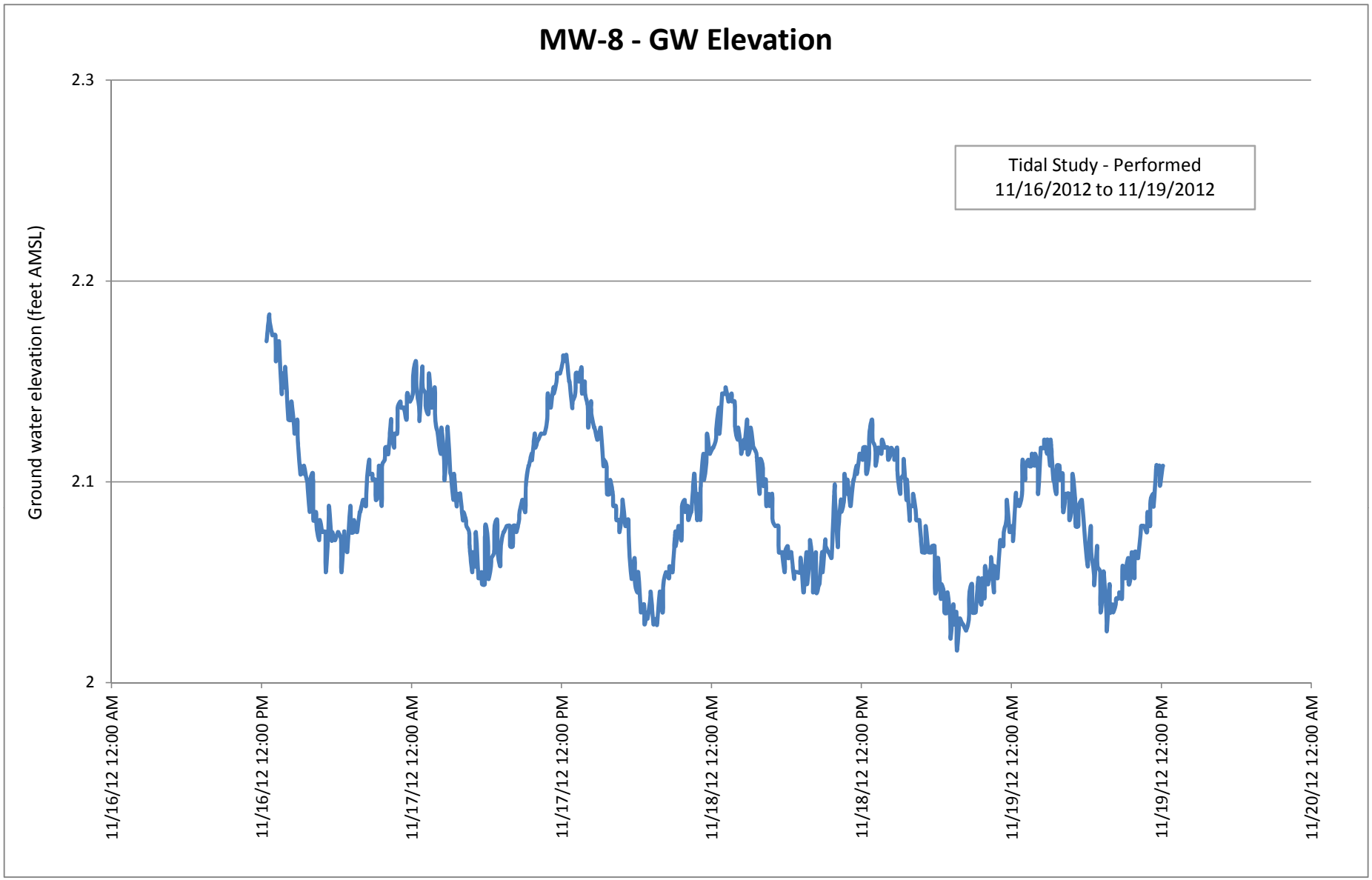
Remedial Investigation - Former Ludlow Street Works
Consolidated Edison Company of New York



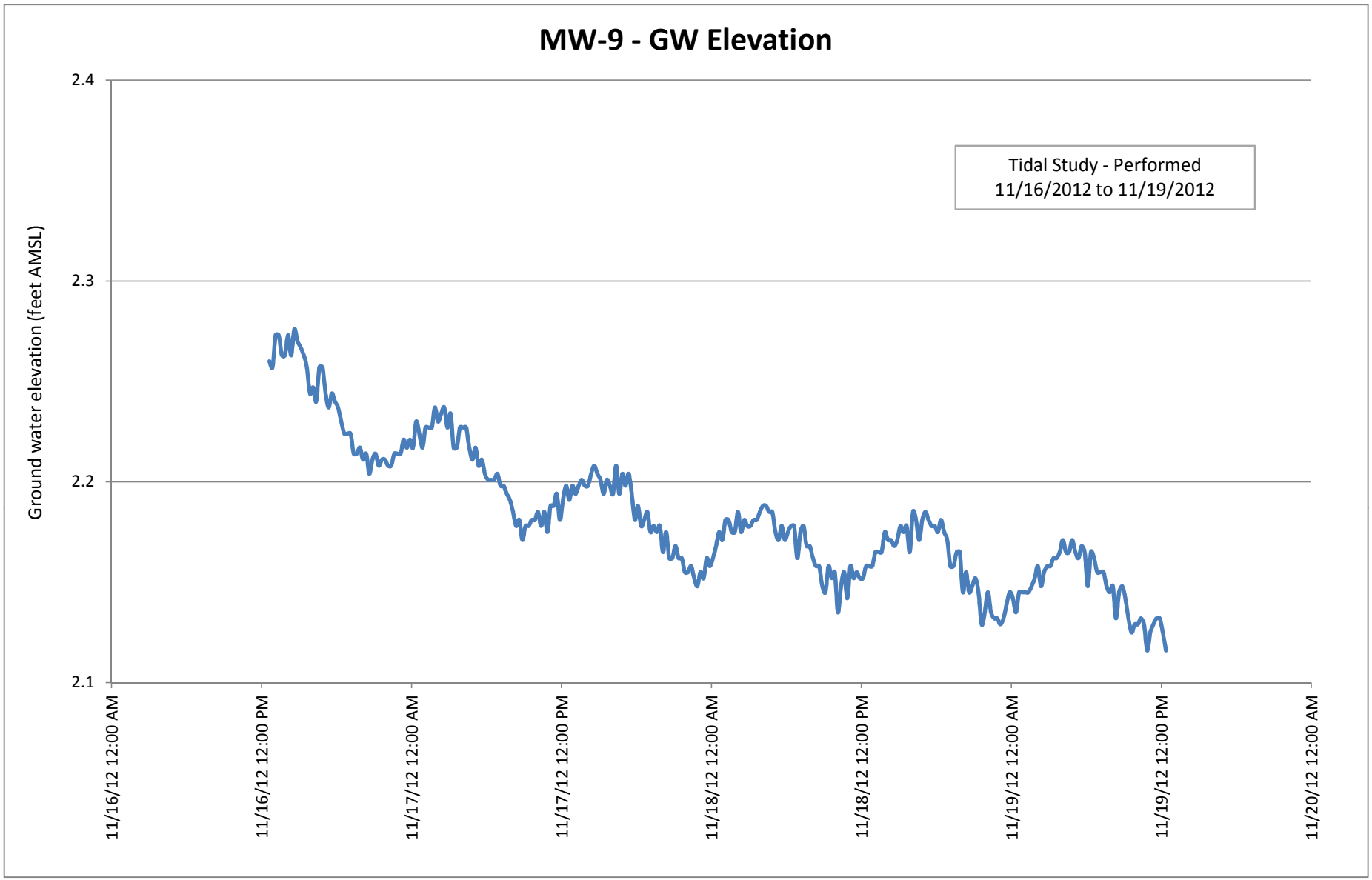
Remedial Investigation - Former Ludlow Street Works
Consolidated Edison Company of New York



Remedial Investigation - Former Ludlow Street Works
Consolidated Edison Company of New York



Remedial Investigation - Former Ludlow Street Works
Consolidated Edison Company of New York



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11/8/2012

Mr. Zohar Lavy

PARSONS GOVERNMENT SERVICES INC.

200 Cottontail Lane South

Somerset NJ 08873

Project Name: Ludlow

Project #:

Workorder #: 1210554

Dear Mr. Zohar Lavy

The following report includes the data for the above referenced project for sample(s) received on 10/25/2012 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager

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# WORK ORDER #: 1210554

Work Order Summary

| | | | |
|---|---|---|---|
| **CLIENT:** | Mr. Zohar Lavy<br>PARSONS GOVERNMENT SERVICES INC.<br>200 Cottontail Lane South<br>Somerset, NJ 08873 | **BILL TO:** | Accounts Payable-Syracuse<br>PARSONS GOVERNMENT SERVICES INC.<br>301 Plainfield Rd, Suite 350<br>Syracuse, NY 13212 |
| **PHONE:** | 732-537-3585 | **P.O. #** | 446110-02000 |
| **FAX:** | | **PROJECT #** | Ludlow |
| **DATE RECEIVED:** | 10/25/2012 | **CONTACT:** | Ausha Scott |
| **DATE COMPLETED:** | 11/08/2012 | | |

| FRACTION # | NAME | TEST | RECEIPT VAC./PRES. | FINAL PRESSURE |
|---|---|---|---|---|
| 01A | SV-3 | Modified TO-15 | 6.5"Hg | 5.0 psi |
| 02A | SV-4 | Modified TO-15 | 7.0"Hg | 5.0 psi |
| 03A | SV-1 | Modified TO-15 | 7.5"Hg | 5.0 psi |
| 04A | Lab Blank | Modified TO-15 | NA | NA |
| 05A | CCV | Modified TO-15 | NA | NA |
| 06A | LCS | Modified TO-15 | NA | NA |
| 06AA | LCSD | Modified TO-15 | NA | NA |

CERTIFIED BY: Heidi Hayes DATE: 11/08/12

Technical Director

Certfication numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,
TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.
Eurofins Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards



180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**
**EPA Method TO-15**
**PARSONS GOVERNMENT SERVICES INC.**
**Workorder# 1210554**

Three 6 Liter Summa Canister samples were received on October 25, 2012. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

## Receiving Notes

There were no receiving discrepancies.

## Analytical Notes

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

## Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit.
UJ- Non-detected compound associated with low bias in the CCV and/or LCS.
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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# Summary of Detected Compounds
# EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: SV-3**

**Lab ID#: 1210554-01A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Acetone | 8.6 | 64 | 20 | 150 |
| Toluene | 0.86 | 6.2 | 3.2 | 23 |
| Tetrachloroethene | 0.86 | 15 | 5.8 | 100 |
| m,p-Xylene | 0.86 | 2.6 | 3.7 | 11 |

**Client Sample ID: SV-4**

**Lab ID#: 1210554-02A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| 1,3-Butadiene | 0.88 | 2.0 | 1.9 | 4.4 |
| Acetone | 8.8 | 91 | 21 | 220 |
| Carbon Disulfide | 3.5 | 4.5 | 11 | 14 |
| Hexane | 0.88 | 100 | 3.1 | 360 |
| Benzene | 0.88 | 2.7 | 2.8 | 8.6 |
| Heptane | 0.88 | 47 | 3.6 | 190 |
| Toluene | 0.88 | 16 | 3.3 | 60 |
| Tetrachloroethene | 0.88 | 3.6 | 5.9 | 24 |
| Ethyl Benzene | 0.88 | 1.3 | 3.8 | 5.8 |
| m,p-Xylene | 0.88 | 4.6 | 3.8 | 20 |
| o-Xylene | 0.88 | 1.6 | 3.8 | 7.0 |

**Client Sample ID: SV-1**

**Lab ID#: 1210554-03A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 0.90 | 1.2 | 4.4 | 5.9 |
| 1,3-Butadiene | 0.90 | 15 | 2.0 | 34 |
| Acetone | 9.0 | 110 | 21 | 260 |
| Carbon Disulfide | 3.6 | 5.4 | 11 | 17 |
| Hexane | 0.90 | 7.6 | 3.2 | 27 |
| 2-Butanone (Methyl Ethyl Ketone) | 3.6 | 3.8 | 10 | 11 |
| 1,1,1-Trichloroethane | 0.90 | 1.2 | 4.9 | 6.5 |
| Cyclohexane | 0.90 | 2.3 | 3.1 | 7.9 |

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# Summary of Detected Compounds
# EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: SV-1**

**Lab ID#: 1210554-03A**

| | | | | |
|---|---|---|---|---|
| 2,2,4-Trimethylpentane | 0.90 | 2.5 | 4.2 | 12 |
| Benzene | 0.90 | 6.2 | 2.8 | 20 |
| Heptane | 0.90 | 3.2 | 3.7 | 13 |
| Toluene | 0.90 | 9.2 | 3.4 | 35 |
| Tetrachloroethene | 0.90 | 4.2 | 6.1 | 28 |
| Ethyl Benzene | 0.90 | 1.2 | 3.9 | 5.4 |
| m,p-Xylene | 0.90 | 4.4 | 3.9 | 19 |
| o-Xylene | 0.90 | 1.2 | 3.9 | 5.2 |

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**Client Sample ID: SV-3**

**Lab ID#: 1210554-01A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p102639** | **Date of Collection:** | **10/24/12 11:55:00 A** |
| **Dil. Factor:** | **1.71** | **Date of Analysis:** | **10/27/12 04:55 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 0.86 | Not Detected | 4.2 | Not Detected |
| Freon 114 | 0.86 | Not Detected | 6.0 | Not Detected |
| Chloromethane | 8.6 | Not Detected | 18 | Not Detected |
| Vinyl Chloride | 0.86 | Not Detected | 2.2 | Not Detected |
| 1,3-Butadiene | 0.86 | Not Detected | 1.9 | Not Detected |
| Bromomethane | 8.6 | Not Detected | 33 | Not Detected |
| Chloroethane | 3.4 | Not Detected | 9.0 | Not Detected |
| Freon 11 | 0.86 | Not Detected | 4.8 | Not Detected |
| Ethanol | 3.4 | Not Detected | 6.4 | Not Detected |
| Freon 113 | 0.86 | Not Detected | 6.6 | Not Detected |
| 1,1-Dichloroethene | 0.86 | Not Detected | 3.4 | Not Detected |
| Acetone | 8.6 | 64 | 20 | 150 |
| 2-Propanol | 3.4 | Not Detected | 8.4 | Not Detected |
| Carbon Disulfide | 3.4 | Not Detected | 11 | Not Detected |
| 3-Chloropropene | 3.4 | Not Detected | 11 | Not Detected |
| Methylene Chloride | 8.6 | Not Detected | 30 | Not Detected |
| Methyl tert-butyl ether | 0.86 | Not Detected | 3.1 | Not Detected |
| trans-1,2-Dichloroethene | 0.86 | Not Detected | 3.4 | Not Detected |
| Hexane | 0.86 | Not Detected | 3.0 | Not Detected |
| 1,1-Dichloroethane | 0.86 | Not Detected | 3.5 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 3.4 | Not Detected | 10 | Not Detected |
| cis-1,2-Dichloroethene | 0.86 | Not Detected | 3.4 | Not Detected |
| Tetrahydrofuran | 0.86 | Not Detected | 2.5 | Not Detected |
| Chloroform | 0.86 | Not Detected | 4.2 | Not Detected |
| 1,1,1-Trichloroethane | 0.86 | Not Detected | 4.7 | Not Detected |
| Cyclohexane | 0.86 | Not Detected | 2.9 | Not Detected |
| Carbon Tetrachloride | 0.86 | Not Detected | 5.4 | Not Detected |
| 2,2,4-Trimethylpentane | 0.86 | Not Detected | 4.0 | Not Detected |
| Benzene | 0.86 | Not Detected | 2.7 | Not Detected |
| 1,2-Dichloroethane | 0.86 | Not Detected | 3.5 | Not Detected |
| Heptane | 0.86 | Not Detected | 3.5 | Not Detected |
| Trichloroethene | 0.86 | Not Detected | 4.6 | Not Detected |
| 1,2-Dichloropropane | 0.86 | Not Detected | 4.0 | Not Detected |
| 1,4-Dioxane | 3.4 | Not Detected | 12 | Not Detected |
| Bromodichloromethane | 0.86 | Not Detected | 5.7 | Not Detected |
| cis-1,3-Dichloropropene | 0.86 | Not Detected | 3.9 | Not Detected |
| 4-Methyl-2-pentanone | 0.86 | Not Detected | 3.5 | Not Detected |
| Toluene | 0.86 | 6.2 | 3.2 | 23 |
| trans-1,3-Dichloropropene | 0.86 | Not Detected | 3.9 | Not Detected |
| 1,1,2-Trichloroethane | 0.86 | Not Detected | 4.7 | Not Detected |
| Tetrachloroethene | 0.86 | 15 | 5.8 | 100 |
| 2-Hexanone | 3.4 | Not Detected | 14 | Not Detected |

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**Client Sample ID: SV-3**

**Lab ID#: 1210554-01A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p102639** | **Date of Collection:** | **10/24/12 11:55:00 A** |
| **Dil. Factor:** | **1.71** | **Date of Analysis:** | **10/27/12 04:55 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Dibromochloromethane | 0.86 | Not Detected | 7.3 | Not Detected |
| 1,2-Dibromoethane (EDB) | 0.86 | Not Detected | 6.6 | Not Detected |
| Chlorobenzene | 0.86 | Not Detected | 3.9 | Not Detected |
| Ethyl Benzene | 0.86 | Not Detected | 3.7 | Not Detected |
| m,p-Xylene | 0.86 | 2.6 | 3.7 | 11 |
| o-Xylene | 0.86 | Not Detected | 3.7 | Not Detected |
| Styrene | 0.86 | Not Detected | 3.6 | Not Detected |
| Bromoform | 0.86 | Not Detected | 8.8 | Not Detected |
| Cumene | 0.86 | Not Detected | 4.2 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 0.86 | Not Detected | 5.9 | Not Detected |
| Propylbenzene | 0.86 | Not Detected | 4.2 | Not Detected |
| 4-Ethyltoluene | 0.86 | Not Detected | 4.2 | Not Detected |
| 1,3,5-Trimethylbenzene | 0.86 | Not Detected | 4.2 | Not Detected |
| 1,2,4-Trimethylbenzene | 0.86 | Not Detected | 4.2 | Not Detected |
| 1,3-Dichlorobenzene | 0.86 | Not Detected | 5.1 | Not Detected |
| 1,4-Dichlorobenzene | 0.86 | Not Detected | 5.1 | Not Detected |
| alpha-Chlorotoluene | 0.86 | Not Detected | 4.4 | Not Detected |
| 1,2-Dichlorobenzene | 0.86 | Not Detected | 5.1 | Not Detected |
| 1,2,4-Trichlorobenzene | 3.4 | Not Detected | 25 | Not Detected |
| Hexachlorobutadiene | 3.4 | Not Detected | 36 | Not Detected |

**Container Type: 6 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 96 | 70-130 |
| 1,2-Dichloroethane-d4 | 99 | 70-130 |
| 4-Bromofluorobenzene | 103 | 70-130 |

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**Client Sample ID: SV-4**

**Lab ID#: 1210554-02A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p102640** | **Date of Collection:** | **10/24/12 12:10:00 P** |
| **Dil. Factor:** | **1.75** | **Date of Analysis:** | **10/27/12 05:38 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 0.88 | Not Detected | 4.3 | Not Detected |
| Freon 114 | 0.88 | Not Detected | 6.1 | Not Detected |
| Chloromethane | 8.8 | Not Detected | 18 | Not Detected |
| Vinyl Chloride | 0.88 | Not Detected | 2.2 | Not Detected |
| 1,3-Butadiene | 0.88 | 2.0 | 1.9 | 4.4 |
| Bromomethane | 8.8 | Not Detected | 34 | Not Detected |
| Chloroethane | 3.5 | Not Detected | 9.2 | Not Detected |
| Freon 11 | 0.88 | Not Detected | 4.9 | Not Detected |
| Ethanol | 3.5 | Not Detected | 6.6 | Not Detected |
| Freon 113 | 0.88 | Not Detected | 6.7 | Not Detected |
| 1,1-Dichloroethene | 0.88 | Not Detected | 3.5 | Not Detected |
| Acetone | 8.8 | 91 | 21 | 220 |
| 2-Propanol | 3.5 | Not Detected | 8.6 | Not Detected |
| Carbon Disulfide | 3.5 | 4.5 | 11 | 14 |
| 3-Chloropropene | 3.5 | Not Detected | 11 | Not Detected |
| Methylene Chloride | 8.8 | Not Detected | 30 | Not Detected |
| Methyl tert-butyl ether | 0.88 | Not Detected | 3.2 | Not Detected |
| trans-1,2-Dichloroethene | 0.88 | Not Detected | 3.5 | Not Detected |
| Hexane | 0.88 | 100 | 3.1 | 360 |
| 1,1-Dichloroethane | 0.88 | Not Detected | 3.5 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 3.5 | Not Detected | 10 | Not Detected |
| cis-1,2-Dichloroethene | 0.88 | Not Detected | 3.5 | Not Detected |
| Tetrahydrofuran | 0.88 | Not Detected | 2.6 | Not Detected |
| Chloroform | 0.88 | Not Detected | 4.3 | Not Detected |
| 1,1,1-Trichloroethane | 0.88 | Not Detected | 4.8 | Not Detected |
| Cyclohexane | 0.88 | Not Detected | 3.0 | Not Detected |
| Carbon Tetrachloride | 0.88 | Not Detected | 5.5 | Not Detected |
| 2,2,4-Trimethylpentane | 0.88 | Not Detected | 4.1 | Not Detected |
| Benzene | 0.88 | 2.7 | 2.8 | 8.6 |
| 1,2-Dichloroethane | 0.88 | Not Detected | 3.5 | Not Detected |
| Heptane | 0.88 | 47 | 3.6 | 190 |
| Trichloroethene | 0.88 | Not Detected | 4.7 | Not Detected |
| 1,2-Dichloropropane | 0.88 | Not Detected | 4.0 | Not Detected |
| 1,4-Dioxane | 3.5 | Not Detected | 13 | Not Detected |
| Bromodichloromethane | 0.88 | Not Detected | 5.9 | Not Detected |
| cis-1,3-Dichloropropene | 0.88 | Not Detected | 4.0 | Not Detected |
| 4-Methyl-2-pentanone | 0.88 | Not Detected | 3.6 | Not Detected |
| Toluene | 0.88 | 16 | 3.3 | 60 |
| trans-1,3-Dichloropropene | 0.88 | Not Detected | 4.0 | Not Detected |
| 1,1,2-Trichloroethane | 0.88 | Not Detected | 4.8 | Not Detected |
| Tetrachloroethene | 0.88 | 3.6 | 5.9 | 24 |
| 2-Hexanone | 3.5 | Not Detected | 14 | Not Detected |

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**Client Sample ID: SV-4**

**Lab ID#: 1210554-02A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p102640** | **Date of Collection:** | **10/24/12 12:10:00 P** |
| **Dil. Factor:** | **1.75** | **Date of Analysis:** | **10/27/12 05:38 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Dibromochloromethane | 0.88 | Not Detected | 7.4 | Not Detected |
| 1,2-Dibromoethane (EDB) | 0.88 | Not Detected | 6.7 | Not Detected |
| Chlorobenzene | 0.88 | Not Detected | 4.0 | Not Detected |
| Ethyl Benzene | 0.88 | 1.3 | 3.8 | 5.8 |
| m,p-Xylene | 0.88 | 4.6 | 3.8 | 20 |
| o-Xylene | 0.88 | 1.6 | 3.8 | 7.0 |
| Styrene | 0.88 | Not Detected | 3.7 | Not Detected |
| Bromoform | 0.88 | Not Detected | 9.0 | Not Detected |
| Cumene | 0.88 | Not Detected | 4.3 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 0.88 | Not Detected | 6.0 | Not Detected |
| Propylbenzene | 0.88 | Not Detected | 4.3 | Not Detected |
| 4-Ethyltoluene | 0.88 | Not Detected | 4.3 | Not Detected |
| 1,3,5-Trimethylbenzene | 0.88 | Not Detected | 4.3 | Not Detected |
| 1,2,4-Trimethylbenzene | 0.88 | Not Detected | 4.3 | Not Detected |
| 1,3-Dichlorobenzene | 0.88 | Not Detected | 5.3 | Not Detected |
| 1,4-Dichlorobenzene | 0.88 | Not Detected | 5.3 | Not Detected |
| alpha-Chlorotoluene | 0.88 | Not Detected | 4.5 | Not Detected |
| 1,2-Dichlorobenzene | 0.88 | Not Detected | 5.3 | Not Detected |
| 1,2,4-Trichlorobenzene | 3.5 | Not Detected | 26 | Not Detected |
| Hexachlorobutadiene | 3.5 | Not Detected | 37 | Not Detected |

**Container Type: 6 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 101 | 70-130 |
| 1,2-Dichloroethane-d4 | 101 | 70-130 |
| 4-Bromofluorobenzene | 97 | 70-130 |

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**Client Sample ID: SV-1**

**Lab ID#: 1210554-03A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p102641** | **Date of Collection:** | **10/24/12 2:28:00 PM** |
| **Dil. Factor:** | **1.79** | **Date of Analysis:** | **10/27/12 06:09 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 0.90 | 1.2 | 4.4 | 5.9 |
| Freon 114 | 0.90 | Not Detected | 6.2 | Not Detected |
| Chloromethane | 9.0 | Not Detected | 18 | Not Detected |
| Vinyl Chloride | 0.90 | Not Detected | 2.3 | Not Detected |
| 1,3-Butadiene | 0.90 | 15 | 2.0 | 34 |
| Bromomethane | 9.0 | Not Detected | 35 | Not Detected |
| Chloroethane | 3.6 | Not Detected | 9.4 | Not Detected |
| Freon 11 | 0.90 | Not Detected | 5.0 | Not Detected |
| Ethanol | 3.6 | Not Detected | 6.7 | Not Detected |
| Freon 113 | 0.90 | Not Detected | 6.8 | Not Detected |
| 1,1-Dichloroethene | 0.90 | Not Detected | 3.5 | Not Detected |
| Acetone | 9.0 | 110 | 21 | 260 |
| 2-Propanol | 3.6 | Not Detected | 8.8 | Not Detected |
| Carbon Disulfide | 3.6 | 5.4 | 11 | 17 |
| 3-Chloropropene | 3.6 | Not Detected | 11 | Not Detected |
| Methylene Chloride | 9.0 | Not Detected | 31 | Not Detected |
| Methyl tert-butyl ether | 0.90 | Not Detected | 3.2 | Not Detected |
| trans-1,2-Dichloroethene | 0.90 | Not Detected | 3.5 | Not Detected |
| Hexane | 0.90 | 7.6 | 3.2 | 27 |
| 1,1-Dichloroethane | 0.90 | Not Detected | 3.6 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 3.6 | 3.8 | 10 | 11 |
| cis-1,2-Dichloroethene | 0.90 | Not Detected | 3.5 | Not Detected |
| Tetrahydrofuran | 0.90 | Not Detected | 2.6 | Not Detected |
| Chloroform | 0.90 | Not Detected | 4.4 | Not Detected |
| 1,1,1-Trichloroethane | 0.90 | 1.2 | 4.9 | 6.5 |
| Cyclohexane | 0.90 | 2.3 | 3.1 | 7.9 |
| Carbon Tetrachloride | 0.90 | Not Detected | 5.6 | Not Detected |
| 2,2,4-Trimethylpentane | 0.90 | 2.5 | 4.2 | 12 |
| Benzene | 0.90 | 6.2 | 2.8 | 20 |
| 1,2-Dichloroethane | 0.90 | Not Detected | 3.6 | Not Detected |
| Heptane | 0.90 | 3.2 | 3.7 | 13 |
| Trichloroethene | 0.90 | Not Detected | 4.8 | Not Detected |
| 1,2-Dichloropropane | 0.90 | Not Detected | 4.1 | Not Detected |
| 1,4-Dioxane | 3.6 | Not Detected | 13 | Not Detected |
| Bromodichloromethane | 0.90 | Not Detected | 6.0 | Not Detected |
| cis-1,3-Dichloropropene | 0.90 | Not Detected | 4.1 | Not Detected |
| 4-Methyl-2-pentanone | 0.90 | Not Detected | 3.7 | Not Detected |
| Toluene | 0.90 | 9.2 | 3.4 | 35 |
| trans-1,3-Dichloropropene | 0.90 | Not Detected | 4.1 | Not Detected |
| 1,1,2-Trichloroethane | 0.90 | Not Detected | 4.9 | Not Detected |
| Tetrachloroethene | 0.90 | 4.2 | 6.1 | 28 |
| 2-Hexanone | 3.6 | Not Detected | 15 | Not Detected |

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**Client Sample ID: SV-1**

**Lab ID#: 1210554-03A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p102641** | **Date of Collection: 10/24/12 2:28:00 PM** | |
| **Dil. Factor:** | **1.79** | **Date of Analysis: 10/27/12 06:09 PM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Dibromochloromethane | 0.90 | Not Detected | 7.6 | Not Detected |
| 1,2-Dibromoethane (EDB) | 0.90 | Not Detected | 6.9 | Not Detected |
| Chlorobenzene | 0.90 | Not Detected | 4.1 | Not Detected |
| Ethyl Benzene | 0.90 | 1.2 | 3.9 | 5.4 |
| m,p-Xylene | 0.90 | 4.4 | 3.9 | 19 |
| o-Xylene | 0.90 | 1.2 | 3.9 | 5.2 |
| Styrene | 0.90 | Not Detected | 3.8 | Not Detected |
| Bromoform | 0.90 | Not Detected | 9.2 | Not Detected |
| Cumene | 0.90 | Not Detected | 4.4 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 0.90 | Not Detected | 6.1 | Not Detected |
| Propylbenzene | 0.90 | Not Detected | 4.4 | Not Detected |
| 4-Ethyltoluene | 0.90 | Not Detected | 4.4 | Not Detected |
| 1,3,5-Trimethylbenzene | 0.90 | Not Detected | 4.4 | Not Detected |
| 1,2,4-Trimethylbenzene | 0.90 | Not Detected | 4.4 | Not Detected |
| 1,3-Dichlorobenzene | 0.90 | Not Detected | 5.4 | Not Detected |
| 1,4-Dichlorobenzene | 0.90 | Not Detected | 5.4 | Not Detected |
| alpha-Chlorotoluene | 0.90 | Not Detected | 4.6 | Not Detected |
| 1,2-Dichlorobenzene | 0.90 | Not Detected | 5.4 | Not Detected |
| 1,2,4-Trichlorobenzene | 3.6 | Not Detected | 26 | Not Detected |
| Hexachlorobutadiene | 3.6 | Not Detected | 38 | Not Detected |

**Container Type: 6 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 96 | 70-130 |
| 1,2-Dichloroethane-d4 | 97 | 70-130 |
| 4-Bromofluorobenzene | 101 | 70-130 |

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**Client Sample ID: Lab Blank**

**Lab ID#: 1210554-04A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p102623** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/26/12 10:44 PM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Freon 12 | 0.50 | Not Detected | 2.5 | Not Detected |
| Freon 114 | 0.50 | Not Detected | 3.5 | Not Detected |
| Chloromethane | 5.0 | Not Detected | 10 | Not Detected |
| Vinyl Chloride | 0.50 | Not Detected | 1.3 | Not Detected |
| 1,3-Butadiene | 0.50 | Not Detected | 1.1 | Not Detected |
| Bromomethane | 5.0 | Not Detected | 19 | Not Detected |
| Chloroethane | 2.0 | Not Detected | 5.3 | Not Detected |
| Freon 11 | 0.50 | Not Detected | 2.8 | Not Detected |
| Ethanol | 2.0 | Not Detected | 3.8 | Not Detected |
| Freon 113 | 0.50 | Not Detected | 3.8 | Not Detected |
| 1,1-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Acetone | 5.0 | Not Detected | 12 | Not Detected |
| 2-Propanol | 2.0 | Not Detected | 4.9 | Not Detected |
| Carbon Disulfide | 2.0 | Not Detected | 6.2 | Not Detected |
| 3-Chloropropene | 2.0 | Not Detected | 6.3 | Not Detected |
| Methylene Chloride | 5.0 | Not Detected | 17 | Not Detected |
| Methyl tert-butyl ether | 0.50 | Not Detected | 1.8 | Not Detected |
| trans-1,2-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Hexane | 0.50 | Not Detected | 1.8 | Not Detected |
| 1,1-Dichloroethane | 0.50 | Not Detected | 2.0 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 2.0 | Not Detected | 5.9 | Not Detected |
| cis-1,2-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Tetrahydrofuran | 0.50 | Not Detected | 1.5 | Not Detected |
| Chloroform | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,1,1-Trichloroethane | 0.50 | Not Detected | 2.7 | Not Detected |
| Cyclohexane | 0.50 | Not Detected | 1.7 | Not Detected |
| Carbon Tetrachloride | 0.50 | Not Detected | 3.1 | Not Detected |
| 2,2,4-Trimethylpentane | 0.50 | Not Detected | 2.3 | Not Detected |
| Benzene | 0.50 | Not Detected | 1.6 | Not Detected |
| 1,2-Dichloroethane | 0.50 | Not Detected | 2.0 | Not Detected |
| Heptane | 0.50 | Not Detected | 2.0 | Not Detected |
| Trichloroethene | 0.50 | Not Detected | 2.7 | Not Detected |
| 1,2-Dichloropropane | 0.50 | Not Detected | 2.3 | Not Detected |
| 1,4-Dioxane | 2.0 | Not Detected | 7.2 | Not Detected |
| Bromodichloromethane | 0.50 | Not Detected | 3.4 | Not Detected |
| cis-1,3-Dichloropropene | 0.50 | Not Detected | 2.3 | Not Detected |
| 4-Methyl-2-pentanone | 0.50 | Not Detected | 2.0 | Not Detected |
| Toluene | 0.50 | Not Detected | 1.9 | Not Detected |
| trans-1,3-Dichloropropene | 0.50 | Not Detected | 2.3 | Not Detected |
| 1,1,2-Trichloroethane | 0.50 | Not Detected | 2.7 | Not Detected |
| Tetrachloroethene | 0.50 | Not Detected | 3.4 | Not Detected |
| 2-Hexanone | 2.0 | Not Detected | 8.2 | Not Detected |

eurofins | Air Toxics

**Client Sample ID: Lab Blank**

**Lab ID#: 1210554-04A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p102623** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/26/12 10:44 PM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Dibromochloromethane | 0.50 | Not Detected | 4.2 | Not Detected |
| 1,2-Dibromoethane (EDB) | 0.50 | Not Detected | 3.8 | Not Detected |
| Chlorobenzene | 0.50 | Not Detected | 2.3 | Not Detected |
| Ethyl Benzene | 0.50 | Not Detected | 2.2 | Not Detected |
| m,p-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| o-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| Styrene | 0.50 | Not Detected | 2.1 | Not Detected |
| Bromoform | 0.50 | Not Detected | 5.2 | Not Detected |
| Cumene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,1,2,2-Tetrachloroethane | 0.50 | Not Detected | 3.4 | Not Detected |
| Propylbenzene | 0.50 | Not Detected | 2.4 | Not Detected |
| 4-Ethyltoluene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,3,5-Trimethylbenzene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,2,4-Trimethylbenzene | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,3-Dichlorobenzene | 0.50 | Not Detected | 3.0 | Not Detected |
| 1,4-Dichlorobenzene | 0.50 | Not Detected | 3.0 | Not Detected |
| alpha-Chlorotoluene | 0.50 | Not Detected | 2.6 | Not Detected |
| 1,2-Dichlorobenzene | 0.50 | Not Detected | 3.0 | Not Detected |
| 1,2,4-Trichlorobenzene | 2.0 | Not Detected | 15 | Not Detected |
| Hexachlorobutadiene | 2.0 | Not Detected | 21 | Not Detected |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 99 | 70-130 |
| 1,2-Dichloroethane-d4 | 94 | 70-130 |
| 4-Bromofluorobenzene | 96 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: CCV**

**Lab ID#: 1210554-05A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p102619** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/26/12 08:05 PM** | |

| Compound | %Recovery |
|---|---|
| Freon 12 | 81 |
| Freon 114 | 84 |
| Chloromethane | 90 |
| Vinyl Chloride | 86 |
| 1,3-Butadiene | 82 |
| Bromomethane | 88 |
| Chloroethane | 89 |
| Freon 11 | 79 |
| Ethanol | 92 |
| Freon 113 | 81 |
| 1,1-Dichloroethene | 90 |
| Acetone | 80 |
| 2-Propanol | 86 |
| Carbon Disulfide | 84 |
| 3-Chloropropene | 94 |
| Methylene Chloride | 84 |
| Methyl tert-butyl ether | 79 |
| trans-1,2-Dichloroethene | 88 |
| Hexane | 91 |
| 1,1-Dichloroethane | 84 |
| 2-Butanone (Methyl Ethyl Ketone) | 82 |
| cis-1,2-Dichloroethene | 86 |
| Tetrahydrofuran | 85 |
| Chloroform | 81 |
| 1,1,1-Trichloroethane | 84 |
| Cyclohexane | 88 |
| Carbon Tetrachloride | 82 |
| 2,2,4-Trimethylpentane | 93 |
| Benzene | 83 |
| 1,2-Dichloroethane | 78 |
| Heptane | 93 |
| Trichloroethene | 76 |
| 1,2-Dichloropropane | 87 |
| 1,4-Dioxane | 77 |
| Bromodichloromethane | 84 |
| cis-1,3-Dichloropropene | 93 |
| 4-Methyl-2-pentanone | 94 |
| Toluene | 88 |
| trans-1,3-Dichloropropene | 91 |
| 1,1,2-Trichloroethane | 81 |
| Tetrachloroethene | 78 |
| 2-Hexanone | 81 |

eurofins | Air Toxics

**Client Sample ID: CCV**

**Lab ID#: 1210554-05A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p102619** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/26/12 08:05 PM** | |

| Compound | %Recovery |
|---|---|
| Dibromochloromethane | 81 |
| 1,2-Dibromoethane (EDB) | 84 |
| Chlorobenzene | 84 |
| Ethyl Benzene | 91 |
| m,p-Xylene | 93 |
| o-Xylene | 95 |
| Styrene | 92 |
| Bromoform | 84 |
| Cumene | 94 |
| 1,1,2,2-Tetrachloroethane | 83 |
| Propylbenzene | 89 |
| 4-Ethyltoluene | 89 |
| 1,3,5-Trimethylbenzene | 86 |
| 1,2,4-Trimethylbenzene | 91 |
| 1,3-Dichlorobenzene | 84 |
| 1,4-Dichlorobenzene | 80 |
| alpha-Chlorotoluene | 105 |
| 1,2-Dichlorobenzene | 83 |
| 1,2,4-Trichlorobenzene | 76 |
| Hexachlorobutadiene | 83 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 104 | 70-130 |
| 1,2-Dichloroethane-d4 | 94 | 70-130 |
| 4-Bromofluorobenzene | 103 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: LCS**

**Lab ID#: 1210554-06A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p102621** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/26/12 08:57 PM** | |

| Compound | %Recovery |
|---|---|
| Freon 12 | 85 |
| Freon 114 | 88 |
| Chloromethane | 89 |
| Vinyl Chloride | 92 |
| 1,3-Butadiene | 86 |
| Bromomethane | 91 |
| Chloroethane | 93 |
| Freon 11 | 82 |
| Ethanol | 60 Q |
| Freon 113 | 86 |
| 1,1-Dichloroethene | 101 |
| Acetone | 84 |
| 2-Propanol | 90 |
| Carbon Disulfide | 111 |
| 3-Chloropropene | 117 |
| Methylene Chloride | 87 |
| Methyl tert-butyl ether | 74 |
| trans-1,2-Dichloroethene | 103 |
| Hexane | 100 |
| 1,1-Dichloroethane | 88 |
| 2-Butanone (Methyl Ethyl Ketone) | 84 |
| cis-1,2-Dichloroethene | 92 |
| Tetrahydrofuran | 86 |
| Chloroform | 86 |
| 1,1,1-Trichloroethane | 90 |
| Cyclohexane | 94 |
| Carbon Tetrachloride | 87 |
| 2,2,4-Trimethylpentane | 97 |
| Benzene | 87 |
| 1,2-Dichloroethane | 80 |
| Heptane | 96 |
| Trichloroethene | 79 |
| 1,2-Dichloropropane | 90 |
| 1,4-Dioxane | 77 |
| Bromodichloromethane | 87 |
| cis-1,3-Dichloropropene | 98 |
| 4-Methyl-2-pentanone | 94 |
| Toluene | 90 |
| trans-1,3-Dichloropropene | 97 |
| 1,1,2-Trichloroethane | 85 |
| Tetrachloroethene | 81 |
| 2-Hexanone | 81 |

eurofins | Air Toxics

**Client Sample ID: LCS**

**Lab ID#: 1210554-06A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p102621** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/26/12 08:57 PM** | |

| Compound | %Recovery |
|---|---|
| Dibromochloromethane | 84 |
| 1,2-Dibromoethane (EDB) | 90 |
| Chlorobenzene | 89 |
| Ethyl Benzene | 95 |
| m,p-Xylene | 99 |
| o-Xylene | 99 |
| Styrene | 96 |
| Bromoform | 86 |
| Cumene | 98 |
| 1,1,2,2-Tetrachloroethane | 89 |
| Propylbenzene | 95 |
| 4-Ethyltoluene | 92 |
| 1,3,5-Trimethylbenzene | 89 |
| 1,2,4-Trimethylbenzene | 94 |
| 1,3-Dichlorobenzene | 89 |
| 1,4-Dichlorobenzene | 85 |
| alpha-Chlorotoluene | 109 |
| 1,2-Dichlorobenzene | 89 |
| 1,2,4-Trichlorobenzene | 83 |
| Hexachlorobutadiene | 89 |

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 103 | 70-130 |
| 1,2-Dichloroethane-d4 | 94 | 70-130 |
| 4-Bromofluorobenzene | 102 | 70-130 |

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**Client Sample ID: LCSD**

**Lab ID#: 1210554-06AA**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p102622** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/26/12 10:08 PM** | |

| Compound | %Recovery |
|---|---|
| Freon 12 | 87 |
| Freon 114 | 91 |
| Chloromethane | 97 |
| Vinyl Chloride | 96 |
| 1,3-Butadiene | 87 |
| Bromomethane | 94 |
| Chloroethane | 95 |
| Freon 11 | 84 |
| Ethanol | 61 Q |
| Freon 113 | 88 |
| 1,1-Dichloroethene | 101 |
| Acetone | 85 |
| 2-Propanol | 92 |
| Carbon Disulfide | 115 |
| 3-Chloropropene | 114 |
| Methylene Chloride | 87 |
| Methyl tert-butyl ether | 76 |
| trans-1,2-Dichloroethene | 106 |
| Hexane | 103 |
| 1,1-Dichloroethane | 91 |
| 2-Butanone (Methyl Ethyl Ketone) | 87 |
| cis-1,2-Dichloroethene | 93 |
| Tetrahydrofuran | 87 |
| Chloroform | 88 |
| 1,1,1-Trichloroethane | 92 |
| Cyclohexane | 96 |
| Carbon Tetrachloride | 89 |
| 2,2,4-Trimethylpentane | 98 |
| Benzene | 88 |
| 1,2-Dichloroethane | 82 |
| Heptane | 98 |
| Trichloroethene | 80 |
| 1,2-Dichloropropane | 92 |
| 1,4-Dioxane | 80 |
| Bromodichloromethane | 90 |
| cis-1,3-Dichloropropene | 99 |
| 4-Methyl-2-pentanone | 92 |
| Toluene | 91 |
| trans-1,3-Dichloropropene | 95 |
| 1,1,2-Trichloroethane | 84 |
| Tetrachloroethene | 80 |
| 2-Hexanone | 80 |

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**Client Sample ID: LCSD**

**Lab ID#: 1210554-06AA**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **p102622** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/26/12 10:08 PM** | |

| Compound | %Recovery |
|---|---|
| Dibromochloromethane | 84 |
| 1,2-Dibromoethane (EDB) | 88 |
| Chlorobenzene | 88 |
| Ethyl Benzene | 94 |
| m,p-Xylene | 98 |
| o-Xylene | 99 |
| Styrene | 96 |
| Bromoform | 86 |
| Cumene | 97 |
| 1,1,2,2-Tetrachloroethane | 88 |
| Propylbenzene | 94 |
| 4-Ethyltoluene | 88 |
| 1,3,5-Trimethylbenzene | 88 |
| 1,2,4-Trimethylbenzene | 92 |
| 1,3-Dichlorobenzene | 87 |
| 1,4-Dichlorobenzene | 83 |
| alpha-Chlorotoluene | 109 |
| 1,2-Dichlorobenzene | 86 |
| 1,2,4-Trichlorobenzene | 80 |
| Hexachlorobutadiene | 85 |

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 103 | 70-130 |
| 1,2-Dichloroethane-d4 | 94 | 70-130 |
| 4-Bromofluorobenzene | 101 | 70-130 |

# Air Toxics LTD.

## CHAIN-OF-CUSTODY RECORD

**Sample Transportation Notice**
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020



Project Manager Eric Gavlin

**Collected by:** (Print and Sign) Zahor Lavy

Company Parsons Email Eric.gavlin@parsons.com

Address 200 Cottontail Ln. City Somerset State NJ Zip 08873

Phone 732 537 3570 Fax 732 868 3110

**Project Info:**
P.O. # 446110-0200
Project # _____
Project Name Ludlow

**Turn Around Time:**
☒ Normal
☐ Rush
_____ specify

*Lab Use Only*
Pressurized by:
Date:
Pressurization Gas: $N_2$ He

| Lab I.D. | Field Sample I.D. (Location) | Can # | Date of Collection | Time of Collection | Analyses Requested | Canister Pressure/Vacuum Initial | Final | Receipt | Final (psi) |
|---|---|---|---|---|---|---|---|---|---|
| 01A | SV-3 | 4371 | 10/24/12 | 1155 | TO-15 Modified | -30 | -8 | | |
| 02A | SV-4 | 1243 | 10/24/12 | 1210 | TO-15 Modified | -30+ | -8 | | |
| 03A | SV-1 | 2477 | 10/24/12 | 1428 | TO-15 Modified | -30+ | -9 | | |
| | | | | | | | | | |
| | | | | | | | | | |
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| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Relinquished by: (signature) Date/Time 10/24/12 / 1815 to UPS
Received by: (signature) Date/Time

Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time 10/25/12 1020

Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time

**Notes:**

**Lab Use Only**

| Shipper Name | Air Bill # | Temp (°C) | Condition | Custody Seals Intact? | Work Order # |
|---|---|---|---|---|---|
| UPS | | N/A | Good | Yes No (None) | 1210554 |

Form 1293 rev.11

# DATA USABILITY SUMMARY REPORT

# LUDLOW FORMER MGP SITE

# SUPPLEMENTAL REMEDIAL INVESTIGATION

*Prepared For:*

**CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.**

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

*Prepared By:*

PARSONS

301 Plainfield Road, Suite 350
Syracuse, New York 13212
Phone: (315) 451-9560
Fax: (315) 451-9570

**FEBRUARY 2013**

## TABLE OF CONTENTS

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## LIST OF ATTACHMENTS

# SECTION 1

# DATA USABILITY SUMMARY

Soil and groundwater samples were collected from the Consolidated Edison Ludlow Street Site from October 25, 2012 through December 21, 2012. Analytical results from these samples were validated and reviewed by Parsons for usability with respect to the following requirements:

- Work Plan,
- NYSDEC Analytical Services Protocol (ASP), and
- USEPA Region II Standard Operating Procedures (SOPs) for organic and inorganic data review.

The analytical laboratory for this project was Chemtech. This laboratory is certified to perform project analyses through the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP).

## 1.1 LABORATORY DATA PACKAGES

The laboratory data package turnaround time, defined as the time from sample receipt by the laboratory to receipt of the analytical data packages by Parsons, was 16-27 days for the project samples.

The data packages received from Chemtech were paginated, complete, and overall were of good quality. Comments on specific quality control (QC) and other requirements are discussed in detail in the attached data validation report which is summarized by media in Section 2.

## 1.2 SAMPLING AND CHAIN-OF-CUSTODY

The samples were collected, properly preserved, shipped under a chain-of-custody (COC) record, and received at Chemtech within one to seven days of sampling. All samples were received intact and in good condition at Chemtech.

## 1.3 LABORATORY ANALYTICAL METHODS

The soil and groundwater samples that were collected from the site were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), metals, and cyanide. Summaries of issues concerning these laboratory analyses are presented in Subsections 1.3.1 through 1.3.3. The data qualifications resulting from the data validation review and statements on the laboratory analytical precision, accuracy, representativeness, completeness, and comparability (PARCC) are discussed for each analytical method in Section 2. The laboratory data were reviewed and may be qualified with the following validation flags:

"U" - not detected at the value given,

"UJ" - estimated and not detected at the value given,

"J" - estimated at the value given,

"N" - presumptive evidence at the value given, and

"R" - unusable value.

The validated laboratory data were tabulated and are presented in Attachment A.

### 1.3.1 Volatile Organic Analysis

Soil and groundwater samples were analyzed for VOCs using the USEPA SW-846 8260C analytical method. Certain reported results for the VOC samples were qualified as estimated based upon instrument calibrations, laboratory control sample recoveries, internal standard responses, and field duplicate precision. Certain reported VOC analytical results were considered unusable and qualified "R" based upon poor instrument calibration linearity and internal standard responses. The reported VOC analytical results were 98.8% and 100% complete (i.e., usable) for the soil and groundwater data, respectively. PARCC requirements were met overall.

### 1.3.2 Semivolatile Organic Analysis

Soil and groundwater samples were analyzed for SVOCs using the USEPA SW-846 8270D analytical method. Certain reported results for the SVOC samples were qualified as estimated based upon matrix spike/matrix spike duplicate precision and accuracy, laboratory control sample recoveries, instrument calibrations, and internal standard responses. The reported SVOC analytical results were 100% complete (i.e., usable) for the soil and groundwater data. PARCC requirements were met.

### 1.3.3 Inorganics Analysis

Soil and groundwater samples were analyzed for metals and cyanide using the USEPA SW-846 6010B/7470A/7471A/9012B analytical methods. Certain reported results for the inorganics samples were qualified as estimated based upon matrix spike recoveries, serial dilutions, laboratory duplicate precision, and field duplicate precision. The reported inorganic analytical results were considered 100% complete (i.e., usable) for the soil and groundwater data. PARCC requirements were met.

# SECTION 2

# DATA VALIDATION REPORT

## 2.1 SOIL

Data review has been completed for data packages generated by Chemtech containing soil samples collected from the site. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. The analytical results were presented by the laboratory in three sample delivery groups (SDGs): D4710, D4751, and D5300. Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. This data validation and usability report is presented by analysis type and the validated laboratory data are presented in Attachment A-1.

### 2.1.1 Volatiles

The following items were reviewed for compliancy in the volatile analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy
- Laboratory control sample (LCS) recoveries
- Laboratory method blank and field equipment blank contamination
- GC/MS instrument performance
- Initial and continuing calibrations
- Internal standard area counts and retention times
- Field duplicate precision
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of MS/MSD precision and accuracy, LCS recoveries, blank contamination, initial and continuing calibrations, internal standard responses, and field duplicate precision as discussed below.

MS/MSD Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC acceptance limits for designated

project spiked samples with the exception of many precision outliers during the spiked analyses of sample MW-7(48-50). Validation qualification of the parent sample was not required since the MS/MSD accuracy measurements were within criteria.

LCS Recoveries

All LCS recoveries associated with project samples were considered acceptable and within QC limits with the exception of the high LCS recoveries for methylene chloride (140%R, 175%R; QC limit 73-134%R) associated with all samples in SDG D4710 except SB-10(45-47); the high LCS recovery for acetone (160%R; QC limit 57-148%R) associated with sample SB-12(12-14); the low LCS recovery for bromochloromethane (75%R; QC limit 76-123%R) associated with all samples in SDG D4751 except SB-12(12-14); the high LCS recoveries for 1,2,4-trichlorobenzene (135%R; QC limit 65-130%R) and 1,2,3-trichlorobenzene (140%R; QC limit 60-135%R) associated with samples SB-16(45-47), SB-14(45-47), SB-14A(45-47), and SB-17(33-35); the low LCS recovery for 1,2,3-trichlorobenzene (70%R; QC limit 79-123%R) and the high LCS recovery for bromomethane (140%R; QC limit 64-136%R) associated with samples SB-14(38-40) and SB-17(45-47) . Therefore, positive results for those compounds where the LCS recovery exceeded the QC limit were considered estimated, possibly biased high, and qualified "J" for the affected samples. Results for those compounds where the LCS recovery fell below the QC limit were considered estimated, possibly biased low, with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples.

Blank Contamination

The laboratory method blanks associated with samples in SDGs D4710 and D4751 contained methylene chloride at concentrations ranging from 4.6 to 9.5 µg/kg. Therefore, all methylene chloride results less than validation action concentrations were considered not detected and qualified "U" for the affected samples.

Initial and Continuing Calibrations

All initial calibration compounds were compliant with a minimum relative response factor (RRF) of 0.05 and a maximum percent relative standard deviation (%RSD) of 20% with the exception of methylene chloride (24.8%RSD) and 1,2,3-trichlorobenzene (21.3%RSD) in the initial calibration associated with samples SB-14(38-40) and SB-17(45-47); carbon tetrachloride (36.9%RSD) in the initial calibration associated with sample FB122112; 2-hexanone (21.2%RSD), dibromochloromethane (26.5%RSD), and bromoform (34.5%RSD) in the initial calibration associated with samples SB-16(30-33) and –DL; and 1,4-dioxane (31.3%RSD) and 1,2-dibromo-3-chloropropane (RRF=0.048) in the initial calibration associated with samples SB-16(45-47), SB-14(45-47), SB-14A(45-47), and SB-17(33-35). The results for these compounds were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples. However, the results for those compounds where the RRF was outside the criteria which were nondetects were considered unusable and qualified "R" for the affected samples.

All continuing calibration compounds were compliant with a minimum RRF of 0.05 and a maximum percent difference (%D) within $\pm$20% with the exception of methylene chloride (32.39%D, 38.81%D, 77.31%D) in the continuing calibrations associated with samples in SDG

D4710; methylene chloride (38.36%D) and 1,2-dibromo-3-chloropropane (-20.25%D) in the continuing calibration associated with all samples in SDG D4751 except SB-11(29.5-30), SB-12(12-14), "RE" samples, and "DL" samples; acetone (20.36%D) and methylene chloride (21.19%D) in the continuing calibration associated with samples SB-11(29.5-30), MW-8(9.5-10)RE, and TP-6FLOORRE; chloroethane (30.46%D), acetone (45.68%D), methyl acetate (38.82%D), and 2-hexanone (21.05%D) in the continuing calibration associated with sample SB-12(12-14); bromomethane (49.57%D) and methylene chloride (-20.25%D) in the continuing calibration associated with samples SB-14(38-40) and SB-17(45-47); 2-butanone (20.99%D) and 1,4-dioxane (50%D) in the continuing calibration associated with samples SB-16(30-33) and –DL; dichlorodifluoromethane (-20.07%D), dibromochloromethane (21.33%D), and 1,2,4-trichlorobenzene (26.25%D) in the continuing calibration associated with samples SB-16(45-47), SB-14(45-47), SB-14A(45-47), and SB-17(33-35); and bromomethane (68.79%D), carbon tetrachloride (65.34%D), and 1,4-dioxane (-33.33%D) in the continuing calibration associated with FB122112. Therefore, the sample results for these compounds were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples.

Internal Standard Responses

All internal standard (IS) responses and retention times were within specified QC ranges based on associated calibration standards (i.e., sample's area count within -50% to +100% and retention times within ±0.5 minutes of the standard) with the exception of the low response for the IS pentafluorobenzene in sample SB-10(30-32)DL; low response for the IS chlorobenzene-d5 in samples SB-9(5-8), TP-6FLOOR, and -RE; low response for the IS 1,4-difluorobenzene-d4 in samples SB-9(5-8), -RE, MW-17(36-38), MW-7(36-38), MW-8(9.5-10), and -RE; and the extremely low response for the IS 1,4-difluorobenzene-d4 in samples SB-10(30-32), TP-6FLOOR, and -RE. Therefore, results associated with these ISs were considered estimated, possibly biased low, with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples. However, nondetected results associated with those ISs that experienced extremely low responses were considered unusable and qualified "R" for the affected samples.

Field Duplicate Precision

All field duplicate precision results were considered acceptable with the exception of the precision results for cyclohexane (153%RPD) and methylcyclohexane (128%RPD) for the field duplicate pair MW-7(36-38) and MW-17(36-38). Therefore, the results for these compounds were considered estimated and qualified "J" for these samples.

Usability

All volatile soil sample results were considered usable following data validation with the exception of certain nondetected results based upon poor instrument calibration linearity and internal standard responses.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The volatile soil data presented

by Chemtech were 98.8% complete (i.e., usable). The validated volatile laboratory data are tabulated and presented in Attachment A-1.

### 2.1.2 Semivolatiles

The following items were reviewed for compliancy in the semivolatile analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- MS/MSD precision and accuracy
- LCS recoveries
- Laboratory method blank and field equipment blank contamination
- GC/MS instrument performance
- Initial and continuing calibrations
- Internal standard area counts and retention times
- Field duplicate precision
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of MS/MSD precision and accuracy, LCS recoveries, and initial and continuing calibrations as discussed below.

MS/MSD Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC limits for designated spiked project samples with the exception of the high MS/MSD accuracy results for hexachlorocyclopentadiene (130%R/130%R; QC limit 10-122%R) during the spiked analyses of sample MW-7(48-50). Validation qualification of the parent sample was not required since this compound was not detected.

LCS Recoveries

All LCS recoveries were considered acceptable and within QC limits with the exception of the high LCS recoveries for 2-nitrophenol (106%R; QC limit 52-105%R), hexachlorocyclopentadiene (161%R; QC limit 38-122%R), 2,4,6-trichlorophenol (106%R; QC limit 56-103%R), acenaphthene (106%R; QC limit 57-102%R), benzo(b)fluoranthene (106%R; QC limit 56-103%R), benzo(a)pyrene (112%R; QC limit 57-103%R), and benzo(g,h,i)perylene (106%R; QC limit 56-105%R) associated with samples in SDG D4710; the LCS recoveries for 4-chloroaniline (16%R; QC limit 25-115%R) and hexachlorocyclopentadiene (142%R;43-

112%R) associated with samples in SDG D4751; the LCS recoveries for hexachlorocyclopentadiene (27%R; QC limit 38-122%R), 2,4-dinitrophenol (15%R; QC limit 32-114%R), and 4,6-dinitro-2-methylphenol (18%R; QC limit 44-119%R) associated with soil samples in SDG D5300; and the LCS recovery for hexachlorocyclopentadiene (130%R; QC limit 42-121%R) associated with sample FB122112. Therefore, results for those compounds where LCS recoveries fell below the QC limit were considered estimated, possibly biased low, with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples. Positive results for those compounds where the LCS recovery exceeded the QC limit were considered estimated, possibly biased high, and qualified "J" for the affected samples.

Initial and Continuing Calibrations

All initial calibration compounds were compliant with a minimum relative response factor (RRF) of 0.05 and a maximum percent relative standard deviation (%RSD) of 20% with the exception of 2,4-dinitrophenol (62.5%RSD) and 4,6-dinitro-2-methylphenol (39.2%RSD) in the initial calibration associated with all samples in SDG D4751 except SB-11(29.5-30), MW-8(24.5-25), and MW-9(35-35.5); 2,4-dinitrophenol (24.5%RSD) in the initial calibration associated with samples SB-11(29.5-30), MW-8(24.5-25), and MW-9(35-35.5); and 2,4-dinitrophenol (38.1%RSD) and 4,6-dinitro-2-methylphenol (23.6%RSD) in the initial calibration associated with samples in SDG D5300. The results for these compounds were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples.

All continuing calibration compounds were compliant with a minimum RRF of 0.05 and a maximum percent difference (%D) within $\pm$20% with the exception of 2,4-dinitrophenol (86.5%D) and 4,6-dinitro-2-methylphenol (21.7%D) in the continuing calibration associated with sample SB-12(36-38). Therefore, results for these compounds which were nondetects were considered estimated and qualified "UJ" for this sample.

Usability

All semivolatile soil sample results were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The semivolatile soil data presented by Chemtech were 100% complete (i.e., usable). The validated semivolatile laboratory data are tabulated and presented in Attachment A-1.

### 2.1.3 Inorganics

The following items were reviewed for compliancy in the inorganics analysis:

- Custody documentation
- Holding times
- Initial and continuing calibration verifications

- Initial and continuing calibration blank, and laboratory preparation blank, and field equipment blank contamination
- Inductively coupled plasma (ICP) interference check sample (ICS)
- Matrix spike (MS) recoveries
- Laboratory duplicate precision
- Field duplicate precision
- Laboratory control sample (LCS) recoveries
- ICP serial dilutions
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of blank contamination, matrix spike recoveries, and serial dilutions as discussed below.

Blank Contamination

The field equipment blank FB122112 associated with samples in SDG D5300 contained chromium, iron, and potassium at concentrations of 21.3, 551, and 1190 µg/L, respectively. Therefore, all results for these analytes less than the validation action concentrations were considered not detected and qualified "U" for the affected samples.

Matrix Spike Recoveries

All the MS recoveries for designated spiked project samples were within the 75-125%R QC limit with sample concentrations less than four times the spiking concentration with the exception of the low MS recoveries for antimony (52.1%R, 51.2%R, 74.1%R, 74.3%R) associated with all soil samples in SDGs D4751 and D5300. Therefore, results for antimony were considered estimated, possibly biased low, with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples since MS recoveries fell below the QC limit.

ICP Serial Dilutions

All serial dilution results for designated project samples were considered acceptable with a percent difference (%D) less than 10% for all ICP analytes with the exception of chromium (15.8%D) and copper (12.5%D) associated with samples in SDG D4710; aluminum (14.8%D), arsenic (17%D), barium (12%D), calcium (14.3%D), chromium (18.9%D), copper (23.4%D), magnesium (16.2%D), manganese (30.3%D), potassium (12.8%D), sodium (14%D), and vanadium (19.4%D) associated with samples in SDG D4751; and aluminum (13.9%D), barium (25.1%D), calcium (28.9%D), chromium (26.6%D), iron (13.9%D), magnesium (23.8%D), manganese (29.1%D), potassium (25.2%D), and zinc (15.4%D) associated with soil samples in

SDG D5300. Therefore, positive results for these analytes were considered estimated and qualified "J" for the affected samples.

Usability

All inorganics soil sample results were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The inorganics soil data presented by Chemtech were 100% complete (i.e., usable). The validated soil inorganics laboratory data are tabulated and presented in Attachment A-1.

## 2.2 GROUNDWATER

Data review has been completed for data packages generated by Chemtech containing groundwater samples collected from the site. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. The analytical results were presented by the laboratory in one sample delivery groups (SDGs): D4947. Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. This data validation and usability report is presented by analysis type and the validated laboratory data are presented in Attachment A-2.

### 2.2.1 Volatiles

The following items were reviewed for compliancy in the volatile analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy
- Laboratory control sample (LCS) recoveries
- Laboratory method blank and field equipment/trip blank contamination
- GC/MS instrument performance
- Initial and continuing calibrations
- Internal standard area counts and retention times
- Field duplicate precision
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of MS/MSD precision and accuracy, blank contamination, and initial and continuing calibrations as discussed below.

MS/MSD Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC limits for designated project spiked samples with the exception of the high accuracy results for carbon tetrachloride (150%R/140%R; QC limit 60-140%R) during the spiked analyses of sample MW-9. Since this compound was not detected in the unspiked parent sample, validation qualification was not required.

Blank Contamination

The field equipment blank FB112712 associated with groundwater samples contained carbon disulfide and methylene chloride at concentrations of 2 and 4.3 µg/L, respectively. Since these compounds were not detected in the project samples, validation qualification was not required.

Initial and Continuing Calibrations

All initial calibration compounds were compliant with a minimum relative response factor (RRF) of 0.05 and a maximum percent relative standard deviation (%RSD) of 20% with the exception of acetone (20.4%RSD), chloromethane (21.6%RSD), bromomethane (21.4%RSD), carbon tetrachloride (67.5%RSD), dibromochloromethane (21.9%RSD), and bromoform (27.8%RSD) in the initial calibration associated with all samples except MW-4, -7DL, and -3DL. The results for these compounds were considered estimated with positive results qualified “J” and nondetected results qualified "UJ" for the affected samples.

All continuing calibration compounds were compliant with a minimum RRF of 0.05 and a maximum percent difference (%D) within $\pm$20% with the exception of methyl acetate (20.78%D), carbon tetrachloride (45.25%D), bromodichloromethane (21.58%D), 4-methyl-2-pentanone (20.34%D), trans-1,3-dichloropropene (23.81%D), dibromochloromethane (30.94%D), bromoform (43.33%D), and 1,4-dioxane (33.33%D) in the continuing calibration associated with all groundwater samples except MW-4, -3DL, and -7DL. Therefore, the sample results for these compounds were considered estimated with positive results qualified “J” and nondetected results qualified “UJ” for the affected samples.

Usability

All volatile groundwater sample results were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The volatile groundwater data presented by Chemtech were 100% complete (i.e., usable). The validated volatile laboratory data are tabulated and presented in Attachment A-2.

### 2.2.2 Semivolatiles

The following items were reviewed for compliancy in the semivolatile analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- MS/MSD precision and accuracy
- LCS recoveries
- Laboratory method blank and field equipment blank contamination
- GC/MS instrument performance
- Initial and continuing calibrations
- Internal standard area counts and retention times
- Field duplicate precision
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of MS/MSD precision and accuracy, LCS recoveries, initial and continuing calibrations, and internal standard responses as discussed below.

MS/MSD Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC limits for designated spiked project samples with the exception of the low MS/MSD accuracy results for 2,3,4,6-tetrachlorophenol (85%R/86%R; QC limit 91-111%R) during the spiked analyses of sample MW-9. Therefore, the nondetected result for this compound was considered estimated, possibly biased low, and qualified "UJ" for the parent sample.

LCS Recoveries

All LCS recoveries were considered acceptable and within QC limits with the exception of the high LCS recoveries for 2-methylphenol (100%R; QC limit 32-94%R), 3+4-methylphenols (99%R; QC limit 24-91%R), hexachlorocyclopentadiene (150%R; QC limit 42-121%R), and 1,2,4,5-tetrachlorobenzene (106%R; QC limit 60-105%R) associated with all groundwater samples. Validation qualification of the groundwater samples was not required since these compounds were not detected.

Initial and Continuing Calibrations

All initial calibration compounds were compliant with a minimum relative response factor (RRF) of 0.05 and a maximum percent relative standard deviation (%RSD) of 20% with the exception of 2,4-dinitrophenol (43.3%RSD, 34.8%RSD) and 4,6-dinitro-2-methylphenol (25.1%RSD, 23.4%RSD) in the initial calibrations associated with all samples. The results for these compounds which were nondetects were considered estimated and qualified "UJ" for the affected samples.

All continuing calibration compounds were compliant with a minimum RRF of 0.05 and a maximum percent difference (%D) within ±20% with the exception of 2,4-dinitrophenol (34.4%D) and 4,6-dinitro-2-methylphenol (23.6%D) in the continuing calibration associated with samples MW-7, 18, -8, -1, and -9; and 2,4-dinitrophenol (21.6%D) in the continuing calibration associated with sample FB112712. Therefore, the sample results for these compounds which were nondetects were considered estimated and qualified "UJ" for the affected samples.

Internal Standard Responses

All internal standard (IS) responses and retention times were within specified QC ranges based on associated calibration standards (i.e., sample's area count within -50% to +100% and retention times within ±0.5 minutes of the standard) with the exception of the low responses for the ISs acenaphthene-d10 and phenanthrene-d10 in sample MW-3. Therefore, results associated with these ISs were considered estimated, possibly biased low, with positive results qualified "J" and nondetected results qualified "UJ" for the affected sample.

Usability

All semivolatile groundwater sample results were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The semivolatile groundwater data presented by Chemtech were 100% complete (i.e., usable). The validated semivolatile laboratory data are tabulated and presented in Attachment A-2.

### 2.2.3 Inorganics

The following items were reviewed for compliancy in the inorganics analysis:

- Custody documentation
- Holding times
- Initial and continuing calibration verifications
- Initial and continuing calibration blank, and laboratory preparation blank, and field equipment blank contamination
- Inductively coupled plasma (ICP) interference check sample (ICS)

- Matrix spike (MS) recoveries
- Laboratory duplicate precision
- Field duplicate precision
- Laboratory control sample (LCS) recoveries
- ICP serial dilutions
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of blank contamination, laboratory duplicate precision, field duplicate precision, and serial dilutions as discussed below.

Blank Contamination

The field equipment blank FB112712 associated with the groundwater samples contained aluminum, chromium, iron, nickel, potassium, sodium, and zinc at concentrations of 61.4, 25.7, 161, 10.5, 763, 17,600, and 14 µg/L, respectively. Therefore, all results for these analytes less than the validation action concentrations were considered not detected and qualified "U" for the affected samples.

Laboratory Duplicate Precision

All laboratory duplicate precision results were considered acceptable with precision results less than 20%RPD for all analytes with the exception of aluminum (33.5%RPD), antimony (20.7%RPD), barium (42.8%RPD), beryllium (23.6%RPD), calcium (45.7%RPD), chromium (42.1%RPD), copper (24.1%RPD), iron (43.2%RPD), magnesium (46.1%RPD), manganese (40.5%RPD), potassium (29%RPD), silver (23.6%RPD), sodium (28.7%RPD), thallium (26.6%RPD), vanadium (36.3%RPD), and zinc (82.8%RPD) associated with all groundwater samples. Therefore, the results for these analytes were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples.

Field Duplicate Precision

All field duplicate precision results were considered acceptable for the field duplicate pair MW-8 and MW-18 with the exception of the precision for aluminum (133%RPD), arsenic (104%RPD), cobalt (99%RPD), copper (96%RPD), iron (133%RPD), lead (111%RPD), nickel (52%RPD), vanadium (117%RPD), and zinc (99%RPD). Therefore, the results for these analytes were considered estimated and qualified "J" for the affected parent sample and its field duplicate.

ICP Serial Dilutions

All serial dilution results for designated project samples were considered acceptable with a percent difference (%D) less than 10% for all ICP analytes with the exception of manganese

(11.7%D) and sodium (74.6%D) associated with groundwater samples. Therefore, positive results for these analytes were considered estimated and qualified "J" for the affected samples.

Usability

All inorganics groundwater sample results were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The inorganics groundwater data presented by Chemtech were 100% complete (i.e., usable). The validated groundwater inorganics laboratory data are tabulated and presented in Attachment A-2.

# ATTACHMENT A

# VALIDATED LABORATORY DATA

# ATTACHMENT A-1

# VALIDATED LABORATORY DATA FOR SOIL SAMPLES

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | | | Dup of MW-7(36-38) | | |
|---|---|---|---|---|---|---|
| | | Location ID: | MW- 7 | MW- 7 | MW- 7 | MW-8 |
| | | Sample ID: | MW-7(36-38) | MW-17(36-38) | MW-7(48-50) | MW-8(9.5-10) |
| | | Lab Sample Id: | D4710-03 | D4710-09 | D4710-04 | D4751-03 |
| | | Depth: | 36 - 38 ft | 36 - 38 ft | 48 - 50 ft | 9.5 - 10 ft |
| | | Source: | CTECH | CTECH | CTECH | CTECH |
| | | SDG: | D4710 | D4710 | D4710 | D4751 |
| | | Matrix: | SOIL | SOIL | SOIL | SOIL |
| | | Sampled: | 10/26/2012 9:10 | 10/26/2012 9:15 | 10/26/2012 9:20 | 11/6/2012 14:15 |
| | | Validated: | 1/23/2013 | 1/23/2013 | 1/23/2013 | 1/23/2013 |
| CAS NO. | COMPOUND | UNITS: | | | | |
| | VOLATILES | | | | | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | ug/kg | 5.4 U | 1.1 U | 0.96 U | 1.1 U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | ug/kg | 2.8 UJ | 0.55 UJ | 0.5 U | 0.56 UJ |
| 76-13-1 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | ug/kg | 8.2 U | 1.6 U | 1.5 U | 1.6 U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | ug/kg | 5.6 U | 1.1 U | 0.98 U | 1.1 U |
| 75-34-3 | 1,1-DICHLOROETHANE | ug/kg | 5.8 U | 1.1 U | 1 U | 1.1 U |
| 75-35-4 | 1,1-DICHLOROETHENE | ug/kg | 9.1 U | 1.8 U | 1.6 U | 1.8 U |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | ug/kg | 3.1 UJ | 0.6 UJ | 0.55 U | 0.61 UJ |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | ug/kg | 4.3 UJ | 0.84 UJ | 0.76 U | 0.86 UJ |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | ug/kg | 5.4 UJ | 1 UJ | 0.95 U | 1.1 UJ |
| 106-93-4 | 1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE) | ug/kg | 4 U | 0.77 U | 0.7 U | 0.78 U |
| 95-50-1 | 1,2-DICHLOROBENZENE | ug/kg | 3.8 UJ | 0.75 UJ | 0.68 U | 0.76 UJ |
| 107-06-2 | 1,2-DICHLOROETHANE | ug/kg | 4 U | 0.77 U | 0.7 U | 0.78 U |
| 78-87-5 | 1,2-DICHLOROPROPANE | ug/kg | 1.6 U | 0.31 U | 0.28 U | 0.32 U |
| 541-73-1 | 1,3-DICHLOROBENZENE | ug/kg | 2.3 UJ | 0.44 UJ | 0.4 U | 0.45 UJ |
| 106-46-7 | 1,4-DICHLOROBENZENE | ug/kg | 2.5 UJ | 0.49 UJ | 0.45 U | 0.5 UJ |
| 123-91-1 | 1,4-DIOXANE (P-DIOXANE) | ug/kg | 310 U | 60 U | 55 U | 60 U |
| 591-78-6 | 2-HEXANONE | ug/kg | 24 U | 4.7 U | 4.3 U | 4.8 U |
| 67-64-1 | ACETONE | ug/kg | 19 U | 3.6 U | 3.3 U | 51 |
| 71-43-2 | BENZENE | ug/kg | 7100 J | 5300 | 1.3 J | 2.3 J |
| 74-97-5 | BROMOCHLOROMETHANE | ug/kg | 4.9 U | 0.95 U | 0.86 U | 0.97 U |
| 75-27-4 | BROMODICHLOROMETHANE | ug/kg | 3.8 U | 0.75 U | 0.68 U | 0.76 U |
| 75-25-2 | BROMOFORM | ug/kg | 4.6 U | 0.89 U | 0.81 U | 0.9 U |
| 74-83-9 | BROMOMETHANE | ug/kg | 15 U | 2.9 U | 2.7 U | 3 U |
| 75-15-0 | CARBON DISULFIDE | ug/kg | 6.5 U | 1.3 U | 1.3 J | 4.9 J |
| 56-23-5 | CARBON TETRACHLORIDE | ug/kg | 6.1 U | 1.2 U | 1.1 U | 1.2 U |
| 108-90-7 | CHLOROBENZENE | ug/kg | 3.1 U | 0.6 U | 0.55 U | 0.61 U |
| 75-00-3 | CHLOROETHANE | ug/kg | 8.6 U | 1.7 U | 1.5 U | 1.7 U |
| 67-66-3 | CHLOROFORM | ug/kg | 4.6 U | 0.89 U | 0.81 U | 0.9 U |
| 74-87-3 | CHLOROMETHANE | ug/kg | 5.3 U | 1 U | 0.94 U | 1.1 U |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | ug/kg | 5.5 U | 1.1 U | 0.97 U | 1.1 U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | ug/kg | 4.4 U | 0.87 U | 0.79 U | 0.88 U |
| 110-82-7 | CYCLOHEXANE | ug/kg | 62 J | 8.2 J | 1.1 U | 1.2 U |
| 124-48-1 | DIBROMOCHLOROMETHANE | ug/kg | 3.3 U | 0.65 U | 0.59 U | 0.66 U |
| 75-71-8 | DICHLORODIFLUOROMETHANE | ug/kg | 4 U | 0.78 U | 0.71 U | 3.4 J |
| 100-41-4 | ETHYLBENZENE | ug/kg | 30000 J | 48000 | 1.7 J | 0.76 U |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | ug/kg | 6200 J | 3600 | 0.52 U | 0.59 UJ |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | ug/kg | 34000 J | 54000 | 2 J | 0.88 U |
| 79-20-9 | METHYL ACETATE | ug/kg | 9.3 U | 1.8 U | 1.6 U | 1.8 U |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | ug/kg | 19 U | 3.7 U | 3.4 U | 3.8 U |
| 108-10-1 | METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE) | ug/kg | 18 U | 3.5 U | 3.2 U | 3.6 U |
| 108-87-2 | METHYLCYCLOHEXANE | ug/kg | 210 J | 46 J | 1.2 U | 1.3 U |
| 75-09-2 | METHYLENE CHLORIDE | ug/kg | 42 UJ | 20 UJ | 11 UJ | 6.1 UJ |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | ug/kg | 18000 J | 28000 | 0.74 U | 0.83 U |
| 100-42-5 | STYRENE | ug/kg | 890 | 960 J | 0.49 U | 0.55 U |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | ug/kg | 5.9 U | 1.2 U | 1 U | 1.2 U |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | ug/kg | 6.2 U | 1.2 U | 1.1 U | 1.2 U |
| 108-88-3 | TOLUENE | ug/kg | 15000 J | 18000 | 1.3 J | 0.78 U |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | ug/kg | 4.3 U | 0.83 U | 0.75 U | 0.84 U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | ug/kg | 4.9 U | 0.95 U | 0.86 U | 0.97 U |
| 79-01-6 | TRICHLOROETHYLENE (TCE) | ug/kg | 5.3 U | 1 U | 0.94 U | 1.1 U |
| 75-69-4 | TRICHLOROFLUOROMETHANE | ug/kg | 8.1 U | 1.6 U | 1.4 U | 1.6 U |
| 75-01-4 | VINYL CHLORIDE | ug/kg | 7.6 U | 1.5 U | 1.3 U | 1.5 U |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW- 7<br>MW-7(36-38)<br>D4710-03<br>36 - 38 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 9:10<br>1/23/2013 | Dup of MW-7(36-38)<br>MW- 7<br>MW-17(36-38)<br>D4710-09<br>36 - 38 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 9:15<br>1/23/2013 | MW- 7<br>MW-7(48-50)<br>D4710-04<br>48 - 50 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 9:20<br>1/23/2013 | MW-8<br>MW-8(9.5-10)<br>D4751-03<br>9.5 - 10 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 14:15<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | SEMIVOLATILES | | | | | |
| 95-94-3 | 1,2,4,5-TETRACHLOROBENZENE | ug/kg | 16 U | 16 U | 14 U | 16 U |
| 58-90-2 | 2,3,4,6-TETRACHLOROPHENOL | ug/kg | 16 U | 16 U | 14 U | 16 U |
| 95-95-4 | 2,4,5-TRICHLOROPHENOL | ug/kg | 29 U | 28 U | 26 U | 28 U |
| 88-06-2 | 2,4,6-TRICHLOROPHENOL | ug/kg | 13 U | 12 U | 11 U | 12 U |
| 120-83-2 | 2,4-DICHLOROPHENOL | ug/kg | 16 U | 15 U | 14 U | 15 U |
| 105-67-9 | 2,4-DIMETHYLPHENOL | ug/kg | 23 U | 23 U | 21 U | 23 U |
| 51-28-5 | 2,4-DINITROPHENOL | ug/kg | 42 U | 41 U | 37 U | 41 UJ |
| 121-14-2 | 2,4-DINITROTOLUENE | ug/kg | 12 U | 12 U | 11 U | 12 U |
| 606-20-2 | 2,6-DINITROTOLUENE | ug/kg | 17 U | 16 U | 15 U | 17 U |
| 91-58-7 | 2-CHLORONAPHTHALENE | ug/kg | 9.4 U | 9.1 U | 8.3 U | 9.2 U |
| 95-57-8 | 2-CHLOROPHENOL | ug/kg | 22 U | 21 U | 19 U | 21 U |
| 91-57-6 | 2-METHYLNAPHTHALENE | ug/kg | 110000 | 130000 | 9.2 U | 10 U |
| 95-48-7 | 2-METHYLPHENOL (O-CRESOL) | ug/kg | 22 U | 22 U | 20 U | 22 U |
| 88-74-4 | 2-NITROANILINE | ug/kg | 18 U | 18 U | 16 U | 18 U |
| 88-75-5 | 2-NITROPHENOL | ug/kg | 20 U | 19 U | 18 U | 20 U |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | ug/kg | 26 U | 26 U | 23 U | 26 U |
| MEPH3MEPH | 3+4-Methylphenols | ug/kg | 21 U | 21 U | 19 U | 21 U |
| 99-09-2 | 3-NITROANILINE | ug/kg | 26 U | 26 U | 23 U | 26 U |
| 534-52-1 | 4,6-DINITRO-2-METHYLPHENOL | ug/kg | 24 U | 23 U | 21 U | 23 UJ |
| 101-55-3 | 4-BROMOPHENYL PHENYL ETHER | ug/kg | 8 U | 7.8 U | 7.1 U | 7.9 U |
| 59-50-7 | 4-CHLORO-3-METHYLPHENOL | ug/kg | 18 U | 18 U | 16 U | 18 U |
| 106-47-8 | 4-CHLOROANILINE | ug/kg | 29 U | 28 U | 26 U | 29 UJ |
| 7005-72-3 | 4-CHLOROPHENYL PHENYL ETHER | ug/kg | 22 U | 22 U | 20 U | 22 U |
| 100-01-6 | 4-NITROANILINE | ug/kg | 53 U | 52 U | 48 U | 53 U |
| 100-02-7 | 4-NITROPHENOL | ug/kg | 76 U | 74 U | 68 U | 75 U |
| 83-32-9 | ACENAPHTHENE | ug/kg | 15000 J | 21000 J | 10 U | 11 U |
| 208-96-8 | ACENAPHTHYLENE | ug/kg | 12000 | 16000 | 9.2 U | 10 U |
| 98-86-2 | ACETOPHENONE | ug/kg | 13 U | 12 U | 11 U | 12 U |
| 120-12-7 | ANTHRACENE | ug/kg | 13000 | 20000 | 7.5 U | 8.3 U |
| 1912-24-9 | ATRAZINE | ug/kg | 22 U | 21 U | 19 U | 21 U |
| 100-52-7 | BENZALDEHYDE | ug/kg | 21 U | 21 U | 19 U | 21 U |
| 56-55-3 | BENZO(A)ANTHRACENE | ug/kg | 8300 | 13000 | 17 U | 260 J |
| 50-32-8 | BENZO(A)PYRENE | ug/kg | 5700 J | 9000 J | 7.9 U | 260 J |
| 205-99-2 | BENZO(B)FLUORANTHENE | ug/kg | 4400 J | 6600 J | 12 U | 300 J |
| 191-24-2 | BENZO(G,H,I)PERYLENE | ug/kg | 2400 J | 2900 J | 15 U | 220 J |
| 207-08-9 | BENZO(K)FLUORANTHENE | ug/kg | 1700 | 2200 | 17 U | 19 U |
| 85-68-7 | BENZYL BUTYL PHTHALATE | ug/kg | 20 U | 19 U | 18 U | 19 U |
| 92-52-4 | BIPHENYL (DIPHENYL) | ug/kg | 7000 | 11000 | 14 U | 15 U |
| 111-91-1 | BIS(2-CHLOROETHOXY) METHANE | ug/kg | 24 U | 23 U | 21 U | 23 U |
| 111-44-4 | BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER) | ug/kg | 20 U | 19 U | 18 U | 19 U |
| 108-60-1 | BIS(2-CHLOROISOPROPYL) ETHER | ug/kg | 17 U | 17 U | 15 U | 17 U |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | ug/kg | 15 U | 14 U | 13 U | 14 U |
| 105-60-2 | CAPROLACTAM | ug/kg | 19 U | 19 U | 17 U | 19 U |
| 86-74-8 | CARBAZOLE | ug/kg | 550 | 700 | 8 U | 8.9 U |
| 218-01-9 | CHRYSENE | ug/kg | 8000 | 12000 | 17 U | 290 J |
| 53-70-3 | DIBENZ(A,H)ANTHRACENE | ug/kg | 720 | 880 | 11 U | 12 U |
| 132-64-9 | DIBENZOFURAN | ug/kg | 2200 | 2800 | 14 U | 16 U |
| 84-66-2 | DIETHYL PHTHALATE | ug/kg | 6.4 U | 6.2 U | 5.7 U | 6.3 U |
| 131-11-3 | DIMETHYL PHTHALATE | ug/kg | 221 J | 226 J | 9.9 U | 215 J |
| 84-74-2 | DI-N-BUTYL PHTHALATE | ug/kg | 32 U | 31 U | 29 U | 32 U |
| 117-84-0 | DI-N-OCTYLPHTHALATE | ug/kg | 4.7 U | 4.6 U | 4.2 U | 4.6 U |
| 206-44-0 | FLUORANTHENE | ug/kg | 14000 | 23000 | 7.3 U | 570 |
| 86-73-7 | FLUORENE | ug/kg | 22000 | 27000 | 14 U | 15 U |
| 118-74-1 | HEXACHLOROBENZENE | ug/kg | 17 U | 16 U | 15 U | 17 U |
| 87-68-3 | HEXACHLOROBUTADIENE | ug/kg | 15 U | 15 U | 13 U | 15 U |
| 77-47-4 | HEXACHLOROCYCLOPENTADIENE | ug/kg | 10 U | 9.7 U | 8.9 U | 9.8 U |
| 67-72-1 | HEXACHLOROETHANE | ug/kg | 18 U | 18 U | 16 U | 18 U |
| 193-39-5 | INDENO(1,2,3-C,D)PYRENE | ug/kg | 2100 | 2700 | 12 U | 170 J |
| 78-59-1 | ISOPHORONE | ug/kg | 14 U | 13 U | 12 U | 13 U |
| 91-20-3 | NAPHTHALENE | ug/kg | 220000 | 240000 | 13 U | 14 U |
| 98-95-3 | NITROBENZENE | ug/kg | 16 U | 15 U | 14 U | 15 U |
| 621-64-7 | N-NITROSODI-N-PROPYLAMINE | ug/kg | 21 U | 20 U | 18 U | 20 U |
| 86-30-6 | N-NITROSODIPHENYLAMINE | ug/kg | 9.9 U | 9.6 U | 8.8 U | 9.7 U |
| 87-86-5 | PENTACHLOROPHENOL | ug/kg | 28 U | 27 U | 25 U | 28 U |
| 85-01-8 | PHENANTHRENE | ug/kg | 60000 | 79000 | 9.9 U | 480 |
| 108-95-2 | PHENOL | ug/kg | 9.5 U | 9.2 U | 8.4 U | 9.4 U |
| 129-00-0 | PYRENE | ug/kg | 26000 | 34000 J | 8.8 U | 550 |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | | | Dup of MW-7(36-38) | | |
|---|---|---|---|---|---|---|
| | | Location ID: | MW- 7 | MW- 7 | MW- 7 | MW-8 |
| | | Sample ID: | MW-7(36-38) | MW-17(36-38) | MW-7(48-50) | MW-8(9.5-10) |
| | | Lab Sample Id: | D4710-03 | D4710-09 | D4710-04 | D4751-03 |
| | | Depth: | 36 - 38 ft | 36 - 38 ft | 48 - 50 ft | 9.5 - 10 ft |
| | | Source: | CTECH | CTECH | CTECH | CTECH |
| | | SDG: | D4710 | D4710 | D4710 | D4751 |
| | | Matrix: | SOIL | SOIL | SOIL | SOIL |
| | | Sampled: | 10/26/2012 9:10 | 10/26/2012 9:15 | 10/26/2012 9:20 | 11/6/2012 14:15 |
| | | Validated: | 1/23/2013 | 1/23/2013 | 1/23/2013 | 1/23/2013 |
| CAS NO. | COMPOUND | UNITS: | | | | |
| | INORGANICS | | | | | |
| 7429-90-5 | ALUMINUM | mg/kg | 7150 | 6870 | 2050 | 4920 J |
| 7440-36-0 | ANTIMONY | mg/kg | 0.28 U | 0.28 U | 0.25 U | 0.28 UJ |
| 7440-38-2 | ARSENIC | mg/kg | 2.45 | 2.47 | 1.55 | 9.24 J |
| 7440-39-3 | BARIUM | mg/kg | 57.6 | 54 | 36.9 | 73 J |
| 7440-41-7 | BERYLLIUM | mg/kg | 0.28 | 0.29 | 0.08 J | 0.03 U |
| 7440-43-9 | CADMIUM | mg/kg | 0.48 | 0.45 | 0.03 J | 1.32 |
| 7440-70-2 | CALCIUM | mg/kg | 1350 | 1340 | 709 | 3220 J |
| 7440-47-3 | CHROMIUM, TOTAL | mg/kg | 13.6 J | 13.7 J | 4.91 J | 31.2 J |
| 7440-48-4 | COBALT | mg/kg | 7.95 | 7.44 | 2.66 | 6.63 |
| 7440-50-8 | COPPER | mg/kg | 16 J | 16.2 J | 8.56 J | 93.7 J |
| 7439-89-6 | IRON | mg/kg | 22400 | 21300 | 5950 | 33500 |
| 7439-92-1 | LEAD | mg/kg | 14.4 | 14.6 | 3.07 | 170 |
| 7439-95-4 | MAGNESIUM | mg/kg | 3170 | 3100 | 1310 | 2310 J |
| 7439-96-5 | MANGANESE | mg/kg | 180 | 135 | 44.7 | 240 J |
| 7439-97-6 | MERCURY | mg/kg | 0.011 J | 0.006 J | 0.003 J | 4.03 |
| 7440-02-0 | NICKEL | mg/kg | 23 | 22 | 8.83 | 19.4 |
| 7440-09-7 | POTASSIUM | mg/kg | 1980 | 1960 | 562 | 1530 J |
| 7782-49-2 | SELENIUM | mg/kg | 0.21 U | 0.21 U | 0.52 | 0.57 |
| 7440-22-4 | SILVER | mg/kg | 0.5 | 0.47 | 0.1 J | 0.36 |
| 7440-23-5 | SODIUM | mg/kg | 2090 | 2190 | 195 | 627 J |
| 7440-28-0 | THALLIUM | mg/kg | 0.46 J | 0.48 J | 0.12 U | 1.23 |
| 7440-62-2 | VANADIUM | mg/kg | 18 | 17.7 | 5.98 | 15.3 J |
| 7440-66-6 | ZINC | mg/kg | 36.1 | 39.3 | 13.7 | 96.8 |
| 57-12-5 | CYANIDE | mg/kg | 0.29 J | 0.362 | 0.171 J | 0.097 J |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-8<br>MW-8(24.5-25)<br>D4751-04<br>24.5 - 25 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 14:20<br>1/23/2013 | MW-9<br>MW-9(9-9.5)<br>D4751-06<br>9 - 9.5 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 10:00<br>1/23/2013 | MW-9<br>MW-9(35-35.5)<br>D4751-05<br>35 - 35.5 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 10:05<br>1/23/2013 | SB- 9<br>SB-9(5-8)<br>D4710-07<br>5 - 8 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 14:15<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | VOLATILES | | | | | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | ug/kg | 1.1 U | 0.95 U | 0.99 U | 0.99 U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | ug/kg | 0.59 U | 0.5 U | 0.52 U | 0.52 UJ |
| 76-13-1 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | ug/kg | 1.7 U | 1.4 U | 1.5 U | 1.5 U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | ug/kg | 1.2 U | 0.97 U | 1 U | 1 UJ |
| 75-34-3 | 1,1-DICHLOROETHANE | ug/kg | 1.2 U | 1 U | 1.1 U | 1.1 U |
| 75-35-4 | 1,1-DICHLOROETHENE | ug/kg | 1.9 U | 1.6 U | 1.6 U | 1.7 U |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | ug/kg | 0.64 U | 0.54 U | 0.56 U | 0.56 UJ |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | ug/kg | 0.9 U | 0.76 U | 0.78 U | 0.79 UJ |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | ug/kg | 1.1 UJ | 0.94 UJ | 0.98 UJ | 0.98 UJ |
| 106-93-4 | 1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE) | ug/kg | 0.82 U | 0.69 U | 0.72 U | 0.72 UJ |
| 95-50-1 | 1,2-DICHLOROBENZENE | ug/kg | 0.79 U | 0.67 U | 0.7 U | 0.7 UJ |
| 107-06-2 | 1,2-DICHLOROETHANE | ug/kg | 0.82 U | 0.69 U | 0.72 U | 0.72 UJ |
| 78-87-5 | 1,2-DICHLOROPROPANE | ug/kg | 0.33 U | 0.28 U | 0.29 U | 0.29 UJ |
| 541-73-1 | 1,3-DICHLOROBENZENE | ug/kg | 0.47 U | 0.4 U | 0.41 U | 0.42 UJ |
| 106-46-7 | 1,4-DICHLOROBENZENE | ug/kg | 0.53 U | 0.44 U | 0.46 U | 0.46 UJ |
| 123-91-1 | 1,4-DIOXANE (P-DIOXANE) | ug/kg | 64 U | 54 U | 55 U | 56 UJ |
| 591-78-6 | 2-HEXANONE | ug/kg | 5 U | 4.2 U | 4.4 U | 4.4 UJ |
| 67-64-1 | ACETONE | ug/kg | 3.9 U | 3.3 U | 3.4 U | 140 |
| 71-43-2 | BENZENE | ug/kg | 0.49 U | 0.41 U | 0.43 U | 28 J |
| 74-97-5 | BROMOCHLOROMETHANE | ug/kg | 1 U | 0.85 U | 0.89 U | 0.89 U |
| 75-27-4 | BROMODICHLOROMETHANE | ug/kg | 0.79 U | 0.67 U | 0.7 U | 0.7 UJ |
| 75-25-2 | BROMOFORM | ug/kg | 0.95 U | 0.8 U | 0.83 U | 0.83 UJ |
| 74-83-9 | BROMOMETHANE | ug/kg | 3.1 U | 2.6 U | 2.7 U | 2.8 U |
| 75-15-0 | CARBON DISULFIDE | ug/kg | 1.4 U | 1.1 U | 1.2 U | 1.2 U |
| 56-23-5 | CARBON TETRACHLORIDE | ug/kg | 1.3 U | 1.1 U | 1.1 U | 1.1 UJ |
| 108-90-7 | CHLOROBENZENE | ug/kg | 0.64 U | 0.54 U | 0.56 U | 0.56 UJ |
| 75-00-3 | CHLOROETHANE | ug/kg | 1.8 U | 1.5 U | 1.6 U | 1.6 U |
| 67-66-3 | CHLOROFORM | ug/kg | 0.95 U | 0.8 U | 0.83 U | 0.83 U |
| 74-87-3 | CHLOROMETHANE | ug/kg | 1.1 U | 0.93 U | 0.96 U | 0.97 U |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | ug/kg | 1.1 U | 0.96 U | 1 U | 1 U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | ug/kg | 0.92 U | 0.78 U | 0.81 U | 0.81 UJ |
| 110-82-7 | CYCLOHEXANE | ug/kg | 1.3 U | 1.1 U | 1.1 U | 1.1 U |
| 124-48-1 | DIBROMOCHLOROMETHANE | ug/kg | 0.69 U | 0.58 U | 0.61 U | 0.61 UJ |
| 75-71-8 | DICHLORODIFLUOROMETHANE | ug/kg | 0.83 U | 0.7 U | 0.73 U | 0.73 U |
| 100-41-4 | ETHYLBENZENE | ug/kg | 0.79 U | 0.67 U | 0.7 U | 3.1 J |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | ug/kg | 0.62 U | 0.52 U | 0.54 U | 0.54 UJ |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | ug/kg | 0.92 U | 0.78 U | 0.81 U | 2.1 J |
| 79-20-9 | METHYL ACETATE | ug/kg | 1.9 U | 1.6 U | 1.7 U | 1.7 U |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | ug/kg | 4 U | 3.4 U | 3.5 U | 3.5 U |
| 108-10-1 | METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE) | ug/kg | 3.7 U | 3.2 U | 3.3 U | 3.3 UJ |
| 108-87-2 | METHYLCYCLOHEXANE | ug/kg | 1.4 U | 1.1 U | 1.2 U | 1.2 UJ |
| 75-09-2 | METHYLENE CHLORIDE | ug/kg | 11 UJ | 5.8 UJ | 5.6 UJ | 50 UJ |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | ug/kg | 0.87 U | 0.73 U | 0.76 U | 0.76 UJ |
| 100-42-5 | STYRENE | ug/kg | 0.58 U | 0.49 U | 0.5 U | 0.51 UJ |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | ug/kg | 1.2 U | 1 U | 1.1 U | 1.1 U |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | ug/kg | 1.3 U | 1.1 U | 1.1 U | 1.1 UJ |
| 108-88-3 | TOLUENE | ug/kg | 0.82 U | 0.69 U | 0.72 U | 11 J |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | ug/kg | 0.88 U | 0.75 U | 0.77 U | 0.78 U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | ug/kg | 1 U | 0.85 U | 0.89 U | 0.89 UJ |
| 79-01-6 | TRICHLOROETHYLENE (TCE) | ug/kg | 1.1 U | 0.93 U | 0.96 U | 0.97 UJ |
| 75-69-4 | TRICHLOROFLUOROMETHANE | ug/kg | 1.7 U | 1.4 U | 1.5 U | 1.5 U |
| 75-01-4 | VINYL CHLORIDE | ug/kg | 1.6 U | 1.3 U | 1.4 U | 1.4 U |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-8<br>MW-8(24.5-25)<br>D4751-04<br>24.5 - 25 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 14:20<br>1/23/2013 | MW-9<br>MW-9(9-9.5)<br>D4751-06<br>9 - 9.5 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 10:00<br>1/23/2013 | MW-9<br>MW-9(35-35.5)<br>D4751-05<br>35 - 35.5 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 10:05<br>1/23/2013 | SB- 9<br>SB-9(5-8)<br>D4710-07<br>5 - 8 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 14:15<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | SEMIVOLATILES | | | | | |
| 95-94-3 | 1,2,4,5-TETRACHLOROBENZENE | ug/kg | 17 U | 14 U | 15 U | 15 U |
| 58-90-2 | 2,3,4,6-TETRACHLOROPHENOL | ug/kg | 17 U | 14 U | 15 U | 15 U |
| 95-95-4 | 2,4,5-TRICHLOROPHENOL | ug/kg | 30 U | 25 U | 26 U | 26 U |
| 88-06-2 | 2,4,6-TRICHLOROPHENOL | ug/kg | 13 U | 11 U | 11 U | 11 U |
| 120-83-2 | 2,4-DICHLOROPHENOL | ug/kg | 16 U | 14 U | 14 U | 14 U |
| 105-67-9 | 2,4-DIMETHYLPHENOL | ug/kg | 24 U | 21 U | 21 U | 21 U |
| 51-28-5 | 2,4-DINITROPHENOL | ug/kg | 43 UJ | 37 UJ | 38 UJ | 38 U |
| 121-14-2 | 2,4-DINITROTOLUENE | ug/kg | 13 U | 11 U | 11 U | 11 U |
| 606-20-2 | 2,6-DINITROTOLUENE | ug/kg | 17 U | 15 U | 15 U | 15 U |
| 91-58-7 | 2-CHLORONAPHTHALENE | ug/kg | 9.7 U | 8.2 U | 8.5 U | 8.5 U |
| 95-57-8 | 2-CHLOROPHENOL | ug/kg | 22 U | 19 U | 20 U | 20 U |
| 91-57-6 | 2-METHYLNAPHTHALENE | ug/kg | 11 U | 9.1 U | 9.4 U | 9.4 U |
| 95-48-7 | 2-METHYLPHENOL (O-CRESOL) | ug/kg | 23 U | 20 U | 20 U | 20 U |
| 88-74-4 | 2-NITROANILINE | ug/kg | 19 U | 16 U | 17 U | 17 U |
| 88-75-5 | 2-NITROPHENOL | ug/kg | 21 U | 17 U | 18 U | 18 U |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | ug/kg | 27 U | 23 U | 24 U | 24 U |
| MEPH3MEPH | 3+4-Methylphenols | ug/kg | 22 U | 19 U | 19 U | 19 U |
| 99-09-2 | 3-NITROANILINE | ug/kg | 27 U | 23 U | 24 U | 24 U |
| 534-52-1 | 4,6-DINITRO-2-METHYLPHENOL | ug/kg | 24 U | 21 UJ | 21 U | 21 U |
| 101-55-3 | 4-BROMOPHENYL PHENYL ETHER | ug/kg | 8.3 U | 7.1 U | 7.3 U | 7.3 U |
| 59-50-7 | 4-CHLORO-3-METHYLPHENOL | ug/kg | 19 U | 16 U | 17 U | 17 U |
| 106-47-8 | 4-CHLOROANILINE | ug/kg | 30 UJ | 26 UJ | 26 UJ | 26 U |
| 7005-72-3 | 4-CHLOROPHENYL PHENYL ETHER | ug/kg | 23 U | 20 U | 20 U | 20 U |
| 100-01-6 | 4-NITROANILINE | ug/kg | 55 U | 47 U | 49 U | 49 U |
| 100-02-7 | 4-NITROPHENOL | ug/kg | 79 U | 67 U | 69 U | 69 U |
| 83-32-9 | ACENAPHTHENE | ug/kg | 12 U | 10 U | 11 U | 11 U |
| 208-96-8 | ACENAPHTHYLENE | ug/kg | 11 U | 9.1 U | 9.4 U | 9.4 U |
| 98-86-2 | ACETOPHENONE | ug/kg | 13 U | 11 U | 11 U | 11 U |
| 120-12-7 | ANTHRACENE | ug/kg | 8.7 U | 7.4 U | 7.6 U | 7.6 U |
| 1912-24-9 | ATRAZINE | ug/kg | 22 U | 19 U | 20 U | 20 U |
| 100-52-7 | BENZALDEHYDE | ug/kg | 22 U | 19 U | 19 U | 20 U |
| 56-55-3 | BENZO(A)ANTHRACENE | ug/kg | 20 U | 17 U | 18 U | 290 J |
| 50-32-8 | BENZO(A)PYRENE | ug/kg | 9.2 U | 7.8 U | 8.1 U | 280 J |
| 205-99-2 | BENZO(B)FLUORANTHENE | ug/kg | 14 U | 12 U | 12 U | 380 J |
| 191-24-2 | BENZO(G,H,I)PERYLENE | ug/kg | 17 U | 15 U | 15 U | 170 J |
| 207-08-9 | BENZO(K)FLUORANTHENE | ug/kg | 20 U | 17 U | 18 U | 18 U |
| 85-68-7 | BENZYL BUTYL PHTHALATE | ug/kg | 20 U | 17 U | 18 U | 18 U |
| 92-52-4 | BIPHENYL (DIPHENYL) | ug/kg | 16 U | 14 U | 14 U | 14 U |
| 111-91-1 | BIS(2-CHLOROETHOXY) METHANE | ug/kg | 25 U | 21 U | 22 U | 22 U |
| 111-44-4 | BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER) | ug/kg | 20 U | 17 U | 18 U | 18 U |
| 108-60-1 | BIS(2-CHLOROISOPROPYL) ETHER | ug/kg | 18 U | 15 U | 15 U | 15 U |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | ug/kg | 15 U | 13 U | 13 U | 13 U |
| 105-60-2 | CAPROLACTAM | ug/kg | 20 U | 17 U | 17 U | 17 U |
| 86-74-8 | CARBAZOLE | ug/kg | 9.3 U | 7.9 U | 8.2 U | 8.2 U |
| 218-01-9 | CHRYSENE | ug/kg | 19 U | 16 U | 17 U | 320 J |
| 53-70-3 | DIBENZ(A,H)ANTHRACENE | ug/kg | 12 U | 10 U | 11 U | 11 U |
| 132-64-9 | DIBENZOFURAN | ug/kg | 17 U | 14 U | 15 U | 15 U |
| 84-66-2 | DIETHYL PHTHALATE | ug/kg | 6.6 U | 5.6 U | 5.8 U | 5.8 U |
| 131-11-3 | DIMETHYL PHTHALATE | ug/kg | 221 J | 292 J | 200 J | 161 J |
| 84-74-2 | DI-N-BUTYL PHTHALATE | ug/kg | 33 U | 28 U | 29 U | 29 U |
| 117-84-0 | DI-N-OCTYLPHTHALATE | ug/kg | 4.9 U | 4.1 U | 4.3 U | 4.3 U |
| 206-44-0 | FLUORANTHENE | ug/kg | 8.6 U | 7.3 U | 7.5 U | 560 |
| 86-73-7 | FLUORENE | ug/kg | 16 U | 14 U | 14 U | 14 U |
| 118-74-1 | HEXACHLOROBENZENE | ug/kg | 17 U | 15 U | 15 U | 15 U |
| 87-68-3 | HEXACHLOROBUTADIENE | ug/kg | 15 U | 13 U | 14 U | 14 U |
| 77-47-4 | HEXACHLOROCYCLOPENTADIENE | ug/kg | 10 U | 8.8 U | 9.1 U | 9.1 U |
| 67-72-1 | HEXACHLOROETHANE | ug/kg | 19 U | 16 U | 17 U | 17 U |
| 193-39-5 | INDENO(1,2,3-C,D)PYRENE | ug/kg | 14 U | 12 U | 12 U | 190 J |
| 78-59-1 | ISOPHORONE | ug/kg | 14 U | 12 U | 12 U | 12 U |
| 91-20-3 | NAPHTHALENE | ug/kg | 15 U | 12 U | 13 U | 13 U |
| 98-95-3 | NITROBENZENE | ug/kg | 16 U | 14 U | 14 U | 14 U |
| 621-64-7 | N-NITROSODI-N-PROPYLAMINE | ug/kg | 21 U | 18 U | 19 U | 19 U |
| 86-30-6 | N-NITROSODIPHENYLAMINE | ug/kg | 10 U | 8.7 U | 9 U | 9 U |
| 87-86-5 | PENTACHLOROPHENOL | ug/kg | 29 U | 25 U | 26 U | 26 U |
| 85-01-8 | PHENANTHRENE | ug/kg | 11 U | 9.8 U | 10 U | 320 J |
| 108-95-2 | PHENOL | ug/kg | 9.8 U | 8.4 U | 8.6 U | 8.6 U |
| 129-00-0 | PYRENE | ug/kg | 10 U | 8.7 U | 9 U | 470 |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-8<br>MW-8(24.5-25)<br>D4751-04<br>24.5 - 25 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 14:20<br>1/23/2013 | MW-9<br>MW-9(9-9.5)<br>D4751-06<br>9 - 9.5 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 10:00<br>1/23/2013 | MW-9<br>MW-9(35-35.5)<br>D4751-05<br>35 - 35.5 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 10:05<br>1/23/2013 | SB- 9<br>SB-9(5-8)<br>D4710-07<br>5 - 8 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 14:15<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | INORGANICS | | | | | |
| 7429-90-5 | ALUMINUM | mg/kg | 8550 J | 13400 J | 2710 J | 7070 |
| 7440-36-0 | ANTIMONY | mg/kg | 0.3 UJ | 0.26 UJ | 0.26 UJ | 0.26 U |
| 7440-38-2 | ARSENIC | mg/kg | 2.16 J | 0.15 U | 0.75 J | 7.78 |
| 7440-39-3 | BARIUM | mg/kg | 85.6 J | 177 J | 60.2 J | 157 |
| 7440-41-7 | BERYLLIUM | mg/kg | 0.33 | 0.13 J | 0.07 J | 0.11 J |
| 7440-43-9 | CADMIUM | mg/kg | 0.66 | 2.17 | 0.19 | 1.24 |
| 7440-70-2 | CALCIUM | mg/kg | 1870 J | 2660 J | 13000 J | 5480 |
| 7440-47-3 | CHROMIUM, TOTAL | mg/kg | 15.8 J | 28.1 J | 6.01 J | 16.7 J |
| 7440-48-4 | COBALT | mg/kg | 10.7 | 27.8 | 3.85 | 7.34 |
| 7440-50-8 | COPPER | mg/kg | 18.8 J | 7.84 J | 8.4 J | 44.1 J |
| 7439-89-6 | IRON | mg/kg | 24400 | 41900 | 6990 | 29900 |
| 7439-92-1 | LEAD | mg/kg | 16.1 | 17.4 | 4.01 | 462 |
| 7439-95-4 | MAGNESIUM | mg/kg | 4040 J | 7840 J | 6590 J | 2280 |
| 7439-96-5 | MANGANESE | mg/kg | 427 J | 251 J | 192 J | 284 |
| 7439-97-6 | MERCURY | mg/kg | 0.002 U | 0.425 | 0.002 U | 2.33 |
| 7440-02-0 | NICKEL | mg/kg | 26.5 | 48.6 | 10.6 | 21.2 |
| 7440-09-7 | POTASSIUM | mg/kg | 2600 J | 10700 J | 860 J | 655 |
| 7782-49-2 | SELENIUM | mg/kg | 0.26 J | 0.5 | 0.19 U | 0.49 |
| 7440-22-4 | SILVER | mg/kg | 0.57 | 0.23 J | 0.07 U | 0.79 |
| 7440-23-5 | SODIUM | mg/kg | 662 J | 402 J | 1080 J | 1150 |
| 7440-28-0 | THALLIUM | mg/kg | 0.52 J | 0.12 U | 0.12 U | 1.13 |
| 7440-62-2 | VANADIUM | mg/kg | 21.2 J | 38.8 J | 9.23 J | 16.7 |
| 7440-66-6 | ZINC | mg/kg | 47.2 | 97.6 | 14.5 | 268 |
| 57-12-5 | CYANIDE | mg/kg | 0.042 U | 0.087 J | 0.075 J | 0.211 J |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB- 9<br>SB-9(28-30)<br>D4710-08<br>28 - 30 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 14:55<br>1/23/2013 | SB-10<br>SB-10(30-32)<br>D4710-01<br>30 - 32 ft<br>CTECH<br>D4710<br>SOIL<br>10/25/2012 12:10<br>1/23/2013 | SB-10<br>SB-10(45-47)<br>D4710-02<br>45 - 47 ft<br>CTECH<br>D4710<br>SOIL<br>10/25/2012 12:40<br>1/23/2013 | SB-11<br>SB-11(5-5.5)<br>D4751-01<br>5 - 5.5 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 12:05<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | VOLATILES | | | | | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | ug/kg | 1.1 U | 5.3 U | 1.1 U | 1.2 U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | ug/kg | 0.6 U | R | 0.55 U | 0.64 U |
| 76-13-1 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | ug/kg | 1.7 U | 8 U | 1.6 U | 1.8 U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | ug/kg | 1.2 U | 5.4 U | 1.1 U | 1.2 U |
| 75-34-3 | 1,1-DICHLOROETHANE | ug/kg | 1.2 U | 5.7 U | 1.1 U | 1.3 U |
| 75-35-4 | 1,1-DICHLOROETHENE | ug/kg | 1.9 U | 8.9 U | 1.8 U | 2 U |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | ug/kg | 0.65 U | R | 0.6 U | 0.69 U |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | ug/kg | 0.91 U | R | 0.84 U | 0.97 U |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | ug/kg | 1.1 U | R | 1 U | 1.2 UJ |
| 106-93-4 | 1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE) | ug/kg | 0.83 U | 3.9 U | 0.77 U | 0.89 U |
| 95-50-1 | 1,2-DICHLOROBENZENE | ug/kg | 0.81 U | R | 0.75 U | 0.86 U |
| 107-06-2 | 1,2-DICHLOROETHANE | ug/kg | 0.83 U | 3.9 U | 0.77 U | 0.89 U |
| 78-87-5 | 1,2-DICHLOROPROPANE | ug/kg | 0.34 U | 1.6 U | 0.31 U | 0.36 U |
| 541-73-1 | 1,3-DICHLOROBENZENE | ug/kg | 0.48 U | R | 0.45 U | 0.51 U |
| 106-46-7 | 1,4-DICHLOROBENZENE | ug/kg | 0.53 U | R | 0.49 U | 0.57 U |
| 123-91-1 | 1,4-DIOXANE (P-DIOXANE) | ug/kg | 65 U | 300 U | 60 U | 69 U |
| 591-78-6 | 2-HEXANONE | ug/kg | 5.1 U | 24 U | 4.7 U | 5.4 U |
| 67-64-1 | ACETONE | ug/kg | 17 J | 18 U | 3.6 U | 4.2 U |
| 71-43-2 | BENZENE | ug/kg | 7.9 | 210000 | 0.46 U | 0.53 U |
| 74-97-5 | BROMOCHLOROMETHANE | ug/kg | 1 U | 4.8 U | 0.95 U | 1.1 U |
| 75-27-4 | BROMODICHLOROMETHANE | ug/kg | 0.81 U | 3.7 U | 0.75 U | 0.86 U |
| 75-25-2 | BROMOFORM | ug/kg | 0.96 U | 4.5 U | 0.89 U | 1 U |
| 74-83-9 | BROMOMETHANE | ug/kg | 3.2 U | 15 U | 3 U | 3.4 U |
| 75-15-0 | CARBON DISULFIDE | ug/kg | 1.4 U | 41 | 1.3 U | 2.8 J |
| 56-23-5 | CARBON TETRACHLORIDE | ug/kg | 1.3 U | 6 U | 1.2 U | 1.4 U |
| 108-90-7 | CHLOROBENZENE | ug/kg | 0.65 U | 3 U | 0.6 U | 0.69 U |
| 75-00-3 | CHLOROETHANE | ug/kg | 1.8 U | 8.5 U | 1.7 U | 1.9 U |
| 67-66-3 | CHLOROFORM | ug/kg | 0.96 U | 4.5 U | 0.89 U | 1 U |
| 74-87-3 | CHLOROMETHANE | ug/kg | 1.1 U | 5.2 U | 1 U | 1.2 U |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | ug/kg | 1.2 U | 5.4 U | 1.1 U | 1.2 U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | ug/kg | 0.94 U | 4.3 U | 0.87 U | 1 U |
| 110-82-7 | CYCLOHEXANE | ug/kg | 1.3 U | 57 | 1.2 U | 1.4 U |
| 124-48-1 | DIBROMOCHLOROMETHANE | ug/kg | 0.7 U | 3.3 U | 0.65 U | 0.75 U |
| 75-71-8 | DICHLORODIFLUOROMETHANE | ug/kg | 0.84 U | 3.9 U | 0.78 U | 0.9 U |
| 100-41-4 | ETHYLBENZENE | ug/kg | 2 J | 540000 | 0.75 U | 0.86 U |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | ug/kg | 0.62 U | 29000 J | 0.58 U | 0.67 U |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | ug/kg | 1.5 J | 470000 | 0.87 U | 1 U |
| 79-20-9 | METHYL ACETATE | ug/kg | 2 U | 9.1 U | 1.8 U | 2.1 U |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | ug/kg | 4 U | 19 U | 3.7 U | 4.3 U |
| 108-10-1 | METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE) | ug/kg | 3.8 U | 18 U | 3.5 U | 4.1 U |
| 108-87-2 | METHYLCYCLOHEXANE | ug/kg | 1.4 U | 180 | 1.3 U | 1.5 U |
| 75-09-2 | METHYLENE CHLORIDE | ug/kg | 25 UJ | 160 J | 7.1 UJ | 8.7 UJ |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | ug/kg | 0.88 U | 220000 | 0.82 U | 0.94 U |
| 100-42-5 | STYRENE | ug/kg | 0.58 U | 7100 J | 0.54 U | 0.62 U |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | ug/kg | 1.2 U | 5.8 U | 1.2 U | 1.3 U |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | ug/kg | 1.3 U | 6.1 U | 1.2 U | 1.4 U |
| 108-88-3 | TOLUENE | ug/kg | 5.9 J | 510000 | 0.77 U | 0.89 U |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | ug/kg | 0.9 U | 4.2 U | 0.83 U | 0.96 U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | ug/kg | 1 U | 4.8 U | 0.95 U | 1.1 U |
| 79-01-6 | TRICHLOROETHYLENE (TCE) | ug/kg | 1.1 U | 5.2 U | 1 U | 1.2 U |
| 75-69-4 | TRICHLOROFLUOROMETHANE | ug/kg | 1.7 U | 8 U | 1.6 U | 1.8 U |
| 75-01-4 | VINYL CHLORIDE | ug/kg | 1.6 U | 7.4 U | 1.5 U | 1.7 U |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB- 9<br>SB-9(28-30)<br>D4710-08<br>28 - 30 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 14:55<br>1/23/2013 | SB-10<br>SB-10(30-32)<br>D4710-01<br>30 - 32 ft<br>CTECH<br>D4710<br>SOIL<br>10/25/2012 12:10<br>1/23/2013 | SB-10<br>SB-10(45-47)<br>D4710-02<br>45 - 47 ft<br>CTECH<br>D4710<br>SOIL<br>10/25/2012 12:40<br>1/23/2013 | SB-11<br>SB-11(5-5.5)<br>D4751-01<br>5 - 5.5 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 12:05<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | SEMIVOLATILES | | | | | |
| 95-94-3 | 1,2,4,5-TETRACHLOROBENZENE | ug/kg | 17 U | 480 U | 16 U | 18 U |
| 58-90-2 | 2,3,4,6-TETRACHLOROPHENOL | ug/kg | 17 U | 480 U | 16 U | 18 U |
| 95-95-4 | 2,4,5-TRICHLOROPHENOL | ug/kg | 30 U | 850 U | 28 U | 32 U |
| 88-06-2 | 2,4,6-TRICHLOROPHENOL | ug/kg | 13 U | 370 U | 12 U | 14 U |
| 120-83-2 | 2,4-DICHLOROPHENOL | ug/kg | 16 U | 460 U | 15 U | 18 U |
| 105-67-9 | 2,4-DIMETHYLPHENOL | ug/kg | 25 U | 690 U | 23 U | 26 U |
| 51-28-5 | 2,4-DINITROPHENOL | ug/kg | 44 U | 1200 U | 41 U | 47 UJ |
| 121-14-2 | 2,4-DINITROTOLUENE | ug/kg | 13 U | 370 U | 12 U | 14 U |
| 606-20-2 | 2,6-DINITROTOLUENE | ug/kg | 18 U | 500 U | 16 U | 19 U |
| 91-58-7 | 2-CHLORONAPHTHALENE | ug/kg | 9.9 U | 280 U | 9.1 U | 11 U |
| 95-57-8 | 2-CHLOROPHENOL | ug/kg | 23 U | 640 U | 21 U | 24 U |
| 91-57-6 | 2-METHYLNAPHTHALENE | ug/kg | 11 U | 2800000 | 10 U | 12 U |
| 95-48-7 | 2-METHYLPHENOL (O-CRESOL) | ug/kg | 23 U | 660 U | 22 U | 25 U |
| 88-74-4 | 2-NITROANILINE | ug/kg | 19 U | 540 U | 18 U | 21 U |
| 88-75-5 | 2-NITROPHENOL | ug/kg | 21 U | 590 U | 19 U | 22 U |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | ug/kg | 28 U | 780 U | 26 U | 30 U |
| MEPH3MEPH | 3+4-Methylphenols | ug/kg | 22 U | 630 U | 21 U | 24 U |
| 99-09-2 | 3-NITROANILINE | ug/kg | 28 U | 780 U | 26 U | 30 U |
| 534-52-1 | 4,6-DINITRO-2-METHYLPHENOL | ug/kg | 25 U | 700 U | 23 U | 27 UJ |
| 101-55-3 | 4-BROMOPHENYL PHENYL ETHER | ug/kg | 8.4 U | 240 U | 7.8 U | 9 U |
| 59-50-7 | 4-CHLORO-3-METHYLPHENOL | ug/kg | 19 U | 540 U | 18 U | 21 U |
| 106-47-8 | 4-CHLOROANILINE | ug/kg | 30 U | 860 U | 28 U | 33 UJ |
| 7005-72-3 | 4-CHLOROPHENYL PHENYL ETHER | ug/kg | 23 U | 660 U | 22 U | 25 U |
| 100-01-6 | 4-NITROANILINE | ug/kg | 56 U | 1600 U | 52 U | 60 U |
| 100-02-7 | 4-NITROPHENOL | ug/kg | 80 U | 2300 U | 74 U | 86 U |
| 83-32-9 | ACENAPHTHENE | ug/kg | 12 U | 320000 J | 11 U | 13 U |
| 208-96-8 | ACENAPHTHYLENE | ug/kg | 11 U | 370000 | 200 J | 12 U |
| 98-86-2 | ACETOPHENONE | ug/kg | 13 U | 370 U | 12 U | 14 U |
| 120-12-7 | ANTHRACENE | ug/kg | 8.8 U | 370000 | 8.2 U | 9.4 U |
| 1912-24-9 | ATRAZINE | ug/kg | 23 U | 640 U | 21 U | 24 U |
| 100-52-7 | BENZALDEHYDE | ug/kg | 23 U | 640 U | 21 U | 24 U |
| 56-55-3 | BENZO(A)ANTHRACENE | ug/kg | 21 U | 220000 | 19 U | 22 U |
| 50-32-8 | BENZO(A)PYRENE | ug/kg | 9.3 U | 150000 J | 8.7 U | 10 U |
| 205-99-2 | BENZO(B)FLUORANTHENE | ug/kg | 14 U | 97000 J | 13 U | 15 U |
| 191-24-2 | BENZO(G,H,I)PERYLENE | ug/kg | 18 U | 42000 J | 16 U | 19 U |
| 207-08-9 | BENZO(K)FLUORANTHENE | ug/kg | 20 U | 32000 | 19 U | 22 U |
| 85-68-7 | BENZYL BUTYL PHTHALATE | ug/kg | 21 U | 580 U | 19 U | 22 U |
| 92-52-4 | BIPHENYL (DIPHENYL) | ug/kg | 16 U | 200000 | 15 U | 17 U |
| 111-91-1 | BIS(2-CHLOROETHOXY) METHANE | ug/kg | 25 U | 700 U | 23 U | 27 U |
| 111-44-4 | BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER) | ug/kg | 21 U | 580 U | 19 U | 22 U |
| 108-60-1 | BIS(2-CHLOROISOPROPYL) ETHER | ug/kg | 18 U | 500 U | 17 U | 19 U |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | ug/kg | 15 U | 430 U | 14 U | 16 U |
| 105-60-2 | CAPROLACTAM | ug/kg | 20 U | 570 U | 19 U | 22 U |
| 86-74-8 | CARBAZOLE | ug/kg | 9.5 U | 13000 | 8.8 U | 10 U |
| 218-01-9 | CHRYSENE | ug/kg | 20 U | 220000 | 18 U | 21 U |
| 53-70-3 | DIBENZ(A,H)ANTHRACENE | ug/kg | 12 U | 12000 | 12 U | 13 U |
| 132-64-9 | DIBENZOFURAN | ug/kg | 17 U | 43000 | 16 U | 18 U |
| 84-66-2 | DIETHYL PHTHALATE | ug/kg | 6.7 U | 190 U | 6.3 U | 7.2 U |
| 131-11-3 | DIMETHYL PHTHALATE | ug/kg | 12 U | 330 U | 11 U | 296 J |
| 84-74-2 | DI-N-BUTYL PHTHALATE | ug/kg | 34 U | 960 U | 32 U | 36 U |
| 117-84-0 | DI-N-OCTYLPHTHALATE | ug/kg | 4.9 U | 140 U | 4.6 U | 5.3 U |
| 206-44-0 | FLUORANTHENE | ug/kg | 8.7 U | 400000 | 8.1 U | 9.3 U |
| 86-73-7 | FLUORENE | ug/kg | 16 U | 550000 | 15 U | 17 U |
| 118-74-1 | HEXACHLOROBENZENE | ug/kg | 18 U | 500 U | 16 U | 19 U |
| 87-68-3 | HEXACHLOROBUTADIENE | ug/kg | 16 U | 440 U | 15 U | 17 U |
| 77-47-4 | HEXACHLOROCYCLOPENTADIENE | ug/kg | 11 U | 300 U | 9.7 U | 11 U |
| 67-72-1 | HEXACHLOROETHANE | ug/kg | 19 U | 540 U | 18 U | 21 U |
| 193-39-5 | INDENO(1,2,3-C,D)PYRENE | ug/kg | 14 U | 37000 | 13 U | 15 U |
| 78-59-1 | ISOPHORONE | ug/kg | 14 U | 400 U | 13 U | 15 U |
| 91-20-3 | NAPHTHALENE | ug/kg | 15 U | 5700000 | 210 J | 16 U |
| 98-95-3 | NITROBENZENE | ug/kg | 16 U | 460 U | 15 U | 17 U |
| 621-64-7 | N-NITROSODI-N-PROPYLAMINE | ug/kg | 22 U | 610 U | 20 U | 23 U |
| 86-30-6 | N-NITROSODIPHENYLAMINE | ug/kg | 10 U | 290 U | 9.6 U | 11 U |
| 87-86-5 | PENTACHLOROPHENOL | ug/kg | 30 U | 830 U | 27 U | 32 U |
| 85-01-8 | PHENANTHRENE | ug/kg | 12 U | 1500000 | 11 U | 12 U |
| 108-95-2 | PHENOL | ug/kg | 10 U | 280 U | 9.3 U | 11 U |
| 129-00-0 | PYRENE | ug/kg | 10 U | 640000 | 9.6 U | 11 U |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB- 9<br>SB-9(28-30)<br>D4710-08<br>28 - 30 ft<br>CTECH<br>D4710<br>SOIL<br>10/26/2012 14:55<br>1/23/2013 | SB-10<br>SB-10(30-32)<br>D4710-01<br>30 - 32 ft<br>CTECH<br>D4710<br>SOIL<br>10/25/2012 12:10<br>1/23/2013 | SB-10<br>SB-10(45-47)<br>D4710-02<br>45 - 47 ft<br>CTECH<br>D4710<br>SOIL<br>10/25/2012 12:40<br>1/23/2013 | SB-11<br>SB-11(5-5.5)<br>D4751-01<br>5 - 5.5 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 12:05<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | INORGANICS | | | | | |
| 7429-90-5 | ALUMINUM | mg/kg | 9490 | 3130 | 4490 | 4170 J |
| 7440-36-0 | ANTIMONY | mg/kg | 0.31 U | 0.28 U | 0.29 U | 0.34 UJ |
| 7440-38-2 | ARSENIC | mg/kg | 3 | 7.21 | 1.23 | 18.3 J |
| 7440-39-3 | BARIUM | mg/kg | 96 | 30.9 | 55.6 | 156 J |
| 7440-41-7 | BERYLLIUM | mg/kg | 0.39 | 0.04 J | 0.2 | 0.04 U |
| 7440-43-9 | CADMIUM | mg/kg | 0.7 | 1.75 | 0.29 | 0.16 J |
| 7440-70-2 | CALCIUM | mg/kg | 2540 | 9540 | 13000 | 2260 J |
| 7440-47-3 | CHROMIUM, TOTAL | mg/kg | 18.4 J | 5.38 J | 8.9 J | 9.93 J |
| 7440-48-4 | COBALT | mg/kg | 11.9 | 3.4 | 5.38 | 6.31 |
| 7440-50-8 | COPPER | mg/kg | 20.5 J | 26.5 J | 11.8 J | 69.6 J |
| 7439-89-6 | IRON | mg/kg | 28600 | 13200 | 12600 | 26800 |
| 7439-92-1 | LEAD | mg/kg | 18.1 | 215 | 8.81 | 30 |
| 7439-95-4 | MAGNESIUM | mg/kg | 5050 | 5480 | 5450 | 1690 J |
| 7439-96-5 | MANGANESE | mg/kg | 414 | 277 | 290 | 803 J |
| 7439-97-6 | MERCURY | mg/kg | 0.002 U | 0.381 | 0.002 U | 1.17 |
| 7440-02-0 | NICKEL | mg/kg | 31.1 | 12.2 | 14.3 | 17.5 |
| 7440-09-7 | POTASSIUM | mg/kg | 2730 | 352 | 1470 | 1500 J |
| 7782-49-2 | SELENIUM | mg/kg | 0.33 J | 1.95 | 0.21 U | 1 |
| 7440-22-4 | SILVER | mg/kg | 0.67 | 0.15 J | 0.09 J | 0.51 |
| 7440-23-5 | SODIUM | mg/kg | 148 | 4300 | 150 | 867 J |
| 7440-28-0 | THALLIUM | mg/kg | 0.74 J | 1.15 | 0.18 J | 0.46 J |
| 7440-62-2 | VANADIUM | mg/kg | 22.5 | 7.59 | 13.1 | 14.8 J |
| 7440-66-6 | ZINC | mg/kg | 50.8 | 506 | 22.9 | 88.4 |
| 57-12-5 | CYANIDE | mg/kg | 0.244 J | 4.4 | 0.172 J | 0.133 J |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB-11<br>SB-11(29.5-30)<br>D4751-02<br>29.5 - 30 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 12:10<br>1/23/2013 | SB-12<br>SB-12(12-14)<br>D4751-07<br>12 - 14 ft<br>CTECH<br>D4751<br>SOIL<br>11/5/2012 10:10<br>1/23/2013 | SB-12<br>SB-12(36-38)<br>D4751-08<br>36 - 38 ft<br>CTECH<br>D4751<br>SOIL<br>11/5/2012 11:00<br>1/23/2013 | SB-13<br>SB-13(47-49)<br>D4751-09<br>47 - 49 ft<br>CTECH<br>D4751<br>SOIL<br>11/5/2012 15:05<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | VOLATILES | | | | | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | ug/kg | 1.1 U | 44 U | 0.93 U | 1 U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | ug/kg | 0.55 U | 34 U | 0.48 U | 0.54 U |
| 76-13-1 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | ug/kg | 1.6 U | 50 U | 1.4 U | 1.6 U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | ug/kg | 1.1 U | 42 U | 0.95 U | 1.1 U |
| 75-34-3 | 1,1-DICHLOROETHANE | ug/kg | 1.1 U | 40 U | 0.99 U | 1.1 U |
| 75-35-4 | 1,1-DICHLOROETHENE | ug/kg | 1.8 U | 52 U | 1.5 U | 1.7 U |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | ug/kg | 0.6 U | 72 U | 0.53 U | 0.58 U |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | ug/kg | 0.84 U | 69 U | 0.74 U | 0.82 U |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | ug/kg | 1 U | 51 U | 0.92 UJ | 1 UJ |
| 106-93-4 | 1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE) | ug/kg | 0.77 U | 46 U | 0.67 U | 0.75 U |
| 95-50-1 | 1,2-DICHLOROBENZENE | ug/kg | 0.75 U | 50 U | 0.65 U | 0.73 U |
| 107-06-2 | 1,2-DICHLOROETHANE | ug/kg | 0.77 U | 53 U | 0.67 U | 0.75 U |
| 78-87-5 | 1,2-DICHLOROPROPANE | ug/kg | 0.31 U | 51 U | 0.27 U | 0.3 U |
| 541-73-1 | 1,3-DICHLOROBENZENE | ug/kg | 0.45 U | 48 U | 0.39 U | 0.43 U |
| 106-46-7 | 1,4-DICHLOROBENZENE | ug/kg | 0.49 U | 36 U | 0.43 U | 0.48 U |
| 123-91-1 | 1,4-DIOXANE (P-DIOXANE) | ug/kg | 60 U | 5500 U | 53 U | 58 U |
| 591-78-6 | 2-HEXANONE | ug/kg | 4.7 U | 220 UJ | 4.1 U | 4.6 U |
| 67-64-1 | ACETONE | ug/kg | 3.6 UJ | 340 UJ | 3.2 U | 3.5 U |
| 71-43-2 | BENZENE | ug/kg | 0.46 U | 36 U | 0.4 U | 85 |
| 74-97-5 | BROMOCHLOROMETHANE | ug/kg | 0.95 U | 250 U | 0.83 U | 0.92 U |
| 75-27-4 | BROMODICHLOROMETHANE | ug/kg | 0.75 U | 40 U | 0.65 U | 0.73 U |
| 75-25-2 | BROMOFORM | ug/kg | 0.89 U | 52 U | 0.78 U | 0.87 U |
| 74-83-9 | BROMOMETHANE | ug/kg | 3 U | 69 U | 2.6 U | 2.9 U |
| 75-15-0 | CARBON DISULFIDE | ug/kg | 1.3 U | 60 U | 1.1 U | 2.6 J |
| 56-23-5 | CARBON TETRACHLORIDE | ug/kg | 1.2 U | 69 U | 1 U | 1.2 U |
| 108-90-7 | CHLOROBENZENE | ug/kg | 0.6 U | 54 U | 0.53 U | 0.58 U |
| 75-00-3 | CHLOROETHANE | ug/kg | 1.7 U | 73 UJ | 1.5 U | 1.6 U |
| 67-66-3 | CHLOROFORM | ug/kg | 0.89 U | 38 U | 0.78 U | 0.87 U |
| 74-87-3 | CHLOROMETHANE | ug/kg | 1 U | 60 U | 0.91 U | 1 U |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | ug/kg | 1.1 U | 39 U | 0.94 U | 1 U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | ug/kg | 0.87 U | 34 U | 0.76 U | 0.84 U |
| 110-82-7 | CYCLOHEXANE | ug/kg | 1.2 U | 61 U | 1.1 U | 1.7 J |
| 124-48-1 | DIBROMOCHLOROMETHANE | ug/kg | 0.65 U | 58 U | 0.57 U | 0.63 U |
| 75-71-8 | DICHLORODIFLUOROMETHANE | ug/kg | 0.78 U | 61 U | 0.68 U | 0.76 U |
| 100-41-4 | ETHYLBENZENE | ug/kg | 0.75 U | 9100 | 0.65 U | 460 J |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | ug/kg | 0.58 U | 1000 | 0.51 U | 45 |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | ug/kg | 0.87 U | 11000 | 0.76 U | 230 |
| 79-20-9 | METHYL ACETATE | ug/kg | 1.8 U | 92 UJ | 1.6 U | 1.8 U |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | ug/kg | 3.7 U | 150 U | 3.3 U | 3.6 U |
| 108-10-1 | METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE) | ug/kg | 3.5 U | 230 U | 3.1 U | 3.4 U |
| 108-87-2 | METHYLCYCLOHEXANE | ug/kg | 1.3 U | 69000 | 1.1 U | 7.1 |
| 75-09-2 | METHYLENE CHLORIDE | ug/kg | 6 UJ | 46 U | 5.3 UJ | 10 UJ |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | ug/kg | 0.82 U | 5700 | 0.72 U | 160 |
| 100-42-5 | STYRENE | ug/kg | 0.54 U | 290 J | 0.47 U | 3.8 J |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | ug/kg | 1.2 U | 39 U | 1 U | 1.1 U |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | ug/kg | 1.2 U | 30 U | 1.1 U | 1.2 U |
| 108-88-3 | TOLUENE | ug/kg | 0.77 U | 1500 | 0.67 U | 53 |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | ug/kg | 0.83 U | 46 U | 0.73 U | 0.81 U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | ug/kg | 0.95 U | 32 U | 0.83 U | 0.92 U |
| 79-01-6 | TRICHLOROETHYLENE (TCE) | ug/kg | 1 U | 31 U | 0.91 U | 1 U |
| 75-69-4 | TRICHLOROFLUOROMETHANE | ug/kg | 1.6 U | 39 U | 1.4 U | 1.5 U |
| 75-01-4 | VINYL CHLORIDE | ug/kg | 1.5 U | 38 U | 1.3 U | 1.4 U |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB-11<br>SB-11(29.5-30)<br>D4751-02<br>29.5 - 30 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 12:10<br>1/23/2013 | SB-12<br>SB-12(12-14)<br>D4751-07<br>12 - 14 ft<br>CTECH<br>D4751<br>SOIL<br>11/5/2012 10:10<br>1/23/2013 | SB-12<br>SB-12(36-38)<br>D4751-08<br>36 - 38 ft<br>CTECH<br>D4751<br>SOIL<br>11/5/2012 11:00<br>1/23/2013 | SB-13<br>SB-13(47-49)<br>D4751-09<br>47 - 49 ft<br>CTECH<br>D4751<br>SOIL<br>11/5/2012 15:05<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | SEMIVOLATILES | | | | | |
| 95-94-3 | 1,2,4,5-TETRACHLOROBENZENE | ug/kg | 16 U | 73 U | 14 U | 15 U |
| 58-90-2 | 2,3,4,6-TETRACHLOROPHENOL | ug/kg | 16 U | 73 U | 14 U | 15 U |
| 95-95-4 | 2,4,5-TRICHLOROPHENOL | ug/kg | 28 U | 130 U | 25 U | 28 U |
| 88-06-2 | 2,4,6-TRICHLOROPHENOL | ug/kg | 12 U | 57 U | 11 U | 12 U |
| 120-83-2 | 2,4-DICHLOROPHENOL | ug/kg | 15 U | 70 U | 13 U | 15 U |
| 105-67-9 | 2,4-DIMETHYLPHENOL | ug/kg | 23 U | 100 U | 20 U | 22 U |
| 51-28-5 | 2,4-DINITROPHENOL | ug/kg | 41 UJ | 190 UJ | 36 UJ | 40 UJ |
| 121-14-2 | 2,4-DINITROTOLUENE | ug/kg | 12 U | 56 U | 11 U | 12 U |
| 606-20-2 | 2,6-DINITROTOLUENE | ug/kg | 16 U | 75 U | 14 U | 16 U |
| 91-58-7 | 2-CHLORONAPHTHALENE | ug/kg | 9.1 U | 42 U | 8 U | 8.9 U |
| 95-57-8 | 2-CHLOROPHENOL | ug/kg | 21 U | 98 U | 19 U | 21 U |
| 91-57-6 | 2-METHYLNAPHTHALENE | ug/kg | 10 U | 160000 | 8.8 U | 1300 |
| 95-48-7 | 2-METHYLPHENOL (O-CRESOL) | ug/kg | 22 U | 100 U | 19 U | 21 U |
| 88-74-4 | 2-NITROANILINE | ug/kg | 18 U | 82 U | 16 U | 17 U |
| 88-75-5 | 2-NITROPHENOL | ug/kg | 19 U | 89 U | 17 U | 19 U |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | ug/kg | 26 U | 120 U | 23 U | 25 U |
| MEPH3MEPH | 3+4-Methylphenols | ug/kg | 21 U | 96 U | 18 U | 20 U |
| 99-09-2 | 3-NITROANILINE | ug/kg | 26 U | 120 U | 23 U | 25 U |
| 534-52-1 | 4,6-DINITRO-2-METHYLPHENOL | ug/kg | 23 U | 110 UJ | 20 UJ | 22 UJ |
| 101-55-3 | 4-BROMOPHENYL PHENYL ETHER | ug/kg | 7.8 U | 36 U | 6.8 U | 7.6 U |
| 59-50-7 | 4-CHLORO-3-METHYLPHENOL | ug/kg | 18 U | 82 U | 16 U | 17 U |
| 106-47-8 | 4-CHLOROANILINE | ug/kg | 28 UJ | 130 UJ | 25 UJ | 28 UJ |
| 7005-72-3 | 4-CHLOROPHENYL PHENYL ETHER | ug/kg | 22 U | 100 U | 19 U | 21 U |
| 100-01-6 | 4-NITROANILINE | ug/kg | 52 U | 240 U | 46 U | 51 U |
| 100-02-7 | 4-NITROPHENOL | ug/kg | 74 U | 340 U | 65 U | 73 U |
| 83-32-9 | ACENAPHTHENE | ug/kg | 11 U | 9100 | 9.9 U | 320 J |
| 208-96-8 | ACENAPHTHYLENE | ug/kg | 10 U | 50000 | 8.8 U | 240 J |
| 98-86-2 | ACETOPHENONE | ug/kg | 12 U | 57 U | 11 U | 12 U |
| 120-12-7 | ANTHRACENE | ug/kg | 8.2 U | 22000 | 7.2 U | 310 J |
| 1912-24-9 | ATRAZINE | ug/kg | 21 U | 98 U | 19 U | 21 U |
| 100-52-7 | BENZALDEHYDE | ug/kg | 21 U | 96 U | 18 U | 20 U |
| 56-55-3 | BENZO(A)ANTHRACENE | ug/kg | 19 U | 11000 | 17 U | 260 J |
| 50-32-8 | BENZO(A)PYRENE | ug/kg | 8.6 U | 7200 | 7.6 U | 200 J |
| 205-99-2 | BENZO(B)FLUORANTHENE | ug/kg | 13 U | 5500 | 11 U | 160 J |
| 191-24-2 | BENZO(G,H,I)PERYLENE | ug/kg | 16 U | 2100 | 14 U | 16 U |
| 207-08-9 | BENZO(K)FLUORANTHENE | ug/kg | 19 U | 1700 J | 17 U | 18 U |
| 85-68-7 | BENZYL BUTYL PHTHALATE | ug/kg | 19 U | 89 U | 17 U | 19 U |
| 92-52-4 | BIPHENYL (DIPHENYL) | ug/kg | 15 U | 10000 | 13 U | 15 U |
| 111-91-1 | BIS(2-CHLOROETHOXY) METHANE | ug/kg | 23 U | 110 U | 20 U | 23 U |
| 111-44-4 | BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER) | ug/kg | 19 U | 89 U | 17 U | 19 U |
| 108-60-1 | BIS(2-CHLOROISOPROPYL) ETHER | ug/kg | 17 U | 77 U | 15 U | 16 U |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | ug/kg | 14 U | 65 U | 12 U | 14 U |
| 105-60-2 | CAPROLACTAM | ug/kg | 19 U | 86 U | 16 U | 18 U |
| 86-74-8 | CARBAZOLE | ug/kg | 8.8 U | 40 U | 7.7 U | 8.6 U |
| 218-01-9 | CHRYSENE | ug/kg | 18 U | 10000 | 16 U | 260 J |
| 53-70-3 | DIBENZ(A,H)ANTHRACENE | ug/kg | 12 U | 53 U | 10 U | 11 U |
| 132-64-9 | DIBENZOFURAN | ug/kg | 16 U | 2500 | 14 U | 15 U |
| 84-66-2 | DIETHYL PHTHALATE | ug/kg | 6.2 U | 29 U | 5.5 U | 6.1 U |
| 131-11-3 | DIMETHYL PHTHALATE | ug/kg | 284 J | 50 U | 455 | 403 |
| 84-74-2 | DI-N-BUTYL PHTHALATE | ug/kg | 31 U | 150 U | 28 U | 31 U |
| 117-84-0 | DI-N-OCTYLPHTHALATE | ug/kg | 4.6 U | 21 U | 4 U | 4.5 U |
| 206-44-0 | FLUORANTHENE | ug/kg | 8 U | 22000 | 7 U | 490 |
| 86-73-7 | FLUORENE | ug/kg | 15 U | 33000 | 13 U | 320 J |
| 118-74-1 | HEXACHLOROBENZENE | ug/kg | 16 U | 75 U | 14 U | 16 U |
| 87-68-3 | HEXACHLOROBUTADIENE | ug/kg | 15 U | 67 U | 13 U | 14 U |
| 77-47-4 | HEXACHLOROCYCLOPENTADIENE | ug/kg | 9.7 U | 45 U | 8.5 U | 9.5 U |
| 67-72-1 | HEXACHLOROETHANE | ug/kg | 18 U | 83 U | 16 U | 18 U |
| 193-39-5 | INDENO(1,2,3-C,D)PYRENE | ug/kg | 13 U | 2000 | 12 U | 13 U |
| 78-59-1 | ISOPHORONE | ug/kg | 13 U | 61 U | 12 U | 13 U |
| 91-20-3 | NAPHTHALENE | ug/kg | 14 U | 310000 | 12 U | 2800 |
| 98-95-3 | NITROBENZENE | ug/kg | 15 U | 70 U | 13 U | 15 U |
| 621-64-7 | N-NITROSODI-N-PROPYLAMINE | ug/kg | 20 U | 93 U | 18 U | 20 U |
| 86-30-6 | N-NITROSODIPHENYLAMINE | ug/kg | 9.6 U | 44 U | 8.4 U | 9.4 U |
| 87-86-5 | PENTACHLOROPHENOL | ug/kg | 27 U | 130 U | 24 U | 27 U |
| 85-01-8 | PHENANTHRENE | ug/kg | 11 U | 94000 | 9.5 U | 1300 |
| 108-95-2 | PHENOL | ug/kg | 9.2 U | 43 U | 8.1 U | 9 U |
| 129-00-0 | PYRENE | ug/kg | 9.6 U | 29000 | 8.4 U | 620 |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB-11<br>SB-11(29.5-30)<br>D4751-02<br>29.5 - 30 ft<br>CTECH<br>D4751<br>SOIL<br>11/6/2012 12:10<br>1/23/2013 | SB-12<br>SB-12(12-14)<br>D4751-07<br>12 - 14 ft<br>CTECH<br>D4751<br>SOIL<br>11/5/2012 10:10<br>1/23/2013 | SB-12<br>SB-12(36-38)<br>D4751-08<br>36 - 38 ft<br>CTECH<br>D4751<br>SOIL<br>11/5/2012 11:00<br>1/23/2013 | SB-13<br>SB-13(47-49)<br>D4751-09<br>47 - 49 ft<br>CTECH<br>D4751<br>SOIL<br>11/5/2012 15:05<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | INORGANICS | | | | | |
| 7429-90-5 | ALUMINUM | mg/kg | 5890 J | 4120 J | 2800 J | 9270 J |
| 7440-36-0 | ANTIMONY | mg/kg | 0.28 UJ | 0.27 UJ | 0.24 UJ | 0.28 UJ |
| 7440-38-2 | ARSENIC | mg/kg | 1.3 J | 0.9 J | 0.49 J | 1.96 J |
| 7440-39-3 | BARIUM | mg/kg | 63.3 J | 31.9 J | 19.1 J | 124 J |
| 7440-41-7 | BERYLLIUM | mg/kg | 0.3 | 0.14 J | 0.04 J | 0.47 |
| 7440-43-9 | CADMIUM | mg/kg | 0.42 | 0.35 | 0.18 | 0.71 |
| 7440-70-2 | CALCIUM | mg/kg | 12200 J | 952 J | 10100 J | 19200 J |
| 7440-47-3 | CHROMIUM, TOTAL | mg/kg | 11.7 J | 9.3 J | 7.04 J | 19.9 J |
| 7440-48-4 | COBALT | mg/kg | 6.51 | 6.88 | 3.39 | 7.91 |
| 7440-50-8 | COPPER | mg/kg | 12.1 J | 11 J | 9.25 J | 18.3 J |
| 7439-89-6 | IRON | mg/kg | 14600 | 10300 | 6990 | 18600 |
| 7439-92-1 | LEAD | mg/kg | 10.5 | 45.3 | 3.88 | 15.2 |
| 7439-95-4 | MAGNESIUM | mg/kg | 5740 J | 1870 J | 4920 J | 3760 J |
| 7439-96-5 | MANGANESE | mg/kg | 319 J | 191 J | 209 J | 1240 J |
| 7439-97-6 | MERCURY | mg/kg | 0.002 U | 0.002 U | 0.002 U | 0.02 |
| 7440-02-0 | NICKEL | mg/kg | 16.6 | 11.2 | 11.5 | 21.4 |
| 7440-09-7 | POTASSIUM | mg/kg | 2190 J | 957 J | 581 J | 2340 J |
| 7782-49-2 | SELENIUM | mg/kg | 0.21 U | 0.2 U | 0.17 U | 1.06 |
| 7440-22-4 | SILVER | mg/kg | 0.14 J | 0.1 J | 0.06 U | 0.34 |
| 7440-23-5 | SODIUM | mg/kg | 2520 J | 5360 J | 1220 J | 1280 J |
| 7440-28-0 | THALLIUM | mg/kg | 0.34 J | 0.13 U | 0.13 J | 0.81 J |
| 7440-62-2 | VANADIUM | mg/kg | 15.3 J | 12.7 J | 9.49 J | 18.3 J |
| 7440-66-6 | ZINC | mg/kg | 27 | 18.6 | 14.9 | 33.7 |
| 57-12-5 | CYANIDE | mg/kg | 0.042 J | 0.434 | 0.069 J | 0.093 J |

| | | | | | Dup of SB-14(45-47) | |
|---|---|---|---|---|---|---|
| Con Ed - Ludlow Site | | Location ID: | SB-14 | SB-14 | SB-14 | SB-16 |
| Validated Soil Analytical Data | | Sample ID: | SB-14(38-40) | SB-14(45-47) | SB-14A(45-47) | SB-16(30-33) |
| SDGs: D4710, D1751, D5300 | | Lab Sample Id: | D5300-03 | D5300-06 | D5300-07 | D5300-01 |
| | | Depth: | 38 - 40 ft | 45 - 47 ft | 45 - 47 ft | 30 - 33 ft |
| | | Source: | CTECH | CTECH | CTECH | CTECH |
| | | SDG: | D5300 | D5300 | D5300 | D5300 |
| | | Matrix: | SOIL | SOIL | SOIL | SOIL |
| | | Sampled: | 12/21/2012 10:50 | 12/21/2012 11:50 | 12/21/2012 12:00 | 12/20/2012 16:10 |
| | | Validated: | 1/23/2013 | 1/23/2013 | 1/23/2013 | 1/23/2013 |
| CAS NO. | COMPOUND | UNITS: | | | | |
| | VOLATILES | | | | | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | ug/kg | 1.1 U | 1 U | 1 U | 110 U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | ug/kg | 0.59 U | 0.54 U | 0.53 U | 57.5 U |
| 76-13-1 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | ug/kg | 1.7 U | 1.5 U | 1.5 U | 170 U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | ug/kg | 1.2 U | 1 U | 1 U | 110 U |
| 75-34-3 | 1,1-DICHLOROETHANE | ug/kg | 1.2 U | 1.1 U | 1.1 U | 120 U |
| 75-35-4 | 1,1-DICHLOROETHENE | ug/kg | 1.9 U | 1.7 U | 1.7 U | 180 U |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | ug/kg | 0.64 UJ | 0.58 U | 0.58 U | 62.5 U |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | ug/kg | 0.9 U | 0.82 UJ | 0.81 UJ | 87.5 U |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | ug/kg | 1.1 U | R | R | 110 U |
| 106-93-4 | 1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE) | ug/kg | 0.82 U | 0.75 U | 0.74 U | 80 U |
| 95-50-1 | 1,2-DICHLOROBENZENE | ug/kg | 0.79 U | 0.72 U | 0.72 U | 77.5 U |
| 107-06-2 | 1,2-DICHLOROETHANE | ug/kg | 0.82 U | 0.75 U | 0.74 U | 80 U |
| 78-87-5 | 1,2-DICHLOROPROPANE | ug/kg | 0.33 U | 0.3 U | 0.3 U | 32.5 U |
| 541-73-1 | 1,3-DICHLOROBENZENE | ug/kg | 0.47 U | 0.43 U | 0.43 U | 46.3 U |
| 106-46-7 | 1,4-DICHLOROBENZENE | ug/kg | 0.52 U | 0.48 U | 0.47 U | 51.3 U |
| 123-91-1 | 1,4-DIOXANE (P-DIOXANE) | ug/kg | 64 U | 58 UJ | 58 UJ | 1300 UJ |
| 591-78-6 | 2-HEXANONE | ug/kg | 5 U | 4.6 U | 4.5 U | 490 UJ |
| 67-64-1 | ACETONE | ug/kg | 3.9 U | 27 J | 26 J | 380 U |
| 71-43-2 | BENZENE | ug/kg | 0.49 U | 0.44 U | 0.44 U | 17200 |
| 74-97-5 | BROMOCHLOROMETHANE | ug/kg | 1 U | 0.92 U | 0.91 U | 98.8 U |
| 75-27-4 | BROMODICHLOROMETHANE | ug/kg | 0.79 U | 0.72 U | 0.72 U | 77.5 U |
| 75-25-2 | BROMOFORM | ug/kg | 0.95 U | 0.86 U | 0.85 U | 92.5 UJ |
| 74-83-9 | BROMOMETHANE | ug/kg | 3.1 UJ | 2.9 U | 2.8 U | 310 U |
| 75-15-0 | CARBON DISULFIDE | ug/kg | 1.4 U | 1.2 U | 1.2 U | 130 U |
| 56-23-5 | CARBON TETRACHLORIDE | ug/kg | 1.3 U | 1.2 U | 1.1 U | 120 U |
| 108-90-7 | CHLOROBENZENE | ug/kg | 0.64 U | 0.58 U | 0.58 U | 62.5 U |
| 75-00-3 | CHLOROETHANE | ug/kg | 1.8 U | 1.6 U | 1.6 U | 180 U |
| 67-66-3 | CHLOROFORM | ug/kg | 0.95 U | 0.86 U | 0.85 U | 92.5 U |
| 74-87-3 | CHLOROMETHANE | ug/kg | 1.1 U | 1 U | 0.99 U | 320 J |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | ug/kg | 1.1 U | 1 U | 1 U | 110 U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | ug/kg | 0.92 U | 0.84 U | 0.83 U | 90 U |
| 110-82-7 | CYCLOHEXANE | ug/kg | 1.3 U | 1.2 U | 1.2 U | 130 U |
| 124-48-1 | DIBROMOCHLOROMETHANE | ug/kg | 0.69 U | 0.63 UJ | 0.62 UJ | 67.5 UJ |
| 75-71-8 | DICHLORODIFLUOROMETHANE | ug/kg | 0.83 U | 0.76 UJ | 0.75 UJ | 81.3 U |
| 100-41-4 | ETHYLBENZENE | ug/kg | 0.79 U | 0.72 U | 0.72 U | 43900 |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | ug/kg | 0.61 U | 0.56 U | 0.55 U | 3300 |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | ug/kg | 0.92 U | 0.84 U | 0.83 U | 38400 |
| 79-20-9 | METHYL ACETATE | ug/kg | 1.9 U | 1.8 U | 1.7 U | 190 U |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | ug/kg | 4 U | 3.6 U | 3.6 U | 390 UJ |
| 108-10-1 | METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE) | ug/kg | 3.7 U | 3.4 U | 3.4 U | 370 U |
| 108-87-2 | METHYLCYCLOHEXANE | ug/kg | 1.4 U | 1.2 U | 1.2 U | 180 J |
| 75-09-2 | METHYLENE CHLORIDE | ug/kg | 1.8 UJ | 1.7 U | 1.6 U | 180 U |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | ug/kg | 0.87 U | 0.79 U | 0.78 U | 18200 |
| 100-42-5 | STYRENE | ug/kg | 0.58 U | 0.52 U | 0.52 U | 8100 |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | ug/kg | 1.2 U | 1.1 U | 1.1 U | 120 U |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | ug/kg | 1.3 U | 1.2 U | 1.2 U | 130 U |
| 108-88-3 | TOLUENE | ug/kg | 0.82 U | 0.75 U | 0.74 U | 46500 |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | ug/kg | 0.88 U | 0.8 U | 0.8 U | 86.3 U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | ug/kg | 1 U | 0.92 U | 0.91 U | 98.8 U |
| 79-01-6 | TRICHLOROETHYLENE (TCE) | ug/kg | 1.1 U | 1 U | 0.99 U | 110 U |
| 75-69-4 | TRICHLOROFLUOROMETHANE | ug/kg | 1.7 U | 1.5 U | 1.5 U | 170 U |
| 75-01-4 | VINYL CHLORIDE | ug/kg | 1.6 U | 1.4 U | 1.4 U | 150 U |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB-14<br>SB-14(38-40)<br>D5300-03<br>38 - 40 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 10:50<br>1/23/2013 | SB-14<br>SB-14(45-47)<br>D5300-06<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 11:50<br>1/23/2013 | Dup of SB-14(45-47)<br>SB-14<br>SB-14A(45-47)<br>D5300-07<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 12:00<br>1/23/2013 | SB-16<br>SB-16(30-33)<br>D5300-01<br>30 - 33 ft<br>CTECH<br>D5300<br>SOIL<br>12/20/2012 16:10<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | SEMIVOLATILES | | | | | |
| 95-94-3 | 1,2,4,5-TETRACHLOROBENZENE | ug/kg | 16.7 U | 15.2 U | 15.1 U | 16.4 U |
| 58-90-2 | 2,3,4,6-TETRACHLOROPHENOL | ug/kg | 16.7 U | 15.2 U | 15.1 U | 16.4 U |
| 95-95-4 | 2,4,5-TRICHLOROPHENOL | ug/kg | 29.9 U | 27.1 U | 26.9 U | 29.2 U |
| 88-06-2 | 2,4,6-TRICHLOROPHENOL | ug/kg | 13 U | 11.8 U | 11.7 U | 12.7 U |
| 120-83-2 | 2,4-DICHLOROPHENOL | ug/kg | 16.2 U | 14.7 U | 14.6 U | 15.9 U |
| 105-67-9 | 2,4-DIMETHYLPHENOL | ug/kg | 24.2 U | 21.9 U | 21.7 U | 23.6 U |
| 51-28-5 | 2,4-DINITROPHENOL | ug/kg | 43.3 UJ | 39.3 UJ | 39 UJ | 42.3 UJ |
| 121-14-2 | 2,4-DINITROTOLUENE | ug/kg | 12.9 U | 11.7 U | 11.6 U | 12.6 U |
| 606-20-2 | 2,6-DINITROTOLUENE | ug/kg | 17.4 U | 15.8 U | 15.6 U | 17 U |
| 91-58-7 | 2-CHLORONAPHTHALENE | ug/kg | 9.7 U | 8.8 U | 8.7 U | 9.5 U |
| 95-57-8 | 2-CHLOROPHENOL | ug/kg | 22.5 U | 20.4 U | 20.3 U | 22 U |
| 91-57-6 | 2-METHYLNAPHTHALENE | ug/kg | 10.7 U | 9.7 U | 9.7 U | 14900 |
| 95-48-7 | 2-METHYLPHENOL (O-CRESOL) | ug/kg | 23.1 U | 21 U | 20.8 U | 22.6 U |
| 88-74-4 | 2-NITROANILINE | ug/kg | 18.9 U | 17.1 U | 17 U | 18.5 U |
| 88-75-5 | 2-NITROPHENOL | ug/kg | 20.6 U | 18.6 U | 18.5 U | 20.1 U |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | ug/kg | 27.3 U | 24.8 U | 24.6 U | 26.7 U |
| MEPH3MEPH | 3+4-Methylphenols | ug/kg | 22.1 U | 20 U | 19.9 U | 21.6 U |
| 99-09-2 | 3-NITROANILINE | ug/kg | 27.3 U | 24.8 U | 24.6 U | 26.7 U |
| 534-52-1 | 4,6-DINITRO-2-METHYLPHENOL | ug/kg | 24.4 UJ | 22.1 UJ | 22 UJ | 23.9 UJ |
| 101-55-3 | 4-BROMOPHENYL PHENYL ETHER | ug/kg | 8.3 U | 7.5 U | 7.5 U | 8.1 U |
| 59-50-7 | 4-CHLORO-3-METHYLPHENOL | ug/kg | 18.9 U | 17.1 U | 17 U | 18.5 U |
| 106-47-8 | 4-CHLOROANILINE | ug/kg | 30 U | 27.2 U | 27 U | 29.4 U |
| 7005-72-3 | 4-CHLOROPHENYL PHENYL ETHER | ug/kg | 23.1 U | 21 U | 20.8 U | 22.6 U |
| 100-01-6 | 4-NITROANILINE | ug/kg | 55.5 U | 50.3 U | 49.9 U | 54.2 U |
| 100-02-7 | 4-NITROPHENOL | ug/kg | 79.1 U | 71.7 U | 71.2 U | 77.3 U |
| 83-32-9 | ACENAPHTHENE | ug/kg | 12 U | 10.9 U | 10.8 U | 1800 |
| 208-96-8 | ACENAPHTHYLENE | ug/kg | 10.7 U | 9.7 U | 9.7 U | 4700 |
| 98-86-2 | ACETOPHENONE | ug/kg | 13 U | 11.8 U | 11.7 U | 12.7 U |
| 120-12-7 | ANTHRACENE | ug/kg | 8.7 U | 7.9 U | 7.8 U | 2500 |
| 1912-24-9 | ATRAZINE | ug/kg | 22.5 U | 20.4 U | 20.3 U | 22 U |
| 100-52-7 | BENZALDEHYDE | ug/kg | 22.2 U | 20.2 U | 20 U | 21.7 U |
| 56-55-3 | BENZO(A)ANTHRACENE | ug/kg | 20.3 U | 18.4 U | 18.3 U | 1600 |
| 50-32-8 | BENZO(A)PYRENE | ug/kg | 9.2 U | 8.3 U | 8.3 U | 1200 |
| 205-99-2 | BENZO(B)FLUORANTHENE | ug/kg | 13.9 U | 12.6 U | 12.5 U | 940 |
| 191-24-2 | BENZO(G,H,I)PERYLENE | ug/kg | 17.3 U | 15.6 U | 15.5 U | 310 J |
| 207-08-9 | BENZO(K)FLUORANTHENE | ug/kg | 20.1 U | 18.2 U | 18.1 U | 380 J |
| 85-68-7 | BENZYL BUTYL PHTHALATE | ug/kg | 20.4 U | 18.5 U | 18.4 U | 20 U |
| 92-52-4 | BIPHENYL (DIPHENYL) | ug/kg | 16.1 U | 14.6 U | 14.5 U | 1600 |
| 111-91-1 | BIS(2-CHLOROETHOXY) METHANE | ug/kg | 24.5 U | 22.2 U | 22.1 U | 24 U |
| 111-44-4 | BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER) | ug/kg | 20.4 U | 18.5 U | 18.4 U | 20 U |
| 108-60-1 | BIS(2-CHLOROISOPROPYL) ETHER | ug/kg | 17.6 U | 16 U | 15.9 U | 17.2 U |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | ug/kg | 15.1 U | 13.7 U | 13.6 U | 14.7 U |
| 105-60-2 | CAPROLACTAM | ug/kg | 19.8 U | 18 U | 17.8 U | 19.4 U |
| 86-74-8 | CARBAZOLE | ug/kg | 9.3 U | 8.5 U | 8.4 U | 9.1 U |
| 218-01-9 | CHRYSENE | ug/kg | 19.3 U | 17.5 U | 17.4 U | 1600 |
| 53-70-3 | DIBENZ(A,H)ANTHRACENE | ug/kg | 12.3 U | 11.1 U | 11 U | 12 U |
| 132-64-9 | DIBENZOFURAN | ug/kg | 16.6 U | 15.1 U | 15 U | 530 |
| 84-66-2 | DIETHYL PHTHALATE | ug/kg | 6.6 U | 6 U | 6 U | 6.5 U |
| 131-11-3 | DIMETHYL PHTHALATE | ug/kg | 570 | 320 J | 340 J | 250 J |
| 84-74-2 | DI-N-BUTYL PHTHALATE | ug/kg | 33.5 U | 30.3 U | 30.1 U | 32.7 U |
| 117-84-0 | DI-N-OCTYLPHTHALATE | ug/kg | 4.9 U | 4.4 U | 4.4 U | 4.7 U |
| 206-44-0 | FLUORANTHENE | ug/kg | 8.6 U | 7.8 U | 7.7 U | 2500 |
| 86-73-7 | FLUORENE | ug/kg | 16.1 U | 14.6 U | 14.5 U | 4500 |
| 118-74-1 | HEXACHLOROBENZENE | ug/kg | 17.4 U | 15.8 U | 15.6 U | 17 U |
| 87-68-3 | HEXACHLOROBUTADIENE | ug/kg | 15.5 U | 14 U | 13.9 U | 15.1 U |
| 77-47-4 | HEXACHLOROCYCLOPENTADIENE | ug/kg | 10.4 UJ | 9.4 UJ | 9.3 UJ | 10.1 UJ |
| 67-72-1 | HEXACHLOROETHANE | ug/kg | 19 U | 17.3 U | 17.1 U | 18.6 U |
| 193-39-5 | INDENO(1,2,3-C,D)PYRENE | ug/kg | 14.2 U | 12.9 U | 12.8 U | 200 J |
| 78-59-1 | ISOPHORONE | ug/kg | 14.1 U | 12.7 U | 12.7 U | 13.7 U |
| 91-20-3 | NAPHTHALENE | ug/kg | 14.7 U | 13.3 U | 13.2 U | 33700 |
| 98-95-3 | NITROBENZENE | ug/kg | 16.1 U | 14.6 U | 14.5 U | 15.7 U |
| 621-64-7 | N-NITROSODI-N-PROPYLAMINE | ug/kg | 21.5 U | 19.5 U | 19.3 U | 21 U |
| 86-30-6 | N-NITROSODIPHENYLAMINE | ug/kg | 10.2 U | 9.3 U | 9.2 U | 10 U |
| 87-86-5 | PENTACHLOROPHENOL | ug/kg | 29.1 U | 26.4 U | 26.2 U | 28.5 U |
| 85-01-8 | PHENANTHRENE | ug/kg | 11.5 U | 10.4 U | 10.4 U | 9900 |
| 108-95-2 | PHENOL | ug/kg | 9.8 U | 8.9 U | 8.9 U | 9.6 U |
| 129-00-0 | PYRENE | ug/kg | 10.2 U | 9.3 U | 9.2 U | 3300 |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB-14<br>SB-14(38-40)<br>D5300-03<br>38 - 40 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 10:50<br>1/23/2013 | SB-14<br>SB-14(45-47)<br>D5300-06<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 11:50<br>1/23/2013 | Dup of SB-14(45-47)<br>SB-14<br>SB-14A(45-47)<br>D5300-07<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 12:00<br>1/23/2013 | SB-16<br>SB-16(30-33)<br>D5300-01<br>30 - 33 ft<br>CTECH<br>D5300<br>SOIL<br>12/20/2012 16:10<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | INORGANICS | | | | | |
| 7429-90-5 | ALUMINUM | mg/kg | 7400 J | 2940 J | 3060 J | 14400 J |
| 7440-36-0 | ANTIMONY | mg/kg | 0.59 UJ | 0.53 UJ | 0.55 UJ | 0.59 UJ |
| 7440-38-2 | ARSENIC | mg/kg | 0.97 J | 0.71 J | 0.89 J | 5.98 |
| 7440-39-3 | BARIUM | mg/kg | 54.1 J | 23.7 J | 26.6 J | 83.1 J |
| 7440-41-7 | BERYLLIUM | mg/kg | 0.39 | 0.14 J | 0.14 J | 0.32 J |
| 7440-43-9 | CADMIUM | mg/kg | 0.06 U | 0.06 U | 0.06 U | 0.06 U |
| 7440-70-2 | CALCIUM | mg/kg | 2180 J | 9830 J | 9770 J | 24700 J |
| 7440-47-3 | CHROMIUM, TOTAL | mg/kg | 16.3 J | 7.26 UJ | 7.44 UJ | 12.4 J |
| 7440-48-4 | COBALT | mg/kg | 7.86 | 3.26 | 3.53 | 3.36 |
| 7440-50-8 | COPPER | mg/kg | 7.99 | 5.12 | 5.88 | 5.21 |
| 7439-89-6 | IRON | mg/kg | 18000 J | 8120 J | 8770 J | 15400 J |
| 7439-92-1 | LEAD | mg/kg | 10.1 | 4.47 | 4.63 | 25.8 |
| 7439-95-4 | MAGNESIUM | mg/kg | 3730 J | 4070 J | 3950 J | 13500 J |
| 7439-96-5 | MANGANESE | mg/kg | 424 J | 290 J | 296 J | 652 J |
| 7439-97-6 | MERCURY | mg/kg | 0.005 J | 0.002 U | 0.003 J | 0.003 J |
| 7440-02-0 | NICKEL | mg/kg | 18.7 | 8.25 | 8.93 | 10.1 |
| 7440-09-7 | POTASSIUM | mg/kg | 2720 J | 832 J | 824 J | 1040 J |
| 7782-49-2 | SELENIUM | mg/kg | 0.76 J | 0.39 U | 0.41 U | 0.49 J |
| 7440-22-4 | SILVER | mg/kg | 0.51 J | 0.17 J | 0.15 J | 0.23 J |
| 7440-23-5 | SODIUM | mg/kg | 332 | 101 | 97.1 J | 6400 |
| 7440-28-0 | THALLIUM | mg/kg | 0.28 U | 0.25 U | 0.27 U | 0.29 U |
| 7440-62-2 | VANADIUM | mg/kg | 19.3 | 8.87 | 10.2 | 19.1 |
| 7440-66-6 | ZINC | mg/kg | 26.9 J | 13 J | 12.9 J | 12.6 J |
| 57-12-5 | CYANIDE | mg/kg | 0.241 J | 0.219 J | 0.299 | 0.909 |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB-16<br>SB-16(45-47)<br>D5300-02<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/20/2012 17:10<br>1/23/2013 | SB-17<br>SB-17(33-35)<br>D5300-08<br>33 - 35 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 15:00<br>1/23/2013 | SB-17<br>SB-17(45-47)<br>D5300-09<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 15:30<br>1/23/2013 | TP-6FLOOR<br>TP-6FLOOR<br>D4751-10<br>-<br>CTECH<br>D4751<br>SOIL<br>11/7/2012 10:30<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | VOLATILES | | | | | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | ug/kg | 1.1 U | 0.92 U | 0.95 U | 1.3 U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | ug/kg | 0.58 U | 0.48 U | 0.5 U | R |
| 76-13-1 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | ug/kg | 1.7 U | 1.4 U | 1.4 U | 1.9 U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | ug/kg | 1.1 U | 0.94 U | 0.98 U | 1.3 U |
| 75-34-3 | 1,1-DICHLOROETHANE | ug/kg | 1.2 U | 0.98 U | 1 U | 6.6 J |
| 75-35-4 | 1,1-DICHLOROETHENE | ug/kg | 1.9 U | 1.5 U | 1.6 U | 2.1 U |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | ug/kg | 0.63 U | 0.52 U | 0.54 UJ | R |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | ug/kg | 0.88 UJ | 0.73 UJ | 0.76 U | R |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | ug/kg | R | R | 0.94 U | R |
| 106-93-4 | 1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE) | ug/kg | 0.81 U | 0.67 U | 0.69 U | 0.92 U |
| 95-50-1 | 1,2-DICHLOROBENZENE | ug/kg | 0.78 U | 0.65 U | 0.67 U | R |
| 107-06-2 | 1,2-DICHLOROETHANE | ug/kg | 0.81 U | 0.67 U | 0.69 U | 0.92 U |
| 78-87-5 | 1,2-DICHLOROPROPANE | ug/kg | 0.33 U | 0.27 U | 0.28 U | 0.37 U |
| 541-73-1 | 1,3-DICHLOROBENZENE | ug/kg | 0.47 U | 0.38 U | 0.4 U | R |
| 106-46-7 | 1,4-DICHLOROBENZENE | ug/kg | 0.52 U | 0.43 U | 0.44 U | R |
| 123-91-1 | 1,4-DIOXANE (P-DIOXANE) | ug/kg | 63 UJ | 10.4 UJ | 54 U | 70 U |
| 591-78-6 | 2-HEXANONE | ug/kg | 5 U | 4.1 U | 4.3 U | 5.6 U |
| 67-64-1 | ACETONE | ug/kg | 71 | 3.1 U | 11 J | 26 J |
| 71-43-2 | BENZENE | ug/kg | 0.48 U | 0.4 U | 0.41 U | 0.54 U |
| 74-97-5 | BROMOCHLOROMETHANE | ug/kg | 1 U | 0.82 U | 0.86 U | 1.1 U |
| 75-27-4 | BROMODICHLOROMETHANE | ug/kg | 0.78 U | 0.65 U | 0.67 U | 0.89 U |
| 75-25-2 | BROMOFORM | ug/kg | 0.93 U | 0.77 U | 0.8 U | 1.1 UJ |
| 74-83-9 | BROMOMETHANE | ug/kg | 3.1 U | 2.5 U | 2.7 UJ | 3.5 U |
| 75-15-0 | CARBON DISULFIDE | ug/kg | 1.3 U | 1.1 U | 1.1 U | 1.5 U |
| 56-23-5 | CARBON TETRACHLORIDE | ug/kg | 1.3 U | 1 U | 1.1 U | 1.4 U |
| 108-90-7 | CHLOROBENZENE | ug/kg | 0.63 U | 0.52 U | 0.54 U | 0.72 UJ |
| 75-00-3 | CHLOROETHANE | ug/kg | 1.8 U | 1.5 U | 1.5 U | 2 U |
| 67-66-3 | CHLOROFORM | ug/kg | 0.93 U | 0.77 U | 0.8 U | 1.1 U |
| 74-87-3 | CHLOROMETHANE | ug/kg | 1.1 U | 0.89 U | 0.93 U | 1.2 U |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | ug/kg | 1.1 U | 0.93 U | 0.97 U | 1.3 U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | ug/kg | 0.91 U | 0.75 U | 0.78 U | 1 U |
| 110-82-7 | CYCLOHEXANE | ug/kg | 1.3 U | 1.1 U | 1.1 U | 1.4 U |
| 124-48-1 | DIBROMOCHLOROMETHANE | ug/kg | 0.68 UJ | 0.56 UJ | 0.59 U | 0.77 U |
| 75-71-8 | DICHLORODIFLUOROMETHANE | ug/kg | 0.82 UJ | 0.68 UJ | 0.71 U | 0.93 U |
| 100-41-4 | ETHYLBENZENE | ug/kg | 4.5 J | 0.65 U | 0.67 U | 0.89 UJ |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | ug/kg | 0.61 U | 0.5 U | 0.52 U | R |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | ug/kg | 3.9 J | 0.75 U | 0.78 U | 1 UJ |
| 79-20-9 | METHYL ACETATE | ug/kg | 1.9 U | 1.6 U | 1.6 U | 2.2 U |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | ug/kg | 3.9 U | 3.2 U | 3.4 U | 4.5 U |
| 108-10-1 | METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE) | ug/kg | 3.7 U | 3 U | 3.2 U | 4.2 U |
| 108-87-2 | METHYLCYCLOHEXANE | ug/kg | 1.3 U | 1.1 U | 1.1 U | 1.5 U |
| 75-09-2 | METHYLENE CHLORIDE | ug/kg | 1.8 U | 1.5 U | 1.5 UJ | 7.2 UJ |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | ug/kg | 2.2 J | 0.71 U | 0.74 U | 0.97 UJ |
| 100-42-5 | STYRENE | ug/kg | 0.57 U | 0.47 U | 0.49 U | 0.64 UJ |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | ug/kg | 1.2 U | 1 U | 1 U | 1.4 U |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | ug/kg | 1.3 U | 1.1 U | 1.1 U | 1.4 UJ |
| 108-88-3 | TOLUENE | ug/kg | 0.81 U | 0.67 U | 0.69 U | 0.92 U |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | ug/kg | 0.87 U | 0.72 U | 0.75 U | 0.99 U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | ug/kg | 1 U | 0.82 U | 0.86 U | 1.1 U |
| 79-01-6 | TRICHLOROETHYLENE (TCE) | ug/kg | 1.1 U | 0.89 U | 0.93 U | 1.2 U |
| 75-69-4 | TRICHLOROFLUOROMETHANE | ug/kg | 1.7 U | 1.4 U | 1.4 U | 1.9 U |
| 75-01-4 | VINYL CHLORIDE | ug/kg | 1.6 U | 1.3 U | 1.3 U | 1.8 U |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB-16<br>SB-16(45-47)<br>D5300-02<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/20/2012 17:10<br>1/23/2013 | SB-17<br>SB-17(33-35)<br>D5300-08<br>33 - 35 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 15:00<br>1/23/2013 | SB-17<br>SB-17(45-47)<br>D5300-09<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 15:30<br>1/23/2013 | TP-6FLOOR<br>TP-6FLOOR<br>D4751-10<br>-<br>CTECH<br>D4751<br>SOIL<br>11/7/2012 10:30<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | SEMIVOLATILES | | | | | |
| 95-94-3 | 1,2,4,5-TETRACHLOROBENZENE | ug/kg | 16.6 U | 13.6 U | 14.2 U | 19 U |
| 58-90-2 | 2,3,4,6-TETRACHLOROPHENOL | ug/kg | 16.6 U | 13.6 U | 14.2 U | 19 U |
| 95-95-4 | 2,4,5-TRICHLOROPHENOL | ug/kg | 29.7 U | 24.2 U | 25.3 U | 34 U |
| 88-06-2 | 2,4,6-TRICHLOROPHENOL | ug/kg | 12.9 U | 10.6 U | 11 U | 15 U |
| 120-83-2 | 2,4-DICHLOROPHENOL | ug/kg | 16.1 U | 13.1 U | 13.7 U | 18 U |
| 105-67-9 | 2,4-DIMETHYLPHENOL | ug/kg | 24 U | 19.6 U | 20.4 U | 27 U |
| 51-28-5 | 2,4-DINITROPHENOL | ug/kg | 43 UJ | 35.1 UJ | 36.6 UJ | 49 UJ |
| 121-14-2 | 2,4-DINITROTOLUENE | ug/kg | 12.8 U | 10.5 U | 10.9 U | 15 U |
| 606-20-2 | 2,6-DINITROTOLUENE | ug/kg | 17.2 U | 14.1 U | 14.7 U | 20 U |
| 91-58-7 | 2-CHLORONAPHTHALENE | ug/kg | 9.6 U | 7.9 U | 8.2 U | 11 U |
| 95-57-8 | 2-CHLOROPHENOL | ug/kg | 22.3 U | 18.2 U | 19 U | 25 U |
| 91-57-6 | 2-METHYLNAPHTHALENE | ug/kg | 10.6 U | 8.7 U | 190 J | 12 U |
| 95-48-7 | 2-METHYLPHENOL (O-CRESOL) | ug/kg | 22.9 U | 18.7 U | 19.6 U | 26 U |
| 88-74-4 | 2-NITROANILINE | ug/kg | 18.8 U | 15.3 U | 16 U | 21 U |
| 88-75-5 | 2-NITROPHENOL | ug/kg | 20.4 U | 16.7 U | 17.4 U | 23 U |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | ug/kg | 27.1 U | 22.2 U | 23.1 U | 31 U |
| MEPH3MEPH | 3+4-Methylphenols | ug/kg | 21.9 U | 17.9 U | 18.7 U | 25 U |
| 99-09-2 | 3-NITROANILINE | ug/kg | 27.1 U | 22.2 U | 23.1 U | 31 U |
| 534-52-1 | 4,6-DINITRO-2-METHYLPHENOL | ug/kg | 24.2 UJ | 19.8 UJ | 20.6 UJ | 28 UJ |
| 101-55-3 | 4-BROMOPHENYL PHENYL ETHER | ug/kg | 8.2 U | 6.7 U | 7 U | 9.4 U |
| 59-50-7 | 4-CHLORO-3-METHYLPHENOL | ug/kg | 18.8 U | 15.3 U | 16 U | 21 U |
| 106-47-8 | 4-CHLOROANILINE | ug/kg | 29.8 U | 24.3 U | 25.4 U | 34 UJ |
| 7005-72-3 | 4-CHLOROPHENYL PHENYL ETHER | ug/kg | 22.9 U | 18.7 U | 19.6 U | 26 U |
| 100-01-6 | 4-NITROANILINE | ug/kg | 55 U | 44.9 U | 46.9 U | 63 U |
| 100-02-7 | 4-NITROPHENOL | ug/kg | 78.4 U | 64.1 U | 66.9 U | 90 U |
| 83-32-9 | ACENAPHTHENE | ug/kg | 11.9 U | 9.7 U | 10.2 U | 14 U |
| 208-96-8 | ACENAPHTHYLENE | ug/kg | 10.6 U | 8.7 U | 9.1 U | 12 U |
| 98-86-2 | ACETOPHENONE | ug/kg | 12.9 U | 10.6 U | 11 U | 15 U |
| 120-12-7 | ANTHRACENE | ug/kg | 8.6 U | 7 U | 7.4 U | 9.8 U |
| 1912-24-9 | ATRAZINE | ug/kg | 22.3 U | 18.2 U | 19 U | 25 U |
| 100-52-7 | BENZALDEHYDE | ug/kg | 22.1 U | 18 U | 18.8 U | 25 U |
| 56-55-3 | BENZO(A)ANTHRACENE | ug/kg | 20.2 U | 16.5 U | 17.2 U | 350 J |
| 50-32-8 | BENZO(A)PYRENE | ug/kg | 9.1 U | 7.5 U | 7.8 U | 410 J |
| 205-99-2 | BENZO(B)FLUORANTHENE | ug/kg | 13.8 U | 11.3 U | 11.8 U | 500 |
| 191-24-2 | BENZO(G,H,I)PERYLENE | ug/kg | 17.1 U | 14 U | 14.6 U | 290 J |
| 207-08-9 | BENZO(K)FLUORANTHENE | ug/kg | 19.9 U | 16.3 U | 17 U | 23 U |
| 85-68-7 | BENZYL BUTYL PHTHALATE | ug/kg | 20.3 U | 16.6 U | 17.3 U | 23 U |
| 92-52-4 | BIPHENYL (DIPHENYL) | ug/kg | 16 U | 13 U | 13.6 U | 18 U |
| 111-91-1 | BIS(2-CHLOROETHOXY) METHANE | ug/kg | 24.3 U | 19.9 U | 20.8 U | 28 U |
| 111-44-4 | BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER) | ug/kg | 20.3 U | 16.6 U | 17.3 U | 23 U |
| 108-60-1 | BIS(2-CHLOROISOPROPYL) ETHER | ug/kg | 17.5 U | 14.3 U | 14.9 U | 20 U |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | ug/kg | 15 U | 12.2 U | 480 | 17 U |
| 105-60-2 | CAPROLACTAM | ug/kg | 19.6 U | 16 U | 16.8 U | 22 U |
| 86-74-8 | CARBAZOLE | ug/kg | 9.3 U | 7.6 U | 7.9 U | 11 U |
| 218-01-9 | CHRYSENE | ug/kg | 19.1 U | 15.6 U | 16.3 U | 400 J |
| 53-70-3 | DIBENZ(A,H)ANTHRACENE | ug/kg | 12.2 U | 9.9 U | 10.4 U | 14 U |
| 132-64-9 | DIBENZOFURAN | ug/kg | 16.5 U | 13.5 U | 14.1 U | 19 U |
| 84-66-2 | DIETHYL PHTHALATE | ug/kg | 6.6 U | 5.4 U | 5.6 U | 7.5 U |
| 131-11-3 | DIMETHYL PHTHALATE | ug/kg | 400 J | 350 | 390 | 632 |
| 84-74-2 | DI-N-BUTYL PHTHALATE | ug/kg | 33.2 U | 27.1 U | 150 J | 38 U |
| 117-84-0 | DI-N-OCTYLPHTHALATE | ug/kg | 4.8 U | 3.9 U | 4.1 U | 5.5 U |
| 206-44-0 | FLUORANTHENE | ug/kg | 8.5 U | 6.9 U | 7.2 U | 750 |
| 86-73-7 | FLUORENE | ug/kg | 16 U | 13 U | 13.6 U | 18 U |
| 118-74-1 | HEXACHLOROBENZENE | ug/kg | 17.2 U | 14.1 U | 14.7 U | 20 U |
| 87-68-3 | HEXACHLOROBUTADIENE | ug/kg | 15.3 U | 12.5 U | 13.1 U | 18 U |
| 77-47-4 | HEXACHLOROCYCLOPENTADIENE | ug/kg | 10.3 UJ | 8.4 UJ | 8.8 UJ | 12 U |
| 67-72-1 | HEXACHLOROETHANE | ug/kg | 18.9 U | 15.4 U | 16.1 U | 22 U |
| 193-39-5 | INDENO(1,2,3-C,D)PYRENE | ug/kg | 14.1 U | 11.5 U | 12 U | 270 J |
| 78-59-1 | ISOPHORONE | ug/kg | 13.9 U | 11.4 U | 11.9 U | 16 U |
| 91-20-3 | NAPHTHALENE | ug/kg | 14.6 U | 11.9 U | 250 J | 17 U |
| 98-95-3 | NITROBENZENE | ug/kg | 16 U | 13 U | 13.6 U | 18 U |
| 621-64-7 | N-NITROSODI-N-PROPYLAMINE | ug/kg | 21.3 U | 17.4 U | 18.2 U | 24 U |
| 86-30-6 | N-NITROSODIPHENYLAMINE | ug/kg | 10.1 U | 8.3 U | 8.6 U | 12 U |
| 87-86-5 | PENTACHLOROPHENOL | ug/kg | 28.9 U | 23.6 U | 24.6 U | 33 U |
| 85-01-8 | PHENANTHRENE | ug/kg | 11.4 U | 9.3 U | 9.7 U | 450 J |
| 108-95-2 | PHENOL | ug/kg | 9.8 U | 8 U | 8.3 U | 11 U |
| 129-00-0 | PYRENE | ug/kg | 10.1 U | 8.3 U | 8.6 U | 690 |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SB-16<br>SB-16(45-47)<br>D5300-02<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/20/2012 17:10<br>1/23/2013 | SB-17<br>SB-17(33-35)<br>D5300-08<br>33 - 35 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 15:00<br>1/23/2013 | SB-17<br>SB-17(45-47)<br>D5300-09<br>45 - 47 ft<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 15:30<br>1/23/2013 | TP-6FLOOR<br>TP-6FLOOR<br>D4751-10<br>-<br>CTECH<br>D4751<br>SOIL<br>11/7/2012 10:30<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | INORGANICS | | | | | |
| 7429-90-5 | ALUMINUM | mg/kg | 6040 J | 2860 J | 9120 J | 9100 J |
| 7440-36-0 | ANTIMONY | mg/kg | 0.61 UJ | 0.47 UJ | 0.51 UJ | 0.36 UJ |
| 7440-38-2 | ARSENIC | mg/kg | 1.18 | 0.68 J | 0.73 J | 14.5 J |
| 7440-39-3 | BARIUM | mg/kg | 74.4 J | 33.3 J | 50.8 J | 122 J |
| 7440-41-7 | BERYLLIUM | mg/kg | 0.33 | 0.1 J | 0.06 J | 0.04 U |
| 7440-43-9 | CADMIUM | mg/kg | 0.07 U | 0.05 U | 0.05 U | 1.73 |
| 7440-70-2 | CALCIUM | mg/kg | 12500 J | 1980 J | 5560 J | 6580 J |
| 7440-47-3 | CHROMIUM, TOTAL | mg/kg | 12.9 J | 10.6 UJ | 25.5 J | 28.7 J |
| 7440-48-4 | COBALT | mg/kg | 7.11 | 4.01 | 6.27 | 9.95 |
| 7440-50-8 | COPPER | mg/kg | 9.59 | 8.81 | 31.1 | 173 J |
| 7439-89-6 | IRON | mg/kg | 15800 J | 7530 J | 13000 J | 39400 |
| 7439-92-1 | LEAD | mg/kg | 8.35 | 2.92 | 20.3 | 356 |
| 7439-95-4 | MAGNESIUM | mg/kg | 5840 J | 2040 J | 3950 J | 4080 J |
| 7439-96-5 | MANGANESE | mg/kg | 443 J | 519 J | 332 J | 345 J |
| 7439-97-6 | MERCURY | mg/kg | 0.005 J | 0.003 J | 0.014 | 6.2 |
| 7440-02-0 | NICKEL | mg/kg | 19.1 | 11.8 | 17.6 | 29.2 |
| 7440-09-7 | POTASSIUM | mg/kg | 2050 J | 730 J | 1420 J | 901 J |
| 7782-49-2 | SELENIUM | mg/kg | 0.63 J | 0.38 J | 0.51 J | 2.18 |
| 7440-22-4 | SILVER | mg/kg | 0.37 J | 0.17 J | 0.18 J | 0.39 |
| 7440-23-5 | SODIUM | mg/kg | 1100 | 188 | 913 | 2090 J |
| 7440-28-0 | THALLIUM | mg/kg | 0.29 U | 0.23 U | 0.25 U | 1.46 |
| 7440-62-2 | VANADIUM | mg/kg | 16.6 | 10.3 | 22.4 | 26 J |
| 7440-66-6 | ZINC | mg/kg | 25.1 J | 13.1 J | 28.6 J | 315 |
| 57-12-5 | CYANIDE | mg/kg | 0.294 J | 0.172 J | 0.257 J | 0.297 J |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | FIELDQC<br>FB122112<br>D5300-10<br>-<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 15:30<br>1/23/2013 |
|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | ug/L |
| | VOLATILES | | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | ug/kg | 0.4 U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | ug/kg | 0.31 U |
| 76-13-1 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | ug/kg | 0.45 U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | ug/kg | 0.38 U |
| 75-34-3 | 1,1-DICHLOROETHANE | ug/kg | 0.36 U |
| 75-35-4 | 1,1-DICHLOROETHENE | ug/kg | 0.47 U |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | ug/kg | 0.2 U |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | ug/kg | 0.2 U |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | ug/kg | 0.46 U |
| 106-93-4 | 1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE) | ug/kg | 0.41 U |
| 95-50-1 | 1,2-DICHLOROBENZENE | ug/kg | 0.45 U |
| 107-06-2 | 1,2-DICHLOROETHANE | ug/kg | 0.48 U |
| 78-87-5 | 1,2-DICHLOROPROPANE | ug/kg | 0.46 U |
| 541-73-1 | 1,3-DICHLOROBENZENE | ug/kg | 0.43 U |
| 106-46-7 | 1,4-DICHLOROBENZENE | ug/kg | 0.32 U |
| 123-91-1 | 1,4-DIOXANE (P-DIOXANE) | ug/kg | 10 UJ |
| 591-78-6 | 2-HEXANONE | ug/kg | 1.9 U |
| 67-64-1 | ACETONE | ug/kg | 0.5 U |
| 71-43-2 | BENZENE | ug/kg | 0.32 U |
| 74-97-5 | BROMOCHLOROMETHANE | ug/kg | 0.2 U |
| 75-27-4 | BROMODICHLOROMETHANE | ug/kg | 0.36 U |
| 75-25-2 | BROMOFORM | ug/kg | 0.47 U |
| 74-83-9 | BROMOMETHANE | ug/kg | 0.2 UJ |
| 75-15-0 | CARBON DISULFIDE | ug/kg | 0.2 U |
| 56-23-5 | CARBON TETRACHLORIDE | ug/kg | 0.2 UJ |
| 108-90-7 | CHLOROBENZENE | ug/kg | 0.49 U |
| 75-00-3 | CHLOROETHANE | ug/kg | 0.2 U |
| 67-66-3 | CHLOROFORM | ug/kg | 0.34 U |
| 74-87-3 | CHLOROMETHANE | ug/kg | 0.2 U |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | ug/kg | 0.35 U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | ug/kg | 0.31 U |
| 110-82-7 | CYCLOHEXANE | ug/kg | 0.2 U |
| 124-48-1 | DIBROMOCHLOROMETHANE | ug/kg | 0.2 U |
| 75-71-8 | DICHLORODIFLUOROMETHANE | ug/kg | 0.2 U |
| 100-41-4 | ETHYLBENZENE | ug/kg | 0.2 U |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | ug/kg | 0.45 U |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | ug/kg | 0.95 U |
| 79-20-9 | METHYL ACETATE | ug/kg | 0.2 U |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | ug/kg | 1.3 U |
| 108-10-1 | METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE) | ug/kg | 2.1 U |
| 108-87-2 | METHYLCYCLOHEXANE | ug/kg | 0.2 U |
| 75-09-2 | METHYLENE CHLORIDE | ug/kg | 0.41 U |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | ug/kg | 0.43 U |
| 100-42-5 | STYRENE | ug/kg | 0.36 U |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | ug/kg | 0.35 U |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | ug/kg | 0.27 U |
| 108-88-3 | TOLUENE | ug/kg | 0.37 U |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | ug/kg | 0.41 U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | ug/kg | 0.29 U |
| 79-01-6 | TRICHLOROETHYLENE (TCE) | ug/kg | 0.28 U |
| 75-69-4 | TRICHLOROFLUOROMETHANE | ug/kg | 0.35 U |
| 75-01-4 | VINYL CHLORIDE | ug/kg | 0.34 U |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | FIELDQC<br>FB122112<br>D5300-10<br>-<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 15:30<br>1/23/2013 |
|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | ug/L |
| | SEMIVOLATILES | | |
| 95-94-3 | 1,2,4,5-TETRACHLOROBENZENE | ug/kg | 0.24 U |
| 58-90-2 | 2,3,4,6-TETRACHLOROPHENOL | ug/kg | 0.24 U |
| 95-95-4 | 2,4,5-TRICHLOROPHENOL | ug/kg | 0.48 U |
| 88-06-2 | 2,4,6-TRICHLOROPHENOL | ug/kg | 0.67 U |
| 120-83-2 | 2,4-DICHLOROPHENOL | ug/kg | 0.79 U |
| 105-67-9 | 2,4-DIMETHYLPHENOL | ug/kg | 0.85 U |
| 51-28-5 | 2,4-DINITROPHENOL | ug/kg | 2.5 UJ |
| 121-14-2 | 2,4-DINITROTOLUENE | ug/kg | 1.2 U |
| 606-20-2 | 2,6-DINITROTOLUENE | ug/kg | 0.38 U |
| 91-58-7 | 2-CHLORONAPHTHALENE | ug/kg | 0.19 U |
| 95-57-8 | 2-CHLOROPHENOL | ug/kg | 0.64 U |
| 91-57-6 | 2-METHYLNAPHTHALENE | ug/kg | 0.38 U |
| 95-48-7 | 2-METHYLPHENOL (O-CRESOL) | ug/kg | 0.29 U |
| 88-74-4 | 2-NITROANILINE | ug/kg | 0.58 U |
| 88-75-5 | 2-NITROPHENOL | ug/kg | 0.62 U |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | ug/kg | 2.4 U |
| MEPH3MEPH | 3+4-Methylphenols | ug/kg | 0.45 U |
| 99-09-2 | 3-NITROANILINE | ug/kg | 1.3 U |
| 534-52-1 | 4,6-DINITRO-2-METHYLPHENOL | ug/kg | 0.88 UJ |
| 101-55-3 | 4-BROMOPHENYL PHENYL ETHER | ug/kg | 0.27 U |
| 59-50-7 | 4-CHLORO-3-METHYLPHENOL | ug/kg | 0.48 U |
| 106-47-8 | 4-CHLOROANILINE | ug/kg | 3.4 U |
| 7005-72-3 | 4-CHLOROPHENYL PHENYL ETHER | ug/kg | 0.25 U |
| 100-01-6 | 4-NITROANILINE | ug/kg | 1.6 U |
| 100-02-7 | 4-NITROPHENOL | ug/kg | 2.4 U |
| 83-32-9 | ACENAPHTHENE | ug/kg | 0.25 U |
| 208-96-8 | ACENAPHTHYLENE | ug/kg | 0.83 U |
| 98-86-2 | ACETOPHENONE | ug/kg | 0.17 U |
| 120-12-7 | ANTHRACENE | ug/kg | 0.19 U |
| 1912-24-9 | ATRAZINE | ug/kg | 0.48 U |
| 100-52-7 | BENZALDEHYDE | ug/kg | 0.92 U |
| 56-55-3 | BENZO(A)ANTHRACENE | ug/kg | 0.19 U |
| 50-32-8 | BENZO(A)PYRENE | ug/kg | 0.17 U |
| 205-99-2 | BENZO(B)FLUORANTHENE | ug/kg | 0.35 U |
| 191-24-2 | BENZO(G,H,I)PERYLENE | ug/kg | 0.35 U |
| 207-08-9 | BENZO(K)FLUORANTHENE | ug/kg | 0.21 U |
| 85-68-7 | BENZYL BUTYL PHTHALATE | ug/kg | 0.23 U |
| 92-52-4 | BIPHENYL (DIPHENYL) | ug/kg | 0.18 U |
| 111-91-1 | BIS(2-CHLOROETHOXY) METHANE | ug/kg | 0.65 U |
| 111-44-4 | BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER) | ug/kg | 0.65 U |
| 108-60-1 | BIS(2-CHLOROISOPROPYL) ETHER | ug/kg | 0.2 U |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | ug/kg | 0.19 U |
| 105-60-2 | CAPROLACTAM | ug/kg | 2.4 U |
| 86-74-8 | CARBAZOLE | ug/kg | 0.26 U |
| 218-01-9 | CHRYSENE | ug/kg | 0.21 U |
| 53-70-3 | DIBENZ(A,H)ANTHRACENE | ug/kg | 0.5 U |
| 132-64-9 | DIBENZOFURAN | ug/kg | 0.29 U |
| 84-66-2 | DIETHYL PHTHALATE | ug/kg | 0.45 U |
| 131-11-3 | DIMETHYL PHTHALATE | ug/kg | 0.26 U |
| 84-74-2 | DI-N-BUTYL PHTHALATE | ug/kg | 2.4 U |
| 117-84-0 | DI-N-OCTYLPHTHALATE | ug/kg | 0.61 U |
| 206-44-0 | FLUORANTHENE | ug/kg | 0.48 U |
| 86-73-7 | FLUORENE | ug/kg | 0.37 U |
| 118-74-1 | HEXACHLOROBENZENE | ug/kg | 0.21 U |
| 87-68-3 | HEXACHLOROBUTADIENE | ug/kg | 0.3 U |
| 77-47-4 | HEXACHLOROCYCLOPENTADIENE | ug/kg | 0.29 U |
| 67-72-1 | HEXACHLOROETHANE | ug/kg | 0.3 U |
| 193-39-5 | INDENO(1,2,3-C,D)PYRENE | ug/kg | 0.18 U |
| 78-59-1 | ISOPHORONE | ug/kg | 0.36 U |
| 91-20-3 | NAPHTHALENE | ug/kg | 0.14 U |
| 98-95-3 | NITROBENZENE | ug/kg | 0.81 U |
| 621-64-7 | N-NITROSODI-N-PROPYLAMINE | ug/kg | 0.24 U |
| 86-30-6 | N-NITROSODIPHENYLAMINE | ug/kg | 0.71 U |
| 87-86-5 | PENTACHLOROPHENOL | ug/kg | 2 U |
| 85-01-8 | PHENANTHRENE | ug/kg | 0.31 U |
| 108-95-2 | PHENOL | ug/kg | 0.25 U |
| 129-00-0 | PYRENE | ug/kg | 0.24 U |

| Con Ed - Ludlow Site<br>Validated Soil Analytical Data<br>SDGs: D4710, D1751, D5300 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Depth:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | FIELDQC<br>FB122112<br>D5300-10<br>-<br>CTECH<br>D5300<br>SOIL<br>12/21/2012 15:30<br>1/23/2013 |
|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | ug/L |
| | INORGANICS | | |
| 7429-90-5 | ALUMINUM | mg/kg | 44.8 J |
| 7440-36-0 | ANTIMONY | mg/kg | 8 U |
| 7440-38-2 | ARSENIC | mg/kg | 4.2 U |
| 7440-39-3 | BARIUM | mg/kg | 4 U |
| 7440-41-7 | BERYLLIUM | mg/kg | 0.7 U |
| 7440-43-9 | CADMIUM | mg/kg | 0.5 U |
| 7440-70-2 | CALCIUM | mg/kg | 599 J |
| 7440-47-3 | CHROMIUM, TOTAL | mg/kg | 21.3 |
| 7440-48-4 | COBALT | mg/kg | 5.8 U |
| 7440-50-8 | COPPER | mg/kg | 2 U |
| 7439-89-6 | IRON | mg/kg | 551 |
| 7439-92-1 | LEAD | mg/kg | 2.6 U |
| 7439-95-4 | MAGNESIUM | mg/kg | 35.6 J |
| 7439-96-5 | MANGANESE | mg/kg | 5.61 J |
| 7439-97-6 | MERCURY | mg/kg | 0.092 U |
| 7440-02-0 | NICKEL | mg/kg | 7.24 J |
| 7440-09-7 | POTASSIUM | mg/kg | 1190 |
| 7782-49-2 | SELENIUM | mg/kg | 4.8 U |
| 7440-22-4 | SILVER | mg/kg | 1.5 U |
| 7440-23-5 | SODIUM | mg/kg | 787 J |
| 7440-28-0 | THALLIUM | mg/kg | 2.4 U |
| 7440-62-2 | VANADIUM | mg/kg | 6.1 U |
| 7440-66-6 | ZINC | mg/kg | 8.24 J |
| 57-12-5 | CYANIDE | mg/kg | 3 U |

# ATTACHMENT A-2

# VALIDATED LABORATORY DATA FOR GROUNDWATER SAMPLES

| Con Ed - Ludlow Site<br>Validated Groundwater Analytical Data | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-1<br>MW-1<br>D4947-01<br>CTECH<br>D4947<br>WATER<br>11/26/2012 10:30<br>1/23/2013 | MW-3<br>MW-3<br>D4947-09<br>CTECH<br>D4947<br>WATER<br>11/27/2012 15:10<br>1/23/2013 | MW-4<br>MW-4<br>D4947-07<br>CTECH<br>D4947<br>WATER<br>11/27/2012 11:50<br>1/23/2013 | MW-7<br>MW-7<br>D4947-08<br>CTECH<br>D4947<br>WATER<br>11/27/2012 13:15<br>1/23/2013 | MW-8<br>MW-8<br>D4947-02<br>CTECH<br>D4947<br>WATER<br>11/26/2012 13:20<br>1/23/2013 |
|---|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | | |
| | VOLATILES | | | | | | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | ug/l | 0.4 U | 0.4 U | 0.4 U | 0.4 U | 0.4 U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | ug/l | 0.31 U | 0.31 U | 0.31 U | 0.31 U | 0.31 U |
| 76-13-1 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | ug/l | 0.45 U | 0.45 U | 0.45 U | 0.45 U | 0.45 U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | ug/l | 0.38 U | 0.38 U | 0.38 U | 0.38 U | 0.38 U |
| 75-34-3 | 1,1-DICHLOROETHANE | ug/l | 0.36 U | 0.36 U | 0.36 U | 0.36 U | 0.36 U |
| 75-35-4 | 1,1-DICHLOROETHENE | ug/l | 0.47 U | 0.47 U | 0.47 U | 0.47 U | 0.47 U |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | ug/l | 0.65 U | 0.65 U | 0.65 U | 0.65 U | 0.65 U |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | ug/l | 0.62 U | 0.62 U | 0.62 U | 0.62 U | 0.62 U |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | ug/l | 0.46 U | 0.46 U | 0.46 U | 0.46 U | 0.46 U |
| 106-93-4 | 1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE) | ug/l | 0.41 U | 0.41 U | 0.41 U | 0.41 U | 0.41 U |
| 95-50-1 | 1,2-DICHLOROBENZENE | ug/l | 0.45 U | 0.45 U | 0.45 U | 0.45 U | 0.45 U |
| 107-06-2 | 1,2-DICHLOROETHANE | ug/l | 0.48 U | 0.48 U | 0.48 U | 0.48 U | 0.48 U |
| 78-87-5 | 1,2-DICHLOROPROPANE | ug/l | 0.46 U | 0.46 U | 0.46 U | 0.46 U | 0.46 U |
| 541-73-1 | 1,3-DICHLOROBENZENE | ug/l | 0.43 U | 0.43 U | 0.43 U | 0.43 U | 0.43 U |
| 106-46-7 | 1,4-DICHLOROBENZENE | ug/l | 0.32 U | 0.32 U | 0.32 U | 0.32 U | 0.32 U |
| 123-91-1 | 1,4-DIOXANE (P-DIOXANE) | ug/l | 50 UJ | 50 UJ | 50 U | 50 UJ | 50 UJ |
| 591-78-6 | 2-HEXANONE | ug/l | 1.9 U | 1.9 U | 1.9 U | 1.9 U | 1.9 U |
| 67-64-1 | ACETONE | ug/l | 2.8 UJ | 2.8 UJ | 2.8 U | 2.8 UJ | 2.8 UJ |
| 71-43-2 | BENZENE | ug/l | 0.32 U | 350 | 0.32 U | 690 | 0.32 U |
| 74-97-5 | BROMOCHLOROMETHANE | ug/l | 2.2 U | 2.2 U | 2.2 U | 2.2 U | 2.2 U |
| 75-27-4 | BROMODICHLOROMETHANE | ug/l | 0.36 UJ | 0.36 UJ | 0.36 U | 0.36 UJ | 0.36 UJ |
| 75-25-2 | BROMOFORM | ug/l | 0.47 UJ | 0.47 UJ | 0.47 U | 0.47 UJ | 0.47 UJ |
| 74-83-9 | BROMOMETHANE | ug/l | 0.62 UJ | 0.62 UJ | 0.62 U | 0.62 UJ | 0.62 UJ |
| 75-15-0 | CARBON DISULFIDE | ug/l | 0.54 U | 0.54 U | 0.54 U | 0.54 U | 0.54 U |
| 56-23-5 | CARBON TETRACHLORIDE | ug/l | 0.62 UJ | 0.62 UJ | 0.62 U | 0.62 UJ | 0.62 UJ |
| 108-90-7 | CHLOROBENZENE | ug/l | 0.49 U | 0.49 U | 0.49 U | 0.49 U | 0.49 U |
| 75-00-3 | CHLOROETHANE | ug/l | 0.66 U | 0.66 U | 0.66 U | 0.66 U | 0.66 U |
| 67-66-3 | CHLOROFORM | ug/l | 0.34 U | 0.34 U | 0.34 U | 0.34 U | 0.34 U |
| 74-87-3 | CHLOROMETHANE | ug/l | 0.54 UJ | 0.54 UJ | 0.54 U | 0.54 UJ | 0.54 UJ |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | ug/l | 0.35 U | 0.45 J | 0.35 U | 0.35 U | 0.35 U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | ug/l | 0.31 U | 0.31 U | 0.31 U | 0.31 U | 0.31 U |
| 110-82-7 | CYCLOHEXANE | ug/l | 0.55 U | 5.5 | 0.55 U | 2.7 J | 0.55 U |
| 124-48-1 | DIBROMOCHLOROMETHANE | ug/l | 0.52 UJ | 0.52 UJ | 0.52 U | 0.52 UJ | 0.52 UJ |
| 75-71-8 | DICHLORODIFLUOROMETHANE | ug/l | 0.55 U | 0.55 U | 0.55 U | 0.55 U | 0.55 U |
| 100-41-4 | ETHYLBENZENE | ug/l | 0.53 U | 250 | 0.53 U | 270 | 0.53 U |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | ug/l | 0.45 U | 7 | 0.45 U | 24 | 0.45 U |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | ug/l | 0.95 U | 410 | 0.95 U | 420 | 0.95 U |
| 79-20-9 | METHYL ACETATE | ug/l | 0.83 UJ | 0.83 UJ | 0.83 U | 0.83 UJ | 0.83 UJ |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | ug/l | 1.3 U | 1.3 U | 1.3 U | 1.3 U | 1.3 U |
| 108-10-1 | METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE) | ug/l | 2.1 UJ | 2.1 UJ | 2.1 U | 2.1 UJ | 2.1 UJ |
| 108-87-2 | METHYLCYCLOHEXANE | ug/l | 0.68 U | 10 | 0.68 U | 3.5 J | 0.68 U |
| 75-09-2 | METHYLENE CHLORIDE | ug/l | 0.41 U | 0.41 U | 0.41 U | 0.41 U | 0.41 U |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | ug/l | 0.43 U | 190 | 0.43 U | 190 | 0.43 U |
| 100-42-5 | STYRENE | ug/l | 0.36 U | 59 | 0.36 U | 18 | 0.36 U |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | ug/l | 0.35 U | 0.35 U | 0.35 U | 0.35 U | 0.52 J |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | ug/l | 0.27 U | 0.42 J | 0.27 U | 0.27 U | 0.27 U |
| 108-88-3 | TOLUENE | ug/l | 0.37 U | 280 | 0.37 U | 270 | 0.37 U |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | ug/l | 0.41 U | 0.41 U | 0.41 U | 0.41 U | 0.41 U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | ug/l | 0.29 UJ | 0.29 UJ | 0.29 U | 0.29 UJ | 0.29 UJ |
| 79-01-6 | TRICHLOROETHYLENE (TCE) | ug/l | 0.28 U | 0.28 U | 0.28 U | 0.28 U | 0.28 U |
| 75-69-4 | TRICHLOROFLUOROMETHANE | ug/l | 0.35 U | 0.35 U | 0.35 U | 0.35 U | 0.35 U |
| 75-01-4 | VINYL CHLORIDE | ug/l | 0.34 U | 0.34 U | 0.34 U | 0.34 U | 0.34 U |

| Con Ed - Ludlow Site<br>Validated Groundwater Analytical Data | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-1<br>MW-1<br>D4947-01<br>CTECH<br>D4947<br>WATER<br>11/26/2012 10:30<br>1/23/2013 | MW-3<br>MW-3<br>D4947-09<br>CTECH<br>D4947<br>WATER<br>11/27/2012 15:10<br>1/23/2013 | MW-4<br>MW-4<br>D4947-07<br>CTECH<br>D4947<br>WATER<br>11/27/2012 11:50<br>1/23/2013 | MW-7<br>MW-7<br>D4947-08<br>CTECH<br>D4947<br>WATER<br>11/27/2012 13:15<br>1/23/2013 | MW-8<br>MW-8<br>D4947-02<br>CTECH<br>D4947<br>WATER<br>11/26/2012 13:20<br>1/23/2013 |
|---|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | | |
| | SEMIVOLATILES | | | | | | |
| 95-94-3 | 1,2,4,5-TETRACHLOROBENZENE | ug/l | 0.22 U | 0.21 UJ | 0.33 U | 0.21 U | 0.21 U |
| 58-90-2 | 2,3,4,6-TETRACHLOROPHENOL | ug/l | 0.22 U | 0.21 UJ | 0.33 U | 0.21 U | 0.21 U |
| 95-95-4 | 2,4,5-TRICHLOROPHENOL | ug/l | 0.45 U | 0.42 UJ | 0.66 U | 0.42 U | 0.42 U |
| 88-06-2 | 2,4,6-TRICHLOROPHENOL | ug/l | 0.63 U | 0.58 UJ | 0.92 U | 0.59 U | 0.59 U |
| 120-83-2 | 2,4-DICHLOROPHENOL | ug/l | 0.74 U | 0.69 U | 1.1 U | 0.69 U | 0.69 U |
| 105-67-9 | 2,4-DIMETHYLPHENOL | ug/l | 0.8 U | 0.74 U | 1.2 U | 0.75 U | 0.75 U |
| 51-28-5 | 2,4-DINITROPHENOL | ug/l | 2.4 UJ | 2.2 UJ | 3.4 UJ | 2.2 UJ | 2.2 UJ |
| 121-14-2 | 2,4-DINITROTOLUENE | ug/l | 1.2 U | 1.1 UJ | 1.7 U | 1.1 U | 1.1 U |
| 606-20-2 | 2,6-DINITROTOLUENE | ug/l | 0.36 U | 0.33 UJ | 0.52 U | 0.34 U | 0.34 U |
| 91-58-7 | 2-CHLORONAPHTHALENE | ug/l | 0.18 U | 0.17 UJ | 0.26 U | 0.17 U | 0.17 U |
| 95-57-8 | 2-CHLOROPHENOL | ug/l | 0.61 U | 0.56 U | 0.89 U | 0.57 U | 0.57 U |
| 91-57-6 | 2-METHYLNAPHTHALENE | ug/l | 0.36 U | 320 | 0.52 U | 130 | 0.34 U |
| 95-48-7 | 2-METHYLPHENOL (O-CRESOL) | ug/l | 0.27 U | 0.25 U | 0.39 U | 0.25 U | 0.25 U |
| 88-74-4 | 2-NITROANILINE | ug/l | 0.55 U | 0.51 UJ | 0.8 U | 0.52 U | 0.52 U |
| 88-75-5 | 2-NITROPHENOL | ug/l | 0.58 U | 0.54 U | 0.85 U | 0.55 U | 0.55 U |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | ug/l | 2.2 U | 2.1 U | 3.3 U | 2.1 U | 2.1 U |
| MEPH3MEPH | 3+4-Methylphenols | ug/l | 0.43 U | 0.4 U | 0.62 U | 0.4 U | 0.4 U |
| 99-09-2 | 3-NITROANILINE | ug/l | 1.2 U | 1.1 UJ | 1.8 U | 1.1 U | 1.1 U |
| 534-52-1 | 4,6-DINITRO-2-METHYLPHENOL | ug/l | 0.83 UJ | 0.77 UJ | 1.2 UJ | 0.78 UJ | 0.78 UJ |
| 101-55-3 | 4-BROMOPHENYL PHENYL ETHER | ug/l | 0.26 U | 0.24 UJ | 0.38 U | 0.24 U | 0.24 U |
| 59-50-7 | 4-CHLORO-3-METHYLPHENOL | ug/l | 0.45 U | 0.42 U | 0.66 U | 0.42 U | 0.42 U |
| 106-47-8 | 4-CHLOROANILINE | ug/l | 3.2 U | 2.1 U | 4.7 U | 3 U | 3 U |
| 7005-72-3 | 4-CHLOROPHENYL PHENYL ETHER | ug/l | 0.24 U | 0.22 UJ | 0.34 U | 0.22 U | 0.22 U |
| 100-01-6 | 4-NITROANILINE | ug/l | 1.5 U | 1.4 UJ | 2.2 U | 1.4 U | 1.4 U |
| 100-02-7 | 4-NITROPHENOL | ug/l | 2.2 U | 2.1 UJ | 3.3 U | 2.1 U | 2.1 U |
| 83-32-9 | ACENAPHTHENE | ug/l | 0.24 U | 17.1 J | 0.34 U | 12.1 | 0.22 U |
| 208-96-8 | ACENAPHTHYLENE | ug/l | 0.79 U | 84.2 | 1.1 U | 7.9 J | 0.74 U |
| 98-86-2 | ACETOPHENONE | ug/l | 0.16 U | 0.15 U | 0.23 U | 5.9 J | 0.15 U |
| 120-12-7 | ANTHRACENE | ug/l | 0.18 U | 10.6 J | 0.26 U | 0.17 U | 0.17 U |
| 1912-24-9 | ATRAZINE | ug/l | 0.45 U | 0.42 UJ | 0.66 U | 0.42 U | 0.42 U |
| 100-52-7 | BENZALDEHYDE | ug/l | 0.87 U | 0.8 U | 1.3 U | 0.81 U | 0.81 U |
| 56-55-3 | BENZO(A)ANTHRACENE | ug/l | 0.18 U | 0.17 U | 0.26 U | 0.17 U | 0.17 U |
| 50-32-8 | BENZO(A)PYRENE | ug/l | 0.16 U | 0.15 U | 0.23 U | 0.15 U | 0.15 U |
| 205-99-2 | BENZO(B)FLUORANTHENE | ug/l | 0.33 U | 0.3 U | 0.48 U | 0.31 U | 0.31 U |
| 191-24-2 | BENZO(G,H,I)PERYLENE | ug/l | 0.33 U | 0.3 U | 0.48 U | 0.31 U | 0.31 U |
| 207-08-9 | BENZO(K)FLUORANTHENE | ug/l | 0.2 U | 0.19 U | 0.3 U | 0.19 U | 0.19 U |
| 85-68-7 | BENZYL BUTYL PHTHALATE | ug/l | 0.21 U | 0.2 U | 0.31 U | 0.2 U | 0.2 U |
| 92-52-4 | BIPHENYL (DIPHENYL) | ug/l | 0.17 U | 25.1 J | 0.25 U | 7.3 J | 0.16 U |
| 111-91-1 | BIS(2-CHLOROETHOXY) METHANE | ug/l | 0.62 U | 0.57 U | 0.9 U | 0.58 U | 0.58 U |
| 111-44-4 | BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER) | ug/l | 0.62 U | 0.57 U | 0.9 U | 0.58 U | 0.58 U |
| 108-60-1 | BIS(2-CHLOROISOPROPYL) ETHER | ug/l | 0.19 U | 0.18 U | 0.28 U | 0.18 U | 0.18 U |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | ug/l | 0.18 U | 0.17 U | 15.4 J | 0.17 U | 0.17 U |
| 105-60-2 | CAPROLACTAM | ug/l | 2.2 U | 2.1 U | 3.3 U | 2.1 U | 2.1 U |
| 86-74-8 | CARBAZOLE | ug/l | 0.25 U | 6.2 J | 0.36 U | 0.23 U | 0.23 U |
| 218-01-9 | CHRYSENE | ug/l | 0.2 U | 0.19 U | 0.3 U | 0.19 U | 0.19 U |
| 53-70-3 | DIBENZ(A,H)ANTHRACENE | ug/l | 0.47 U | 0.44 U | 0.69 U | 0.44 U | 0.44 U |
| 132-64-9 | DIBENZOFURAN | ug/l | 0.27 U | 4.5 J | 0.39 U | 0.25 U | 0.25 U |
| 84-66-2 | DIETHYL PHTHALATE | ug/l | 0.43 U | 0.4 UJ | 0.62 U | 0.4 U | 0.4 U |
| 131-11-3 | DIMETHYL PHTHALATE | ug/l | 0.25 U | 0.23 UJ | 0.36 U | 0.23 U | 0.23 U |
| 84-74-2 | DI-N-BUTYL PHTHALATE | ug/l | 2.2 U | 2.1 UJ | 3.3 U | 2.1 U | 2.1 U |
| 117-84-0 | DI-N-OCTYLPHTHALATE | ug/l | 0.57 U | 0.53 U | 0.84 U | 0.54 U | 0.54 U |
| 206-44-0 | FLUORANTHENE | ug/l | 0.45 U | 7.6 J | 0.66 U | 0.42 U | 0.42 U |
| 86-73-7 | FLUORENE | ug/l | 0.35 U | 34.7 J | 0.51 U | 9.9 J | 0.33 U |
| 118-74-1 | HEXACHLOROBENZENE | ug/l | 0.2 U | 0.19 UJ | 0.3 U | 0.19 U | 0.19 U |
| 87-68-3 | HEXACHLOROBUTADIENE | ug/l | 0.28 U | 0.26 U | 0.41 U | 0.26 U | 0.26 U |
| 77-47-4 | HEXACHLOROCYCLOPENTADIENE | ug/l | 0.27 U | 0.25 UJ | 0.39 U | 0.25 U | 0.25 U |
| 67-72-1 | HEXACHLOROETHANE | ug/l | 0.28 U | 0.26 U | 0.41 U | 0.26 U | 0.26 U |
| 193-39-5 | INDENO(1,2,3-C,D)PYRENE | ug/l | 0.17 U | 0.16 U | 0.25 U | 0.16 U | 0.16 U |
| 78-59-1 | ISOPHORONE | ug/l | 0.34 U | 0.31 U | 0.49 U | 0.32 U | 0.32 U |
| 91-20-3 | NAPHTHALENE | ug/l | 0.13 U | 2500 | 0.2 U | 1300 | 0.13 U |
| 98-95-3 | NITROBENZENE | ug/l | 0.76 U | 0.71 U | 1.1 U | 0.72 U | 0.72 U |
| 621-64-7 | N-NITROSODI-N-PROPYLAMINE | ug/l | 0.22 U | 0.21 U | 0.33 U | 0.21 U | 0.21 U |
| 86-30-6 | N-NITROSODIPHENYLAMINE | ug/l | 0.67 U | 0.63 UJ | 0.98 U | 0.63 U | 0.63 U |
| 87-86-5 | PENTACHLOROPHENOL | ug/l | 1.9 U | 1.8 UJ | 2.8 U | 1.8 U | 1.8 U |
| 85-01-8 | PHENANTHRENE | ug/l | 0.29 U | 46.2 J | 0.43 U | 14.2 | 0.27 U |
| 108-95-2 | PHENOL | ug/l | 0.24 U | 0.22 U | 0.34 U | 0.22 U | 0.22 U |
| 129-00-0 | PYRENE | ug/l | 0.22 U | 10.1 J | 0.33 U | 0.21 U | 0.21 U |

| Con Ed - Ludlow Site<br>Validated Groundwater Analytical Data | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-1<br>MW-1<br>D4947-01<br>CTECH<br>D4947<br>WATER<br>11/26/2012 10:30<br>1/23/2013 | MW-3<br>MW-3<br>D4947-09<br>CTECH<br>D4947<br>WATER<br>11/27/2012 15:10<br>1/23/2013 | MW-4<br>MW-4<br>D4947-07<br>CTECH<br>D4947<br>WATER<br>11/27/2012 11:50<br>1/23/2013 | MW-7<br>MW-7<br>D4947-08<br>CTECH<br>D4947<br>WATER<br>11/27/2012 13:15<br>1/23/2013 | MW-8<br>MW-8<br>D4947-02<br>CTECH<br>D4947<br>WATER<br>11/26/2012 13:20<br>1/23/2013 |
|---|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | | |
| | INORGANICS | | | | | | |
| 7429-90-5 | ALUMINUM | ug/l | 331 J | 72.9 UJ | 161000 J | 268 J | 1860 J |
| 7440-36-0 | ANTIMONY | ug/l | 4.98 J | 5.31 J | 4 UJ | 6.86 J | 5.06 J |
| 7440-38-2 | ARSENIC | ug/l | 6.1 | 2.45 J | 206 | 2.1 U | 4.85 J |
| 7440-39-3 | BARIUM | ug/l | 159 J | 106 J | 2170 J | 109 J | 104 J |
| 7440-41-7 | BERYLLIUM | ug/l | 0.35 UJ | 0.35 UJ | 7.1 J | 0.35 UJ | 0.35 UJ |
| 7440-43-9 | CADMIUM | ug/l | 0.25 U | 0.32 J | 25 | 0.25 U | 0.3 J |
| 7440-70-2 | CALCIUM | ug/l | 91200 J | 58900 J | 67500 J | 105000 J | 78800 J |
| 7440-47-3 | CHROMIUM, TOTAL | ug/l | 55.8 UJ | 13.8 UJ | 352 J | 23.5 UJ | 28.6 UJ |
| 7440-48-4 | COBALT | ug/l | 2.9 U | 2.9 U | 263 | 2.9 U | 4.32 J |
| 7440-50-8 | COPPER | ug/l | 6.08 J | 7.44 J | 822 J | 1.44 J | 20.7 J |
| 7439-89-6 | IRON | ug/l | 5890 J | 1160 J | 520000 J | 680 UJ | 3790 J |
| 7439-92-1 | LEAD | ug/l | 1.34 J | 6.72 | 10700 | 1.72 J | 24.5 J |
| 7439-95-4 | MAGNESIUM | ug/l | 22100 J | 21500 J | 53000 J | 37800 J | 25200 J |
| 7439-96-5 | MANGANESE | ug/l | 4090 J | 1100 J | 6820 J | 1030 J | 1520 J |
| 7439-97-6 | MERCURY | ug/l | 0.092 J | 0.092 U | 16.85 | 0.092 U | 0.092 U |
| 7440-02-0 | NICKEL | ug/l | 31.6 U | 12.2 U | 689 | 19.4 U | 18.2 UJ |
| 7440-09-7 | POTASSIUM | ug/l | 8980 J | 8370 J | 23300 J | 8420 J | 8280 J |
| 7782-49-2 | SELENIUM | ug/l | 2.4 U | 2.4 U | 26 | 2.4 U | 2.4 U |
| 7440-22-4 | SILVER | ug/l | 0.75 UJ | 0.75 UJ | 25.7 J | 0.75 UJ | 0.75 UJ |
| 7440-23-5 | SODIUM | ug/l | 361000 J | 3480000 J | 167000 J | 535000 J | 628000 J |
| 7440-28-0 | THALLIUM | ug/l | 1.2 UJ | 1.2 UJ | 5.2 J | 1.2 UJ | 1.2 UJ |
| 7440-62-2 | VANADIUM | ug/l | 3.05 UJ | 3.05 UJ | 438 J | 3.05 UJ | 5.36 J |
| 7440-66-6 | ZINC | ug/l | 10.2 UJ | 11.8 UJ | 5910 J | 9.49 UJ | 30.8 UJ |
| 57-12-5 | CYANIDE | ug/l | 3 U | 123 | 224 | 27 | 5 U |

| Con Ed - Ludlow Site<br>Validated Groundwater Analytical Data | | | Dup of MW-8 | | | |
|---|---|---|---|---|---|---|
| | | Location ID: | MW-18 | MW-9 | FIELDQC | FIELDQC |
| | | Sample ID: | MW-18 | MW-9 | FB112712 | TRIPBLANK |
| | | Lab Sample Id: | D4947-03 | D4947-04 | D4947-11 | D4947-10 |
| | | Source: | CTECH | CTECH | CTECH | CTECH |
| | | SDG: | D4947 | D4947 | D4947 | D4947 |
| | | Matrix: | WATER | WATER | WATER | WATER |
| | | Sampled: | 11/26/2012 13:20 | 11/26/2012 14:45 | 11/27/2012 13:45 | 11/20/2012 9:00 |
| | | Validated: | 1/23/2013 | 1/23/2013 | 1/23/2013 | 1/23/2013 |
| CAS NO. | COMPOUND | UNITS: | | | | |
| | VOLATILES | | | | | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | ug/l | 0.4 U | 0.4 U | 0.4 U | 0.4 U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | ug/l | 0.31 U | 0.31 U | 0.31 U | 0.31 U |
| 76-13-1 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | ug/l | 0.45 U | 0.45 U | 0.45 U | 0.45 U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | ug/l | 0.38 U | 0.38 U | 0.38 U | 0.38 U |
| 75-34-3 | 1,1-DICHLOROETHANE | ug/l | 0.36 U | 0.36 U | 0.36 U | 0.36 U |
| 75-35-4 | 1,1-DICHLOROETHENE | ug/l | 0.47 U | 0.47 U | 0.47 U | 0.47 U |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | ug/l | 0.65 U | 0.65 U | 0.65 U | 0.65 U |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | ug/l | 0.62 U | 0.62 U | 0.62 U | 0.62 U |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | ug/l | 0.46 U | 0.46 U | 0.46 U | 0.46 U |
| 106-93-4 | 1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE) | ug/l | 0.41 U | 0.41 U | 0.41 U | 0.41 U |
| 95-50-1 | 1,2-DICHLOROBENZENE | ug/l | 0.45 U | 0.45 U | 0.45 U | 0.45 U |
| 107-06-2 | 1,2-DICHLOROETHANE | ug/l | 0.48 U | 0.48 U | 0.48 U | 0.48 U |
| 78-87-5 | 1,2-DICHLOROPROPANE | ug/l | 0.46 U | 0.46 U | 0.46 U | 0.46 U |
| 541-73-1 | 1,3-DICHLOROBENZENE | ug/l | 0.43 U | 0.43 U | 0.43 U | 0.43 U |
| 106-46-7 | 1,4-DICHLOROBENZENE | ug/l | 0.32 U | 0.32 U | 0.32 U | 0.32 U |
| 123-91-1 | 1,4-DIOXANE (P-DIOXANE) | ug/l | 50 UJ | 50 UJ | 50 UJ | 50 UJ |
| 591-78-6 | 2-HEXANONE | ug/l | 1.9 U | 1.9 U | 1.9 U | 1.9 U |
| 67-64-1 | ACETONE | ug/l | 2.8 UJ | 2.8 UJ | 2.8 UJ | 2.8 UJ |
| 71-43-2 | BENZENE | ug/l | 0.32 U | 0.32 U | 0.32 U | 0.32 U |
| 74-97-5 | BROMOCHLOROMETHANE | ug/l | 2.2 U | 2.2 U | 2.2 U | 2.2 U |
| 75-27-4 | BROMODICHLOROMETHANE | ug/l | 0.36 UJ | 0.36 UJ | 0.36 UJ | 0.36 UJ |
| 75-25-2 | BROMOFORM | ug/l | 0.47 UJ | 0.47 UJ | 0.47 UJ | 0.47 UJ |
| 74-83-9 | BROMOMETHANE | ug/l | 0.62 UJ | 0.62 UJ | 0.62 UJ | 0.62 UJ |
| 75-15-0 | CARBON DISULFIDE | ug/l | 0.54 U | 0.54 U | 2 J | 0.54 U |
| 56-23-5 | CARBON TETRACHLORIDE | ug/l | 0.62 UJ | 0.62 UJ | 0.62 UJ | 0.62 UJ |
| 108-90-7 | CHLOROBENZENE | ug/l | 0.49 U | 0.49 U | 0.49 U | 0.49 U |
| 75-00-3 | CHLOROETHANE | ug/l | 0.66 U | 0.66 U | 0.66 U | 0.66 U |
| 67-66-3 | CHLOROFORM | ug/l | 0.34 U | 0.34 U | 0.34 U | 0.34 U |
| 74-87-3 | CHLOROMETHANE | ug/l | 0.54 UJ | 0.54 UJ | 0.54 UJ | 0.54 UJ |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | ug/l | 0.35 U | 0.35 U | 0.35 U | 0.35 U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | ug/l | 0.31 U | 0.31 U | 0.31 U | 0.31 U |
| 110-82-7 | CYCLOHEXANE | ug/l | 0.55 U | 0.55 U | 0.55 U | 0.55 U |
| 124-48-1 | DIBROMOCHLOROMETHANE | ug/l | 0.52 UJ | 0.52 UJ | 0.52 UJ | 0.52 UJ |
| 75-71-8 | DICHLORODIFLUOROMETHANE | ug/l | 0.55 U | 0.55 U | 0.55 U | 0.55 U |
| 100-41-4 | ETHYLBENZENE | ug/l | 0.53 U | 0.53 U | 0.53 U | 0.53 U |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | ug/l | 0.45 U | 0.45 U | 0.45 U | 0.45 U |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | ug/l | 0.95 U | 0.95 U | 0.95 U | 0.95 U |
| 79-20-9 | METHYL ACETATE | ug/l | 0.83 UJ | 0.83 UJ | 0.83 UJ | 0.83 UJ |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | ug/l | 1.3 U | 1.3 U | 1.3 U | 1.3 U |
| 108-10-1 | METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE) | ug/l | 2.1 UJ | 2.1 UJ | 2.1 UJ | 2.1 UJ |
| 108-87-2 | METHYLCYCLOHEXANE | ug/l | 0.68 U | 0.68 U | 0.68 U | 0.68 U |
| 75-09-2 | METHYLENE CHLORIDE | ug/l | 0.41 U | 0.41 U | 4.3 J | 0.41 U |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | ug/l | 0.43 U | 0.43 U | 0.43 U | 0.43 U |
| 100-42-5 | STYRENE | ug/l | 0.36 U | 0.36 U | 0.36 U | 0.36 U |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | ug/l | 0.49 J | 1.4 J | 0.35 U | 0.35 U |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | ug/l | 0.27 U | 0.27 U | 0.27 U | 0.27 U |
| 108-88-3 | TOLUENE | ug/l | 0.37 U | 0.37 U | 0.37 U | 0.37 U |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | ug/l | 0.41 U | 0.41 U | 0.41 U | 0.41 U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | ug/l | 0.29 UJ | 0.29 UJ | 0.29 UJ | 0.29 UJ |
| 79-01-6 | TRICHLOROETHYLENE (TCE) | ug/l | 0.28 U | 0.28 U | 0.28 U | 0.28 U |
| 75-69-4 | TRICHLOROFLUOROMETHANE | ug/l | 0.35 U | 0.35 U | 0.35 U | 0.35 U |
| 75-01-4 | VINYL CHLORIDE | ug/l | 0.34 U | 0.34 U | 0.34 U | 0.34 U |

| Con Ed - Ludlow Site<br>Validated Groundwater Analytical Data | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | Dup of MW-8<br>MW-18<br>MW-18<br>D4947-03<br>CTECH<br>D4947<br>WATER<br>11/26/2012 13:20<br>1/23/2013 | MW-9<br>MW-9<br>D4947-04<br>CTECH<br>D4947<br>WATER<br>11/26/2012 14:45<br>1/23/2013 | FIELDQC<br>FB112712<br>D4947-11<br>CTECH<br>D4947<br>WATER<br>11/27/2012 13:45<br>1/23/2013 | FIELDQC<br>TRIPBLANK<br>D4947-10<br>CTECH<br>D4947<br>WATER<br>11/20/2012 9:00<br>1/23/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | SEMIVOLATILES | | | | | |
| 95-94-3 | 1,2,4,5-TETRACHLOROBENZENE | ug/l | 0.21 U | 0.21 U | 0.21 U | |
| 58-90-2 | 2,3,4,6-TETRACHLOROPHENOL | ug/l | 0.21 U | 0.21 UJ | 0.21 U | |
| 95-95-4 | 2,4,5-TRICHLOROPHENOL | ug/l | 0.42 U | 0.42 U | 0.41 U | |
| 88-06-2 | 2,4,6-TRICHLOROPHENOL | ug/l | 0.58 U | 0.59 U | 0.58 U | |
| 120-83-2 | 2,4-DICHLOROPHENOL | ug/l | 0.69 U | 0.69 U | 0.68 U | |
| 105-67-9 | 2,4-DIMETHYLPHENOL | ug/l | 0.74 U | 0.75 U | 0.73 U | |
| 51-28-5 | 2,4-DINITROPHENOL | ug/l | 2.2 UJ | 2.2 UJ | 2.2 UJ | |
| 121-14-2 | 2,4-DINITROTOLUENE | ug/l | 1.1 U | 1.1 U | 1.1 U | |
| 606-20-2 | 2,6-DINITROTOLUENE | ug/l | 0.33 U | 0.34 U | 0.33 U | |
| 91-58-7 | 2-CHLORONAPHTHALENE | ug/l | 0.17 U | 0.17 U | 0.16 U | |
| 95-57-8 | 2-CHLOROPHENOL | ug/l | 0.56 U | 0.57 U | 0.56 U | |
| 91-57-6 | 2-METHYLNAPHTHALENE | ug/l | 0.33 U | 0.34 U | 0.33 U | |
| 95-48-7 | 2-METHYLPHENOL (O-CRESOL) | ug/l | 0.25 U | 0.25 U | 0.25 U | |
| 88-74-4 | 2-NITROANILINE | ug/l | 0.51 U | 0.52 U | 0.51 U | |
| 88-75-5 | 2-NITROPHENOL | ug/l | 0.54 U | 0.55 U | 0.54 U | |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | ug/l | 2.1 U | 2.1 U | 2.1 U | |
| MEPH3MEPH | 3+4-Methylphenols | ug/l | 0.4 U | 0.4 U | 0.39 U | |
| 99-09-2 | 3-NITROANILINE | ug/l | 1.1 U | 1.1 U | 1.1 U | |
| 534-52-1 | 4,6-DINITRO-2-METHYLPHENOL | ug/l | 0.77 UJ | 0.78 UJ | 0.76 UJ | |
| 101-55-3 | 4-BROMOPHENYL PHENYL ETHER | ug/l | 0.24 U | 0.24 U | 0.24 U | |
| 59-50-7 | 4-CHLORO-3-METHYLPHENOL | ug/l | 0.42 U | 0.42 U | 0.41 U | |
| 106-47-8 | 4-CHLOROANILINE | ug/l | 2.1 U | 3 U | 2.9 U | |
| 7005-72-3 | 4-CHLOROPHENYL PHENYL ETHER | ug/l | 0.22 U | 0.22 U | 0.22 U | |
| 100-01-6 | 4-NITROANILINE | ug/l | 1.4 U | 1.4 U | 1.4 U | |
| 100-02-7 | 4-NITROPHENOL | ug/l | 2.1 U | 2.1 U | 2.1 U | |
| 83-32-9 | ACENAPHTHENE | ug/l | 0.22 U | 0.22 U | 0.22 U | |
| 208-96-8 | ACENAPHTHYLENE | ug/l | 0.73 U | 0.74 U | 0.72 U | |
| 98-86-2 | ACETOPHENONE | ug/l | 0.15 U | 0.15 U | 0.14 U | |
| 120-12-7 | ANTHRACENE | ug/l | 0.17 U | 0.17 U | 0.16 U | |
| 1912-24-9 | ATRAZINE | ug/l | 0.42 U | 0.42 U | 0.41 U | |
| 100-52-7 | BENZALDEHYDE | ug/l | 0.8 U | 0.81 U | 0.79 U | |
| 56-55-3 | BENZO(A)ANTHRACENE | ug/l | 0.17 U | 0.17 U | 0.16 U | |
| 50-32-8 | BENZO(A)PYRENE | ug/l | 0.15 U | 0.15 U | 0.14 U | |
| 205-99-2 | BENZO(B)FLUORANTHENE | ug/l | 0.3 U | 0.31 U | 0.3 U | |
| 191-24-2 | BENZO(G,H,I)PERYLENE | ug/l | 0.3 U | 0.31 U | 0.3 U | |
| 207-08-9 | BENZO(K)FLUORANTHENE | ug/l | 0.19 U | 0.19 U | 0.19 U | |
| 85-68-7 | BENZYL BUTYL PHTHALATE | ug/l | 0.2 U | 0.2 U | 0.2 U | |
| 92-52-4 | BIPHENYL (DIPHENYL) | ug/l | 0.16 U | 0.16 U | 0.15 U | |
| 111-91-1 | BIS(2-CHLOROETHOXY) METHANE | ug/l | 0.57 U | 0.58 U | 0.57 U | |
| 111-44-4 | BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER) | ug/l | 0.57 U | 0.58 U | 0.57 U | |
| 108-60-1 | BIS(2-CHLOROISOPROPYL) ETHER | ug/l | 0.18 U | 0.18 U | 0.18 U | |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | ug/l | 0.17 U | 0.17 U | 0.16 U | |
| 105-60-2 | CAPROLACTAM | ug/l | 2.1 U | 2.1 U | 2.1 U | |
| 86-74-8 | CARBAZOLE | ug/l | 0.23 U | 0.23 U | 0.23 U | |
| 218-01-9 | CHRYSENE | ug/l | 0.19 U | 0.19 U | 0.19 U | |
| 53-70-3 | DIBENZ(A,H)ANTHRACENE | ug/l | 0.44 U | 0.44 U | 0.43 U | |
| 132-64-9 | DIBENZOFURAN | ug/l | 0.25 U | 0.25 U | 0.25 U | |
| 84-66-2 | DIETHYL PHTHALATE | ug/l | 0.4 U | 0.4 U | 0.39 U | |
| 131-11-3 | DIMETHYL PHTHALATE | ug/l | 0.23 U | 0.23 U | 0.23 U | |
| 84-74-2 | DI-N-BUTYL PHTHALATE | ug/l | 2.1 U | 2.1 U | 2.1 U | |
| 117-84-0 | DI-N-OCTYLPHTHALATE | ug/l | 0.53 U | 0.54 U | 0.53 U | |
| 206-44-0 | FLUORANTHENE | ug/l | 0.42 U | 0.42 U | 0.41 U | |
| 86-73-7 | FLUORENE | ug/l | 0.32 U | 0.33 U | 0.32 U | |
| 118-74-1 | HEXACHLOROBENZENE | ug/l | 0.19 U | 0.19 U | 0.19 U | |
| 87-68-3 | HEXACHLOROBUTADIENE | ug/l | 0.26 U | 0.26 U | 0.26 U | |
| 77-47-4 | HEXACHLOROCYCLOPENTADIENE | ug/l | 0.25 U | 0.25 U | 0.25 U | |
| 67-72-1 | HEXACHLOROETHANE | ug/l | 0.26 U | 0.26 U | 0.26 U | |
| 193-39-5 | INDENO(1,2,3-C,D)PYRENE | ug/l | 0.16 U | 0.16 U | 0.15 U | |
| 78-59-1 | ISOPHORONE | ug/l | 0.31 U | 0.32 U | 0.31 U | |
| 91-20-3 | NAPHTHALENE | ug/l | 0.13 U | 0.13 U | 0.12 U | |
| 98-95-3 | NITROBENZENE | ug/l | 0.71 U | 0.72 U | 0.7 U | |
| 621-64-7 | N-NITROSODI-N-PROPYLAMINE | ug/l | 0.21 U | 0.21 U | 0.21 U | |
| 86-30-6 | N-NITROSODIPHENYLAMINE | ug/l | 0.63 U | 0.63 U | 0.62 U | |
| 87-86-5 | PENTACHLOROPHENOL | ug/l | 1.8 U | 1.8 U | 1.8 U | |
| 85-01-8 | PHENANTHRENE | ug/l | 0.27 U | 0.27 U | 0.27 U | |
| 108-95-2 | PHENOL | ug/l | 0.22 U | 0.22 U | 0.22 U | |
| 129-00-0 | PYRENE | ug/l | 0.21 U | 0.21 U | 0.21 U | |

| Con Ed - Ludlow Site<br>Validated Groundwater Analytical Data | | | Dup of MW-8 | | | |
|---|---|---|---|---|---|---|
| | | Location ID: | MW-18 | MW-9 | FIELDQC | FIELDQC |
| | | Sample ID: | MW-18 | MW-9 | FB112712 | TRIPBLANK |
| | | Lab Sample Id: | D4947-03 | D4947-04 | D4947-11 | D4947-10 |
| | | Source: | CTECH | CTECH | CTECH | CTECH |
| | | SDG: | D4947 | D4947 | D4947 | D4947 |
| | | Matrix: | WATER | WATER | WATER | WATER |
| | | Sampled: | 11/26/2012 13:20 | 11/26/2012 14:45 | 11/27/2012 13:45 | 11/20/2012 9:00 |
| | | Validated: | 1/23/2013 | 1/23/2013 | 1/23/2013 | 1/23/2013 |
| CAS NO. | COMPOUND | UNITS: | | | | |
| | INORGANICS | | | | | |
| 7429-90-5 | ALUMINUM | ug/l | 9290 J | 26.5 UJ | 61.4 J | |
| 7440-36-0 | ANTIMONY | ug/l | 4 UJ | 4 UJ | 4 UJ | |
| 7440-38-2 | ARSENIC | ug/l | 15.3 J | 13.7 | 2.1 U | |
| 7440-39-3 | BARIUM | ug/l | 169 J | 478 J | 2.22 J | |
| 7440-41-7 | BERYLLIUM | ug/l | 0.38 J | 0.35 UJ | 0.35 UJ | |
| 7440-43-9 | CADMIUM | ug/l | 0.87 J | 0.27 J | 0.25 U | |
| 7440-70-2 | CALCIUM | ug/l | 90000 J | 198000 J | 295 J | |
| 7440-47-3 | CHROMIUM, TOTAL | ug/l | 37.9 UJ | 11.8 UJ | 25.7 J | |
| 7440-48-4 | COBALT | ug/l | 12.8 J | 2.9 U | 2.9 U | |
| 7440-50-8 | COPPER | ug/l | 59 J | 1.11 J | 1 UJ | |
| 7439-89-6 | IRON | ug/l | 18700 J | 17400 J | 161 J | |
| 7439-92-1 | LEAD | ug/l | 85.2 J | 1.3 U | 1.3 U | |
| 7439-95-4 | MAGNESIUM | ug/l | 31000 J | 88100 J | 53.7 J | |
| 7439-96-5 | MANGANESE | ug/l | 2030 J | 4210 J | 4.96 J | |
| 7439-97-6 | MERCURY | ug/l | 0.092 U | 0.092 U | 0.092 U | |
| 7440-02-0 | NICKEL | ug/l | 31 UJ | 10 U | 10.5 | |
| 7440-09-7 | POTASSIUM | ug/l | 10900 J | 22200 J | 763 J | |
| 7782-49-2 | SELENIUM | ug/l | 2.4 U | 2.82 J | 2.4 U | |
| 7440-22-4 | SILVER | ug/l | 0.75 UJ | 0.75 UJ | 0.75 UJ | |
| 7440-23-5 | SODIUM | ug/l | 677000 J | 18600 UJ | 17600 J | |
| 7440-28-0 | THALLIUM | ug/l | 1.2 UJ | 1.2 UJ | 1.2 UJ | |
| 7440-62-2 | VANADIUM | ug/l | 20.6 J | 3.05 UJ | 3.05 UJ | |
| 7440-66-6 | ZINC | ug/l | 90.7 J | 3.25 UJ | 14 J | |
| 57-12-5 | CYANIDE | ug/l | 5 U | 8 U | 3 J | |

# DATA USABILITY SUMMARY REPORT

# LUDLOW FORMER MGP SITE

# SUPPLEMENTAL REMEDIAL INVESTIGATION

*Prepared For:*

**CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.**

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**Long Island City, NY 11105**

*Prepared By:*

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**APRIL 2013**

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## LIST OF ATTACHMENTS

# SECTION 1

# DATA USABILITY SUMMARY

Soil gas samples were collected from the Consolidated Edison Ludlow Former MGP site on October 24, 2012. Analytical results from these samples were validated and reviewed by Parsons for usability with respect to the following requirements:

- Work Plan,
- NYSDEC Analytical Services Protocol (ASP), and
- USEPA Region II Standard Operating Procedures (SOPs) for organic and inorganic data review.

The analytical laboratory for this project was Eurofins – Air Toxics (Eurofins). This laboratory is certified to perform project analyses through the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP).

## 1.1 LABORATORY DATA PACKAGES

The laboratory data package turnaround time, defined as the time from sample receipt by the laboratory to receipt of the analytical data packages by Parsons, was 24 days for the project samples.

The data packages received from Eurofins were paginated, complete, and overall were of good quality. Comments on specific quality control (QC) and other requirements are discussed in detail in the attached data validation reports which are summarized in Section 2.

## 1.2 SAMPLING AND CHAIN-OF-CUSTODY

The samples were collected, properly preserved, shipped under a chain-of-custody (COC) record, and received at Eurofins within one day of sampling. All samples were received intact and in good condition at the laboratory.

## 1.3 LABORATORY ANALYTICAL METHODS

The soil gas samples that were collected from the site were analyzed for volatile organic compounds (VOCs). Summaries of issues concerning these laboratory analyses are presented in Subsections 1.3.1. The data qualifications resulting from the data validation review and statements on the laboratory analytical precision, accuracy, representativeness, completeness, and comparability (PARCC) are discussed for each analytical method in Section 2. The laboratory data were reviewed and may be qualified with the following validation flags:

"U" - not detected at the value given,

"UJ" - estimated and not detected at the value given,

"J" - estimated at the value given,

"N" - presumptive evidence at the value given, and

"R" - unusable value.

The validated laboratory data were tabulated and are presented in Attachment A.

### 1.3.1 Volatile Organic Analysis

Soil gas samples were analyzed for VOCs using the USEPA TO-15 analytical method. Certain reported results for the VOC samples were qualified as estimated based upon laboratory control sample (LCS) recoveries. The reported VOC analytical results were 100% complete (i.e., usable) for the soil gas data. PARCC requirements were met.

# SECTION 2

# DATA VALIDATION REPORT

## 2.1 SOIL GAS SAMPLES

Data review has been completed for data packages generated by Eurofins containing analytical results from soil gas samples collected from the site. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. Analytical results for these samples were contained with SDG 1210554. Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. This data validation and usability report is presented by analysis type. The validated laboratory data are presented in Attachment A.

### 2.1.1 Volatiles

The following items were reviewed for compliancy in the volatile analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy
- Laboratory control sample (LCS) recoveries
- Laboratory method blank contamination
- GC/MS instrument performance
- Initial and continuing calibrations
- Internal standard area counts and retention times
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of LCS recoveries as discussed below.

LCS Recoveries

All LCS recoveries were considered acceptable and within QC limits with the exception of the low LCS recoveries for ethanol (60%R, 61%R; QC limit 70-130%R) associated with all samples. Therefore, the ethanol results for these samples which were nondetects, were considered estimated, possibly biased low, and qualified "UJ" for the affected samples.

Usability

All soil gas sample results were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The volatile soil gas data presented by Eurofins were 100% complete (i.e., usable). The validated volatile laboratory data are tabulated and presented in Attachment A.

# ATTACHMENT A

# VALIDATED LABORATORY DATA

| Consolidated Edison<br>Ludlow Street Site<br>Validated Air Analytical Data | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | SV-1<br>SV-1<br>1210554-03A<br>AIRTOXICS<br>1210554<br>SOIL VAPOR<br>10/24/2012<br>4/15/2013 | SV-3<br>SV-3<br>1210554-01A<br>AIRTOXICS<br>1210554<br>SOIL VAPOR<br>10/24/2012<br>4/15/2013 | SV-4<br>SV-4<br>1210554-02A<br>AIRTOXICS<br>1210554<br>SOIL VAPOR<br>10/24/2012<br>4/15/2013 |
|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | |
| | VOLATILES | | | | |
| 67-64-1 | ACETONE | ug/m3 | 260 | 150 | 220 |
| 107-05-1 | ALLYL CHLORIDE (3-CHLOROPROPENE) | ug/m3 | 11 U | 11 U | 11 U |
| 100-44-7 | ALPHA-CHLOROTOLUENE | ug/m3 | 4.6 U | 4.4 U | 4.5 U |
| 71-43-2 | BENZENE | ug/m3 | 20 | 2.7 U | 8.6 |
| 75-27-4 | BROMODICHLOROMETHANE | ug/m3 | 6 U | 5.7 U | 5.9 U |
| 75-25-2 | BROMOFORM | ug/m3 | 9.2 U | 8.8 U | 9 U |
| 74-83-9 | BROMOMETHANE | ug/m3 | 35 U | 33 U | 34 U |
| 106-99-0 | 1,3-BUTADIENE | ug/m3 | 34 | 1.9 U | 4.4 |
| 75-15-0 | CARBON DISULFIDE | ug/m3 | 17 | 11 U | 14 |
| 56-23-5 | CARBON TETRACHLORIDE | ug/m3 | 5.6 U | 5.4 U | 5.5 U |
| 108-90-7 | CHLOROBENZENE | ug/m3 | 4.1 U | 3.9 U | 4 U |
| 75-00-3 | CHLOROETHANE | ug/m3 | 9.4 U | 9 U | 9.2 U |
| 67-66-3 | CHLOROFORM | ug/m3 | 4.4 U | 4.2 U | 4.3 U |
| 74-87-3 | CHLOROMETHANE | ug/m3 | 18 U | 18 U | 18 U |
| 110-82-7 | CYCLOHEXANE | ug/m3 | 7.9 | 2.9 U | 3 U |
| 124-48-1 | DIBROMOCHLOROMETHANE | ug/m3 | 7.6 U | 7.3 U | 7.4 U |
| 106-93-4 | 1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE) | ug/m3 | 6.9 U | 6.6 U | 6.7 U |
| 75-71-8 | DICHLORODIFLUOROMETHANE | ug/m3 | 5.9 | 4.2 U | 4.3 U |
| 75-34-3 | 1,1-DICHLOROETHANE | ug/m3 | 3.6 U | 3.5 U | 3.5 U |
| 107-06-2 | 1,2-DICHLOROETHANE | ug/m3 | 3.6 U | 3.5 U | 3.5 U |
| 75-35-4 | 1,1-DICHLOROETHENE | ug/m3 | 3.5 U | 3.4 U | 3.5 U |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | ug/m3 | 3.5 U | 3.4 U | 3.5 U |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | ug/m3 | 3.5 U | 3.4 U | 3.5 U |
| 95-50-1 | 1,2-DICHLOROBENZENE | ug/m3 | 5.4 U | 5.1 U | 5.3 U |
| 541-73-1 | 1,3-DICHLOROBENZENE | ug/m3 | 5.4 U | 5.1 U | 5.3 U |
| 106-46-7 | 1,4-DICHLOROBENZENE | ug/m3 | 5.4 U | 5.1 U | 5.3 U |
| 78-87-5 | 1,2-DICHLOROPROPANE | ug/m3 | 4.1 U | 4 U | 4 U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | ug/m3 | 4.1 U | 3.9 U | 4 U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | ug/m3 | 4.1 U | 3.9 U | 4 U |
| 123-91-1 | 1,4-DIOXANE (P-DIOXANE) | ug/m3 | 13 U | 12 U | 13 U |
| 64-17-5 | ETHANOL | ug/m3 | 6.7 UJ | 6.4 UJ | 6.6 UJ |
| 622-96-8 | 4-ETHYLTOLUENE | ug/m3 | 4.4 U | 4.2 U | 4.3 U |
| 100-41-4 | ETHYLBENZENE | ug/m3 | 5.4 | 3.7 U | 5.8 |
| 76-14-2 | FREON 114 | ug/m3 | 6.2 U | 6 U | 6.1 U |
| 142-82-5 | HEPTANE | ug/m3 | 13 | 3.5 U | 190 |
| 87-68-3 | HEXACHLOROBUTADIENE | ug/m3 | 38 U | 36 U | 37 U |
| 110-54-3 | N-HEXANE | ug/m3 | 27 | 3 U | 360 |
| 591-78-6 | 2-HEXANONE | ug/m3 | 15 U | 14 U | 14 U |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | ug/m3 | 4.4 U | 4.2 U | 4.3 U |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | ug/m3 | 11 | 10 U | 10 U |
| 108-10-1 | METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE) | ug/m3 | 3.7 U | 3.5 U | 3.6 U |
| 75-09-2 | METHYLENE CHLORIDE | ug/m3 | 31 U | 30 U | 30 U |
| 67-63-0 | 2-PROPANOL | ug/m3 | 8.8 U | 8.4 U | 8.6 U |
| 103-65-1 | N-PROPYLBENZENE | ug/m3 | 4.4 U | 4.2 U | 4.3 U |
| 100-42-5 | STYRENE | ug/m3 | 3.8 U | 3.6 U | 3.7 U |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | ug/m3 | 3.2 U | 3.1 U | 3.2 U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | ug/m3 | 6.1 U | 5.9 U | 6 U |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | ug/m3 | 28 | 100 | 24 |
| 109-99-9 | TETRAHYDROFURAN | ug/m3 | 2.6 U | 2.5 U | 2.6 U |
| 108-88-3 | TOLUENE | ug/m3 | 35 | 23 | 60 |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | ug/m3 | 26 U | 25 U | 26 U |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | ug/m3 | 6.5 | 4.7 U | 4.8 U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | ug/m3 | 4.9 U | 4.7 U | 4.8 U |
| 79-01-6 | TRICHLOROETHYLENE (TCE) | ug/m3 | 4.8 U | 4.6 U | 4.7 U |
| 76-13-1 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | ug/m3 | 6.8 U | 6.6 U | 6.7 U |
| 75-69-4 | TRICHLOROFLUOROMETHANE | ug/m3 | 5 U | 4.8 U | 4.9 U |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | ug/m3 | 4.4 U | 4.2 U | 4.3 U |
| 108-67-8 | 1,3,5-TRIMETHYLBENZENE (MESITYLENE) | ug/m3 | 4.4 U | 4.2 U | 4.3 U |
| 540-84-1 | 2,2,4-TRIMETHYLPENTANE | ug/m3 | 12 | 4 U | 4.1 U |
| 75-01-4 | VINYL CHLORIDE | ug/m3 | 2.3 U | 2.2 U | 2.2 U |
| 179601-23-1 | M,P-XYLENE | ug/m3 | 19 | 11 | 20 |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | ug/m3 | 5.2 | 3.7 U | 7 |

# DATA USABILITY SUMMARY REPORT

# LUDLOW FORMER MGP SITE

# SUPPLEMENTAL REMEDIAL INVESTIGATION

*Prepared For:*

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**MAY 2013**

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## LIST OT ATTACHMENTS

# SECTION 1

# DATA USABILITY SUMMARY

Groundwater samples were collected from the Consolidated Edison Ludlow Street Site from April 4, 2013 through April 8, 2013. Analytical results from these samples were validated and reviewed by Parsons for usability with respect to the following requirements:

- Work Plan,
- NYSDEC Analytical Services Protocol (ASP), and
- USEPA Region II Standard Operating Procedures (SOPs) for organic and inorganic data review.

The analytical laboratory for this project was Chemtech. This laboratory is certified to perform project analyses through the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP).

## 1.1 LABORATORY DATA PACKAGES

The laboratory data package turnaround time, defined as the time from sample receipt by the laboratory to receipt of the analytical data packages by Parsons, was 14 days for the project samples.

The data packages received from Chemtech were paginated, complete, and overall were of good quality. Comments on specific quality control (QC) and other requirements are discussed in detail in the attached data validation report which is summarized by media in Section 2.

## 1.2 SAMPLING AND CHAIN-OF-CUSTODY

The samples were collected, properly preserved, shipped under a chain-of-custody (COC) record, and received at Chemtech within one to four days of sampling. All samples were received intact and in good condition at Chemtech.

## 1.3 LABORATORY ANALYTICAL METHODS

The groundwater samples that were collected from the site were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), metals, and cyanide. Summaries of issues concerning these laboratory analyses are presented in Subsections 1.3.1 through 1.3.3. The data qualifications resulting from the data validation review and statements on the laboratory analytical precision, accuracy, representativeness, completeness, and comparability (PARCC) are discussed for each analytical method in Section 2. The laboratory data were reviewed and may be qualified with the following validation flags:

"U" - not detected at the value given,

"UJ" - estimated and not detected at the value given,

"J" - estimated at the value given,

"N" - presumptive evidence at the value given, and

"R" - unusable value.

The validated laboratory data were tabulated and are presented in Attachment A.

### 1.3.1 Volatile Organic Analysis

Groundwater samples were analyzed for VOCs using the USEPA SW-846 8260C analytical method. Certain reported results for the VOC samples were qualified as estimated based upon matrix spike/matrix spike duplicate (MS/MSD) recoveries and instrument calibrations. The reported VOC analytical results were 100% complete (i.e., usable) for the groundwater data. PARCC requirements were met.

### 1.3.2 Semivolatile Organic Analysis

Groundwater samples were analyzed for SVOCs using the USEPA SW-846 8270D analytical method. Certain reported results for the SVOC samples were qualified as estimated based upon MS/MSD recoveries, instrument calibrations, internal standard responses, and field duplicate precision. Certain reported results for the SVOC samples were considered unusable and qualified "R" based upon poor MS/MSD recoveries. The reported SVOC analytical results were 99.7% complete (i.e., usable) for the groundwater data. PARCC requirements were met overall.

### 1.3.3 Inorganics Analysis

Groundwater samples were analyzed for metals and cyanide using the USEPA SW-846 6010B/7470A/7471A/9012B analytical methods. Certain reported results for the inorganics samples were qualified as estimated based upon matrix spike recoveries, serial dilutions, and field duplicate precision. Certain reported results for the inorganic samples were considered unusable and qualified "R" based upon poor matrix spike recoveries. The reported inorganic analytical results were considered 97.2% complete (i.e., usable) for the groundwater data. PARCC requirements were met overall.

# SECTION 2

# DATA VALIDATION REPORT

## 2.1 GROUNDWATER

Data review has been completed for data packages generated by Chem tech containing groundwater samples collected from the site. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. The analytical results were presented by the laboratory in one sample delivery group (SDG): E1768. Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs for organic and inorganic data review. This data validation and usability report is presented by analysis type and the validated laboratory data are presented in Attachment A.

### 2.1.1 Volatiles

The following items were reviewed for compliancy in the volatile analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy
- Laboratory control sample (LCS) recoveries
- Laboratory method blank and field equipment/trip blank contamination
- GC/MS instrument performance
- Initial and continuing calibrations
- Internal standard area counts and retention times
- Field duplicate precision
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of MS/MSD precision and accuracy, LCS recoveries, blank contamination, and initial and continuing calibrations as discussed below.

MS/MSD Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC limits for designated project spiked samples with the exception of the high MS/MSD accuracy results for chloromethane,

methyl tert-butyl ether, 1,1-dichloroethane, 2-butanone, bromochloromethane, chloroform, 1,1,1-trichloroethane, 4-methyl-2-pentanone, 2-hexanone, 1,2-dibromoethane, bromoform, 1,1,2,2-tetrachloroethane, 1,2-dibromo-3-chloropropane, and 1,4-dioxane; and the low MS/MSD accuracy results for bromomethane and methylcyclohexane during the spiked analyses of sample MW-5. The positive 2-butanone and 4-methyl-2-pentanone results for the parent sample were considered estimated, possibly biased high, and qualified "J" based upon high MS/MSD accuracy results. The nondetected bromomethane and methylcyclohexane results for the parent sample were considered estimated, possibly biased low, and qualified "UJ" based upon low MS/MSD accuracy results. The remaining noncompliant compounds did not required validation qualification for the parent sample.

LCS Recoveries

All LCS recoveries were considered acceptable and within QC limits for all compounds with the exception of the high LCS recovery for 1,2,3-trichlorobenzene (136%R; 58-130%R) associated with sample MW-5DL. Validation qualification was not required since this compound was not detected in this sample.

Blank Contamination

The field equipment blank FB040813 associated with groundwater samples contained carbon disulfide at a concentration of 5.4 µg/L. Since this compound was not detected in the project samples, validation qualification was not required.

Initial and Continuing Calibrations

All initial calibration compounds were compliant with a minimum relative response factor (RRF) of 0.05 and a maximum percent relative standard deviation (%RSD) of 20% with the exception of acetone (20.3%RSD) and chloroethane (20.3%RSD) in the initial calibration associated with samples MW-5 and -5DL; bromomethane (22.1%RSD), acetone (23.7%RSD), and cyclohexane (42.6%RSD) in the initial calibration associated with all samples except MW-5, -5DL, and -3ADL; and dichlorodifluoromethane (25.4%RSD), chloromethane (24.8%RSD), chloroethane (23.3%RSD), 1,1,2-trichlorotrifluoroethane (20.2%RSD), cis-1,3-dichloropropene (21.6%RSD), 2-hexanone (27.9%RSD), dibromochloromethane (27.3%RSD), bromoform (32.5%RSD), and 1,2-dibromo-3-chloropropane (23.6%RSD) in the initial calibration associated with sample MW-3ADL. The results for these compounds were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples.

All continuing calibration compounds were compliant with a minimum RRF of 0.05 and a maximum percent difference (%D) within +_20% with the exception of methyl acetate (-21.25%D) and acetone (-24.14%D) in the continuing calibration associated with sample MW-5DL; cyclohexane (-20.59%D) in the continuing calibration associated with all samples except MW-5, -5DL, and -3ADL; and carbon tetrachloride (24.61%D), bromodichloromethane (28.04%D), 4-methyl-2-pentanone (29.2%D), trans-1,3-dichloropropene (35.28%D), cis-1,3-dichloropropene (26.97%D), 2-hexanone ( 35.74%D), dibromochloromethane (35.84%D), styrene (22.09%D), bromoform (34.04%D), and 1,4-dioxane (25%D) in the continuing calibration associated with MW-3ADL. Therefore, the sample results for these compounds were

considered estimated with positive results qualif ied "J" and nondetected results qualified "UJ" for the affected samples.

Usability

All volatile groundwater sample results were considered usable following data validation.

Summary

The quality assurance objectives f or measurement data included considerations f or precision, accuracy, representativeness, com pleteness, and com parability. The volatile groundwater data presented by Chem tech were 100% complete (i.e., usable). The validated volatile laboratory data are tabulated and presented in Attachment A.

### 2.1.2 Semivolatiles

The following items were reviewed for compliancy in the semivolatile analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- MS/MSD precision and accuracy
- LCS recoveries
- Laboratory method blank and field equipment blank contamination
- GC/MS instrument performance
- Initial and continuing calibrations
- Internal standard area counts and retention times
- Field duplicate precision
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered com pliant and acceptable in accordance with the validation protocols with the exception of MS/MSD preci sion and accuracy, LCS recoveries, initial and continuing calibrations, internal standard res ponses, and field duplicate precision as discussed below.

MS/MSD Precision and Accuracy

All MS/MSD precision (relative percent differen ce; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC lim its for designated spiked project samples with the exception of the low MS/MSD accuracy results for naphthalene and 4-nitroaniline; the less than 10% MS/MSD accuracy results for 3-nitroaniline and 3,3-dichlorobenzidine; and the high MS/MSD accuracy result for indeno(1,2,3-cd)pyrene during the

spiked analyses of sample MW-5. Therefore, results for those compounds that fell below the QC limit were considered estimated, possibly biased low, with positive results qualified "J" and nondetected results qualified "UJ" for the parent sample. However, the nondetected 3-nitroaniline and 3,3-dichlorobenzidine results were considered unusable and qualified "R" for the parent sample. Validation qualification of indeno(1,2,3-cd)pyrene was not required since this compound was not detected in the parent sample.

LCS Recoveries

All LCS recoveries were considered acceptable and within QC limits with the exception of the high LCS recovery for indeno(1,2,3-cd)pyrene (139%R; QC limit 45-125%R) associated with all groundwater samples. Validation qualification of the groundwater samples was not required since this compound was not detected.

Initial and Continuing Calibrations

All initial calibration compounds were compliant with a minimum relative response factor (RRF) of 0.05 and a maximum percent relative standard deviation (%RSD) of 20% with the exception of hexachlorocyclopentadiene (24.2%RSD), 2,4-dinitrophenol (47.3%RSD), 4-nitrophenol (20.3%RSD), pentachlorophenol (20.7%RSD), and 4,6-dinitro-2-methylphenol (32.1%RSD) in the initial calibration associated with samples MW-1, -5, and -9; 2,4-dinitrophenol (41.9%RSD), 4,6-dinitro-2-methylphenol (24.2%RSD), and pentachlorophenol (23.7%RSD) in the initial calibration associated with samples FB040813, MW-2, -3, -3A, -5DL, -7, and -4; hexachlorocyclopentadiene (36.7%RSD), 2,4-dinitrophenol (47.6%RSD), 4-nitrophenol (32.9%RSD), and 4,6-dinitro-2-methylphenol (28%RSD) in the initial calibration associated with samples MW-7DL, -7DL2, -3ADL, and -3ADL2; and benzaldehyde (22.5%RSD), hexachlorocyclopentadiene (24.9%RSD), 2,4-dinitrophenol (41.1%RSD), and 4-nitrophenol (21.0%RSD). The results for these compounds were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples.

All continuing calibration compounds were compliant with a minimum RRF of 0.05 and a maximum percent difference (%D) within +_20% with the exception of indeno(1,2,3-cd)pyrene (78.9%D), dibenzo(a,h)anthracene (36.9%D), and benzo(g,h,i)perylene (35.7%D) in the continuing calibration associated with samples MW-1, -5, and -9; 2,4-dinitrophenol (20.6%D) and acetophenone (22.8%D) in the continuing calibration associated with samples MW-2, -3, -3A, -5DL, and -7; 2,4-dinitrophenol (-25.4%D) in the continuing calibration associated with sample MW-4; and 4-nitrophenol (-30.2%D), di-n-octylphthalate (-23.5%D), dibenzo(a,h)anthracene (43.1%D), and benzo(g,h,i)perylene (49.2%D) in the continuing calibration of MW-3DL and -3ADL3. Therefore, the sample results for these compounds were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples.

Internal Standard Responses

All internal standard (IS) responses and retention times were within specified QC ranges based on associated calibration standards (i.e., sample's area count within -50% to +100% and retention times within ±0.5 minutes of the standard) with the exception of the low responses for the IS chrysene-d12 in samples MW-7DL2, -3ADL2, -7DL, -3ADL, -3DL, and -3ADL3; and the

low responses for the IS perylene-d12 in samples MW-3DL and -3ADL3. Validation qualification of these samples was not required since final data results were not affected.

Field Duplicate Precision

All field duplicate precision results were considered acceptable with the exception of the precision for acenaphthylene (53%RPD) associated with sample MW-3 and its field duplicate MW-3A. Therefore, the acenaphthylene results for these samples were considered estimated and qualified "J".

Usability

All semivolatile groundwater sample results were considered usable following data validation with the exception of certain nondetected results based upon poor MS/MSD recoveries.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The semivolatile groundwater data presented by Chemtech were 99.7% complete (i.e., usable). The validated semivolatile laboratory data are tabulated and presented in Attachment A.

### 2.1.3 Inorganics

The following items were reviewed for compliancy in the inorganics analysis:

- Custody documentation
- Holding times
- Initial and continuing calibration verifications
- Initial and continuing calibration blank, and laboratory preparation blank, and field equipment blank contamination
- Inductively coupled plasma (ICP) interference check sample (ICS)
- Matrix spike (MS) recoveries
- Laboratory duplicate precision
- Field duplicate precision
- Laboratory control sample (LCS) recoveries
- ICP serial dilutions
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of blank contamination, matrix spike recoveries, field duplicate precision, and serial dilutions as discussed below.

Blank Contamination

The field equipment blank FB040813 associated with the groundwater samples contained dissolved sodium and dissolved zinc at concentrations of 3160 and 26.9 µg/L, respectively. Therefore, all results for these analytes less than the validation action concentrations were considered not detected and qualified "U" for the affected samples.

Matrix Spike Recoveries

All matrix spike recoveries for all analytes were considered acceptable and within the 75-125%R QC limit with the exception of the matrix spike recoveries for aluminum (165.8%R, 146.7%R), cadmium (18.9%R, 17.7%R), chromium (50.1%R, 47.5%R), cobalt (72.3%R, 68.6%R), silver (49%R, 42.5%R), thallium (61.5%R, 57.8%R), copper (52.6%R, 49.6%R), iron (133%R), lead (51.9%R, 45.2%R), mercury (71.1%R, 72%R), nickel (63.9%R, 61%R), vanadium (62%R, 58.4%R), and zinc (55.6%R, 47.6%R) associated with all samples. Therefore, positive results for those analytes where matrix spike recoveries exceeded the QC limit were considered estimated, possibly biased high, and qualified "J" for the affected samples. Results for those analytes where matrix spike recoveries fell below the QC limit were considered estimated, possibly biased low, with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples. However, nondetected cadmium results were considered unusable and qualified "R" for the affected samples based upon less 30% matrix spike recoveries.

Field Duplicate Precision

All field duplicate precision results were considered acceptable for the field duplicate pair MW-3 and MW-3A with the exception of the precision for cyanide (129%RPD). Therefore, the cyanide results were considered estimated and qualified "J" for the affected parent sample and its field duplicate.

ICP Serial Dilutions

All serial dilution results for designated project samples were considered acceptable with a percent difference (%D) less than 10% for all ICP analytes with the exception of calcium (13.7%D), lead (11.7%D), magnesium (18.7%D), manganese (12.9%D), and sodium (16.3%D) associated with all samples. Therefore, positive results for these analytes were considered estimated and qualified "J" for the affected samples.

Usability

All inorganics groundwater sample results were considered usable following data validation with the exception of certain nondetected results based upon poor matrix spike recoveries.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The inorganics groundwater data presented by Chem tech were 97.2% complete (i.e., usable). The validated groundwater inorganics laboratory data are tabulated and presented in Attachment A.

# ATTACHMENT A

# VALIDATED LABORATORY DATA

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>SDG: E1768 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-1<br>MW-1-20130405<br>E1768-13<br>CTECH<br>E1768<br>WATER<br>4/5/2013 13:00<br>4/30/2013 | MW-2<br>MW-2-20130408<br>E1768-07<br>CTECH<br>E1768<br>WATER<br>4/8/2013 8:22<br>4/30/2013 | MW-3<br>MW-3-20130408<br>E1768-08<br>CTECH<br>E1768<br>WATER<br>4/8/2013 9:54<br>4/30/2013 | Dup of MW-3<br>MW-3A<br>MW-3A-20130408<br>E1768-09<br>CTECH<br>E1768<br>WATER<br>4/8/2013 9:54<br>4/30/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | VOLATILES | | | | | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | ug/l | 0.4 U | 0.4 U | 0.4 U | 0.4 U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | ug/l | 0.31 U | 0.31 U | 0.31 U | 0.31 U |
| 76-13-1 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | ug/l | 0.45 U | 0.45 U | 0.45 U | 0.45 U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | ug/l | 0.38 U | 0.38 U | 0.38 U | 0.38 U |
| 75-34-3 | 1,1-DICHLOROETHANE | ug/l | 0.36 U | 0.36 U | 0.36 U | 0.36 U |
| 75-35-4 | 1,1-DICHLOROETHENE | ug/l | 0.47 U | 0.47 U | 0.47 U | 0.47 U |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | ug/l | 0.46 U | 0.46 U | 0.46 U | 0.46 U |
| 106-93-4 | 1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE) | ug/l | 0.41 U | 0.41 U | 0.41 U | 0.41 U |
| 95-50-1 | 1,2-DICHLOROBENZENE | ug/l | 0.45 U | 0.45 U | 0.45 U | 0.45 U |
| 107-06-2 | 1,2-DICHLOROETHANE | ug/l | 0.48 U | 0.48 U | 0.48 U | 0.48 U |
| 78-87-5 | 1,2-DICHLOROPROPANE | ug/l | 0.46 U | 0.46 U | 0.46 U | 0.46 U |
| 541-73-1 | 1,3-DICHLOROBENZENE | ug/l | 0.43 U | 0.43 U | 0.43 U | 0.43 U |
| 106-46-7 | 1,4-DICHLOROBENZENE | ug/l | 0.32 U | 0.32 U | 0.32 U | 0.32 U |
| 591-78-6 | 2-HEXANONE | ug/l | 1.9 U | 1.9 U | 1.9 U | 1.9 U |
| 67-64-1 | ACETONE | ug/l | 7.8 J | 8.7 J | 0.5 UJ | 0.5 UJ |
| 71-43-2 | BENZENE | ug/l | 0.32 U | 0.32 U | 360 | 460 |
| 74-97-5 | BROMOCHLOROMETHANE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 75-27-4 | BROMODICHLOROMETHANE | ug/l | 0.36 U | 0.36 U | 0.36 U | 0.36 U |
| 75-25-2 | BROMOFORM | ug/l | 0.47 U | 0.47 U | 0.47 U | 0.47 U |
| 74-83-9 | BROMOMETHANE | ug/l | 0.2 UJ | 0.2 UJ | 0.2 UJ | 0.2 UJ |
| 75-15-0 | CARBON DISULFIDE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 56-23-5 | CARBON TETRACHLORIDE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 108-90-7 | CHLOROBENZENE | ug/l | 0.49 U | 0.49 U | 0.49 U | 0.49 U |
| 75-00-3 | CHLOROETHANE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 67-66-3 | CHLOROFORM | ug/l | 0.34 U | 0.34 U | 0.34 U | 0.34 U |
| 74-87-3 | CHLOROMETHANE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | ug/l | 0.35 U | 0.49 J | 0.35 U | 0.35 U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | ug/l | 0.31 U | 0.31 U | 0.31 U | 0.31 U |
| 110-82-7 | CYCLOHEXANE | ug/l | 0.2 UJ | 0.2 UJ | 1.5 J | 2.1 J |
| 124-48-1 | DIBROMOCHLOROMETHANE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 75-71-8 | DICHLORODIFLUOROMETHANE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 100-41-4 | ETHYLBENZENE | ug/l | 0.2 U | 0.2 U | 160 | 180 |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | ug/l | 0.45 U | 0.45 U | 3.9 J | 4.6 J |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | ug/l | 0.95 U | 0.95 U | 300 | 370 |
| 79-20-9 | METHYL ACETATE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | ug/l | 1.3 U | 1.3 U | 1.3 U | 1.3 U |
| 108-10-1 | METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE) | ug/l | 2.1 U | 2.1 U | 2.1 U | 2.1 U |
| 108-87-2 | METHYLCYCLOHEXANE | ug/l | 0.2 U | 0.2 U | 3.1 J | 4.2 J |
| 75-09-2 | METHYLENE CHLORIDE | ug/l | 0.41 U | 0.41 U | 0.41 U | 0.41 U |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | ug/l | 0.43 U | 0.43 U | 160 | 180 |
| 100-42-5 | STYRENE | ug/l | 0.36 U | 0.36 U | 41.5 | 42.6 |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | ug/l | 0.35 U | 0.35 U | 1.7 J | 1.8 J |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | ug/l | 0.27 U | 0.27 U | 0.27 U | 0.27 U |
| 108-88-3 | TOLUENE | ug/l | 0.37 U | 0.37 U | 260 | 310 |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | ug/l | 0.41 U | 0.41 U | 0.41 U | 0.41 U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | ug/l | 0.29 U | 0.29 U | 0.29 U | 0.29 U |
| 79-01-6 | TRICHLOROETHYLENE (TCE) | ug/l | 0.28 U | 0.28 U | 0.28 U | 0.28 U |
| 75-69-4 | TRICHLOROFLUOROMETHANE | ug/l | 0.35 U | 0.35 U | 0.35 U | 0.35 U |
| 75-01-4 | VINYL CHLORIDE | ug/l | 0.34 U | 0.34 U | 0.34 U | 0.34 U |
| 123-91-1 | 1,4-DIOXANE (P-DIOXANE) | ug/l | 100 U | 100 U | 100 U | 100 U |

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>SDG: E1768 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-1<br>MW-1-20130405<br>E1768-13<br>CTECH<br>E1768<br>WATER<br>4/5/2013 13:00<br>4/30/2013 | MW-2<br>MW-2-20130408<br>E1768-07<br>CTECH<br>E1768<br>WATER<br>4/8/2013 8:22<br>4/30/2013 | MW-3<br>MW-3-20130408<br>E1768-08<br>CTECH<br>E1768<br>WATER<br>4/8/2013 9:54<br>4/30/2013 | Dup of MW-3<br>MW-3A<br>MW-3A-20130408<br>E1768-09<br>CTECH<br>E1768<br>WATER<br>4/8/2013 9:54<br>4/30/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | SEMIVOLATILES | | | | | |
| 95-94-3 | 1,2,4,5-TETRACHLOROBENZENE | ug/l | 0.22 U | 0.202 U | 0.204 U | 0.202 U |
| 58-90-2 | 2,3,4,6-TETRACHLOROPHENOL | ug/l | 0.22 U | 0.202 U | 0.204 U | 0.202 U |
| 95-95-4 | 2,4,5-TRICHLOROPHENOL | ug/l | 0.45 U | 0.404 U | 0.408 U | 0.404 U |
| 88-06-2 | 2,4,6-TRICHLOROPHENOL | ug/l | 0.63 U | 0.566 U | 0.571 U | 0.566 U |
| 120-83-2 | 2,4-DICHLOROPHENOL | ug/l | 0.74 U | 0.667 U | 0.673 U | 0.667 U |
| 105-67-9 | 2,4-DIMETHYLPHENOL | ug/l | 0.8 U | 0.717 U | 0.724 U | 0.717 U |
| 51-28-5 | 2,4-DINITROPHENOL | ug/l | 2.4 UJ | 2.1 UJ | 2.1 UJ | 2.1 UJ |
| 121-14-2 | 2,4-DINITROTOLUENE | ug/l | 1.2 U | 1 U | 1.1 U | 1 U |
| 606-20-2 | 2,6-DINITROTOLUENE | ug/l | 0.36 U | 0.323 U | 0.327 U | 0.323 U |
| 91-58-7 | 2-CHLORONAPHTHALENE | ug/l | 0.18 U | 0.162 U | 0.163 U | 0.162 U |
| 95-57-8 | 2-CHLOROPHENOL | ug/l | 0.61 U | 0.545 U | 0.551 U | 0.545 U |
| 91-57-6 | 2-METHYLNAPHTHALENE | ug/l | 0.36 U | 0.323 U | 630 | 630 |
| 95-48-7 | 2-METHYLPHENOL (O-CRESOL) | ug/l | 0.27 U | 0.242 U | 0.245 U | 0.242 U |
| 88-74-4 | 2-NITROANILINE | ug/l | 0.55 U | 0.495 U | 0.5 U | 0.495 U |
| 88-75-5 | 2-NITROPHENOL | ug/l | 0.58 U | 0.525 U | 0.531 U | 0.525 U |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | ug/l | 2.2 U | 2 U | 2 U | 2 U |
| MEPH3MEPH | 3+4-Methylphenols | ug/l | 0.43 U | 0.384 U | 0.388 U | 0.384 U |
| 99-09-2 | 3-NITROANILINE | ug/l | 1.2 U | 1.1 U | 1.1 U | 1.1 U |
| 534-52-1 | 4,6-DINITRO-2-METHYLPHENOL | ug/l | 0.83 UJ | 0.747 UJ | 0.755 UJ | 0.747 UJ |
| 101-55-3 | 4-BROMOPHENYL PHENYL ETHER | ug/l | 0.26 U | 0.232 U | 0.235 U | 0.232 U |
| 59-50-7 | 4-CHLORO-3-METHYLPHENOL | ug/l | 0.45 U | 0.404 U | 0.408 U | 0.404 U |
| 106-47-8 | 4-CHLOROANILINE | ug/l | 3.2 U | 2.9 U | 2.9 U | 2.9 U |
| 7005-72-3 | 4-CHLOROPHENYL PHENYL ETHER | ug/l | 0.24 U | 0.212 U | 0.214 U | 0.212 U |
| 100-01-6 | 4-NITROANILINE | ug/l | 1.5 U | 1.4 U | 1.4 U | 1.4 U |
| 100-02-7 | 4-NITROPHENOL | ug/l | 2.2 U | 2 U | 2 U | 2 U |
| 83-32-9 | ACENAPHTHENE | ug/l | 0.24 U | 0.212 U | 22.5 | 32.2 |
| 208-96-8 | ACENAPHTHYLENE | ug/l | 0.79 U | 0.707 U | 75.6 J | 130 J |
| 98-86-2 | ACETOPHENONE | ug/l | 0.16 U | 0.141 UJ | 4.8 J | 8 J |
| 120-12-7 | ANTHRACENE | ug/l | 0.18 U | 0.162 U | 21.9 | 27.4 |
| 1912-24-9 | ATRAZINE | ug/l | 0.45 U | 0.404 U | 0.408 U | 0.404 U |
| 100-52-7 | BENZALDEHYDE | ug/l | 0.87 U | 0.778 U | 0.786 U | 0.778 U |
| 56-55-3 | BENZO(A)ANTHRACENE | ug/l | 0.18 U | 0.162 U | 12.1 | 12.2 |
| 50-32-8 | BENZO(A)PYRENE | ug/l | 0.16 U | 0.141 U | 8.5 J | 8.5 J |
| 205-99-2 | BENZO(B)FLUORANTHENE | ug/l | 0.33 U | 0.293 U | 6.4 J | 6.5 J |
| 191-24-2 | BENZO(G,H,I)PERYLENE | ug/l | 0.33 UJ | 0.293 U | 0.296 U | 0.293 U |
| 207-08-9 | BENZO(K)FLUORANTHENE | ug/l | 0.2 U | 0.182 U | 0.184 U | 0.182 U |
| 85-68-7 | BENZYL BUTYL PHTHALATE | ug/l | 0.21 U | 0.192 U | 0.194 U | 0.192 U |
| 92-52-4 | BIPHENYL (DIPHENYL) | ug/l | 0.17 U | 0.152 U | 25.2 | 36.2 |
| 111-91-1 | BIS(2-CHLOROETHOXY) METHANE | ug/l | 0.62 U | 0.556 U | 0.561 U | 0.556 U |
| 111-44-4 | BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER) | ug/l | 0.62 U | 0.556 U | 0.561 U | 0.556 U |
| 108-60-1 | BIS(2-CHLOROISOPROPYL) ETHER | ug/l | 0.19 U | 0.172 U | 0.173 U | 0.172 U |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | ug/l | 0.18 U | 0.162 U | 0.163 U | 0.162 U |
| 105-60-2 | CAPROLACTAM | ug/l | 2.2 U | 2 U | 2 U | 2 U |
| 86-74-8 | CARBAZOLE | ug/l | 0.25 U | 0.222 U | 5.3 J | 8.4 J |
| 218-01-9 | CHRYSENE | ug/l | 0.2 U | 0.182 U | 12.3 | 12.2 |
| 53-70-3 | DIBENZ(A,H)ANTHRACENE | ug/l | 0.47 UJ | 0.424 U | 0.429 U | 0.424 U |
| 132-64-9 | DIBENZOFURAN | ug/l | 0.27 U | 0.242 U | 6.1 J | 8.9 J |
| 84-66-2 | DIETHYL PHTHALATE | ug/l | 0.43 U | 0.384 U | 0.388 U | 0.384 U |
| 131-11-3 | DIMETHYL PHTHALATE | ug/l | 0.25 U | 0.222 U | 0.224 U | 0.222 U |
| 84-74-2 | DI-N-BUTYL PHTHALATE | ug/l | 2.2 U | 2 U | 2 U | 2 U |
| 117-84-0 | DI-N-OCTYLPHTHALATE | ug/l | 0.57 U | 0.515 U | 0.52 U | 0.515 U |
| 206-44-0 | FLUORANTHENE | ug/l | 0.45 U | 0.404 U | 17.8 | 19.9 |
| 86-73-7 | FLUORENE | ug/l | 0.35 U | 0.313 U | 47.3 | 65.1 |
| 118-74-1 | HEXACHLOROBENZENE | ug/l | 0.2 U | 0.182 U | 0.184 U | 0.182 U |
| 87-68-3 | HEXACHLOROBUTADIENE | ug/l | 0.28 U | 0.253 U | 0.255 U | 0.253 U |
| 77-47-4 | HEXACHLOROCYCLOPENTADIENE | ug/l | 0.27 UJ | 0.242 U | 0.245 U | 0.242 U |
| 67-72-1 | HEXACHLOROETHANE | ug/l | 0.28 U | 0.253 U | 0.255 U | 0.253 U |
| 193-39-5 | INDENO(1,2,3-C,D)PYRENE | ug/l | 0.17 UJ | 0.152 U | 0.153 U | 0.152 U |
| 78-59-1 | ISOPHORONE | ug/l | 0.34 U | 0.303 U | 0.306 U | 0.303 U |
| 91-20-3 | NAPHTHALENE | ug/l | 0.13 U | 0.121 U | 2300 | 3900 |
| 98-95-3 | NITROBENZENE | ug/l | 0.76 U | 0.687 U | 0.694 U | 0.687 U |
| 621-64-7 | N-NITROSODI-N-PROPYLAMINE | ug/l | 0.22 U | 0.202 U | 0.204 U | 0.202 U |
| 86-30-6 | N-NITROSODIPHENYLAMINE | ug/l | 0.67 U | 0.606 U | 0.612 U | 0.606 U |
| 87-86-5 | PENTACHLOROPHENOL | ug/l | 1.9 UJ | 1.7 UJ | 1.8 UJ | 1.7 UJ |
| 85-01-8 | PHENANTHRENE | ug/l | 0.29 U | 0.263 U | 72.9 | 110 |
| 108-95-2 | PHENOL | ug/l | 0.24 U | 0.212 U | 0.214 U | 0.212 U |
| 129-00-0 | PYRENE | ug/l | 0.22 U | 0.202 U | 28.4 | 31.6 |

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>SDG: E1768 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-1<br>MW-1-20130405<br>E1768-13<br>CTECH<br>E1768<br>WATER<br>4/5/2013 13:00<br>4/30/2013 | MW-2<br>MW-2-20130408<br>E1768-07<br>CTECH<br>E1768<br>WATER<br>4/8/2013 8:22<br>4/30/2013 | MW-3<br>MW-3-20130408<br>E1768-08<br>CTECH<br>E1768<br>WATER<br>4/8/2013 9:54<br>4/30/2013 | Dup of MW-3<br>MW-3A<br>MW-3A-20130408<br>E1768-09<br>CTECH<br>E1768<br>WATER<br>4/8/2013 9:54<br>4/30/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | TOTAL METALS | | | | | |
| 7429-90-5 | ALUMINUM | ug/l | 2380 J | 368 J | 96.1 J | 81.4 J |
| 7440-36-0 | ANTIMONY | ug/l | 8 U | 9.48 J | 8 U | 8 U |
| 7440-38-2 | ARSENIC | ug/l | 7.8 J | 4.2 U | 4.2 U | 4.25 J |
| 7440-39-3 | BARIUM | ug/l | 129 | 1990 | 134 | 128 |
| 7440-41-7 | BERYLLIUM | ug/l | 0.7 U | 0.7 U | 0.7 U | 0.7 U |
| 7440-43-9 | CADMIUM | ug/l | R | 1.22 J | 0.52 J | R |
| 7440-70-2 | CALCIUM | ug/l | 59000 J | 262000 J | 81900 J | 77000 J |
| 7440-47-3 | CHROMIUM, TOTAL | ug/l | 37.6 J | 1.1 UJ | 1.1 UJ | 1.1 UJ |
| 7440-48-4 | COBALT | ug/l | 5.8 UJ | 6.91 J | 5.8 UJ | 5.8 UJ |
| 7440-50-8 | COPPER | ug/l | 7.59 J | 27.4 J | 7.59 J | 6.54 J |
| 7439-89-6 | IRON | ug/l | 8770 | 6860 | 1600 | 1590 |
| 7439-92-1 | LEAD | ug/l | 6.36 J | 10.1 J | 40.3 J | 37.6 J |
| 7439-95-4 | MAGNESIUM | ug/l | 13400 J | 33200 J | 22600 J | 21000 J |
| 7439-96-5 | MANGANESE | ug/l | 2200 J | 2160 J | 1500 J | 1400 J |
| 7439-97-6 | MERCURY | ug/l | 0.092 U | 0.092 U | 0.092 U | 0.092 U |
| 7440-02-0 | NICKEL | ug/l | 20.9 J | 4.2 UJ | 5.62 J | 5.4 J |
| 7440-09-7 | POTASSIUM | ug/l | 6390 | 113000 | 15500 | 14300 |
| 7782-49-2 | SELENIUM | ug/l | 4.8 U | 4.8 U | 4.8 U | 4.8 U |
| 7440-22-4 | SILVER | ug/l | 1.5 UJ | 1.5 UJ | 1.5 UJ | 1.5 UJ |
| 7440-23-5 | SODIUM | ug/l | 272000 J | 39700000 J | 4620000 J | 5420000 J |
| 7440-28-0 | THALLIUM | ug/l | 2.4 UJ | 2.4 UJ | 2.4 UJ | 2.4 UJ |
| 7440-62-2 | VANADIUM | ug/l | 6.1 UJ | 6.1 UJ | 6.1 UJ | 6.1 UJ |
| 7440-66-6 | ZINC | ug/l | 18.4 J | 35.4 J | 20.8 J | 21.1 J |
| | DISSOLVED METALS | | | | | |
| 7429-90-5 | ALUMINUM | ug/l | 6.5 UJ | | | |
| 7440-36-0 | ANTIMONY | ug/l | 8 U | | | |
| 7440-38-2 | ARSENIC | ug/l | 4.2 U | | | |
| 7440-39-3 | BARIUM | ug/l | 64.9 | | | |
| 7440-41-7 | BERYLLIUM | ug/l | 0.7 U | | | |
| 7440-43-9 | CADMIUM | ug/l | R | | | |
| 7440-70-2 | CALCIUM | ug/l | 54500 J | | | |
| 7440-47-3 | CHROMIUM, TOTAL | ug/l | 1.1 UJ | | | |
| 7440-48-4 | COBALT | ug/l | 5.8 UJ | | | |
| 7440-50-8 | COPPER | ug/l | 2 UJ | | | |
| 7439-89-6 | IRON | ug/l | 20.4 U | | | |
| 7439-92-1 | LEAD | ug/l | 2.6 UJ | | | |
| 7439-95-4 | MAGNESIUM | ug/l | 10700 J | | | |
| 7439-96-5 | MANGANESE | ug/l | 680 J | | | |
| 7439-97-6 | MERCURY | ug/l | 0.092 U | | | |
| 7440-02-0 | NICKEL | ug/l | 4.2 UJ | | | |
| 7440-09-7 | POTASSIUM | ug/l | 6360 | | | |
| 7782-49-2 | SELENIUM | ug/l | 4.8 U | | | |
| 7440-22-4 | SILVER | ug/l | 1.5 UJ | | | |
| 7440-23-5 | SODIUM | ug/l | 271000 J | | | |
| 7440-28-0 | THALLIUM | ug/l | 2.4 UJ | | | |
| 7440-62-2 | VANADIUM | ug/l | 6.1 UJ | | | |
| 7440-66-6 | ZINC | ug/l | 9.09 J | | | |
| | OTHER | | | | | |
| 57-12-5 | CYANIDE | ug/l | 3 U | 224 | 36 J | 166 J |

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>SDG: E1768 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-4<br>MW-4-20130408<br>E1768-06<br>CTECH<br>E1768<br>WATER<br>4/8/2013 8:40<br>4/30/2013 | MW-5<br>MW-5-20130405<br>E1768-03<br>CTECH<br>E1768<br>WATER<br>4/5/2013 14:10<br>4/30/2013 | MW-7<br>MW-7-20130404<br>E1768-12<br>CTECH<br>E1768<br>WATER<br>4/4/2013 12:32<br>4/30/2013 | MW-9<br>MW-9-20130405<br>E1768-01<br>CTECH<br>E1768<br>WATER<br>4/5/2013 10:35<br>4/30/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | VOLATILES | | | | | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | ug/l | 0.4 U | 0.4 U | 0.4 U | 0.4 U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | ug/l | 0.31 U | 0.31 U | 0.31 U | 0.31 U |
| 76-13-1 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | ug/l | 0.45 U | 0.45 U | 0.45 U | 0.45 U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | ug/l | 0.38 U | 0.38 U | 0.38 U | 0.38 U |
| 75-34-3 | 1,1-DICHLOROETHANE | ug/l | 0.36 U | 0.36 U | 0.36 U | 0.36 U |
| 75-35-4 | 1,1-DICHLOROETHENE | ug/l | 0.47 U | 0.47 U | 0.47 U | 0.47 U |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | ug/l | 0.46 U | 0.46 U | 0.46 U | 0.46 U |
| 106-93-4 | 1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE) | ug/l | 0.41 U | 0.41 U | 0.41 U | 0.41 U |
| 95-50-1 | 1,2-DICHLOROBENZENE | ug/l | 0.45 U | 0.45 U | 0.45 U | 0.45 U |
| 107-06-2 | 1,2-DICHLOROETHANE | ug/l | 0.48 U | 0.48 U | 0.48 U | 0.48 U |
| 78-87-5 | 1,2-DICHLOROPROPANE | ug/l | 0.46 U | 0.46 U | 0.46 U | 0.46 U |
| 541-73-1 | 1,3-DICHLOROBENZENE | ug/l | 0.43 U | 0.43 U | 0.43 U | 0.43 U |
| 106-46-7 | 1,4-DICHLOROBENZENE | ug/l | 0.32 U | 0.32 U | 0.32 U | 0.32 U |
| 591-78-6 | 2-HEXANONE | ug/l | 1.9 U | 1.9 U | 1.9 U | 1.9 U |
| 67-64-1 | ACETONE | ug/l | 81.1 J | 320 J | 0.5 UJ | 0.5 UJ |
| 71-43-2 | BENZENE | ug/l | 0.32 U | 35.8 | 1200 | 0.32 U |
| 74-97-5 | BROMOCHLOROMETHANE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 75-27-4 | BROMODICHLOROMETHANE | ug/l | 0.36 U | 0.36 U | 0.36 U | 0.36 U |
| 75-25-2 | BROMOFORM | ug/l | 0.47 U | 0.47 U | 0.47 U | 0.47 U |
| 74-83-9 | BROMOMETHANE | ug/l | 0.2 UJ | 0.2 UJ | 0.2 UJ | 0.2 UJ |
| 75-15-0 | CARBON DISULFIDE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 56-23-5 | CARBON TETRACHLORIDE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 108-90-7 | CHLOROBENZENE | ug/l | 0.49 U | 0.49 U | 0.49 U | 0.49 U |
| 75-00-3 | CHLOROETHANE | ug/l | 0.2 U | 0.2 UJ | 0.2 U | 0.2 U |
| 67-66-3 | CHLOROFORM | ug/l | 0.34 U | 0.34 U | 0.34 U | 0.34 U |
| 74-87-3 | CHLOROMETHANE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | ug/l | 0.35 U | 0.35 U | 0.35 U | 0.35 U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | ug/l | 0.31 U | 0.31 U | 0.31 U | 0.31 U |
| 110-82-7 | CYCLOHEXANE | ug/l | 0.2 UJ | 0.2 U | 0.2 UJ | 0.2 UJ |
| 124-48-1 | DIBROMOCHLOROMETHANE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 75-71-8 | DICHLORODIFLUOROMETHANE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 100-41-4 | ETHYLBENZENE | ug/l | 0.2 U | 12.1 | 90 | 0.2 U |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | ug/l | 0.45 U | 1.8 J | 9.8 | 0.45 U |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | ug/l | 0.95 U | 7.7 J | 180 | 0.95 U |
| 79-20-9 | METHYL ACETATE | ug/l | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | ug/l | 1.3 U | 29.2 J | 1.3 U | 1.3 U |
| 108-10-1 | METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE) | ug/l | 2.1 U | 200 J | 2.1 U | 2.1 U |
| 108-87-2 | METHYLCYCLOHEXANE | ug/l | 0.2 U | 0.2 UJ | 0.44 J | 0.2 U |
| 75-09-2 | METHYLENE CHLORIDE | ug/l | 0.41 U | 0.41 U | 0.41 U | 0.41 U |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | ug/l | 0.43 U | 8.1 | 130 | 0.43 U |
| 100-42-5 | STYRENE | ug/l | 0.36 U | 0.49 J | 0.36 U | 0.36 U |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | ug/l | 0.35 U | 0.35 U | 1.6 J | 1.6 J |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | ug/l | 0.27 U | 0.27 U | 0.27 U | 0.27 U |
| 108-88-3 | TOLUENE | ug/l | 0.37 U | 36.9 | 62.8 | 0.37 U |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | ug/l | 0.41 U | 0.41 U | 0.41 U | 0.41 U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | ug/l | 0.29 U | 0.29 U | 0.29 U | 0.29 U |
| 79-01-6 | TRICHLOROETHYLENE (TCE) | ug/l | 0.28 U | 0.28 U | 0.28 U | 0.28 U |
| 75-69-4 | TRICHLOROFLUOROMETHANE | ug/l | 0.35 U | 0.35 U | 0.35 U | 0.35 U |
| 75-01-4 | VINYL CHLORIDE | ug/l | 0.34 U | 0.34 U | 0.34 U | 0.34 U |
| 123-91-1 | 1,4-DIOXANE (P-DIOXANE) | ug/l | 100 U | 100 U | 100 U | 100 U |

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>SDG: E1768 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-4<br>MW-4-20130408<br>E1768-06<br>CTECH<br>E1768<br>WATER<br>4/8/2013 8:40<br>4/30/2013 | MW-5<br>MW-5-20130405<br>E1768-03<br>CTECH<br>E1768<br>WATER<br>4/5/2013 14:10<br>4/30/2013 | MW-7<br>MW-7-20130404<br>E1768-12<br>CTECH<br>E1768<br>WATER<br>4/4/2013 12:32<br>4/30/2013 | MW-9<br>MW-9-20130405<br>E1768-01<br>CTECH<br>E1768<br>WATER<br>4/5/2013 10:35<br>4/30/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | SEMIVOLATILES | | | | | |
| 95-94-3 | 1,2,4,5-TETRACHLOROBENZENE | ug/l | 0.4 U | 0.253 U | 0.206 U | 0.21 U |
| 58-90-2 | 2,3,4,6-TETRACHLOROPHENOL | ug/l | 0.4 U | 0.253 U | 0.206 U | 0.21 U |
| 95-95-4 | 2,4,5-TRICHLOROPHENOL | ug/l | 0.8 U | 0.506 U | 0.412 U | 0.43 U |
| 88-06-2 | 2,4,6-TRICHLOROPHENOL | ug/l | 1.1 U | 0.709 U | 0.577 U | 0.6 U |
| 120-83-2 | 2,4-DICHLOROPHENOL | ug/l | 1.3 U | 0.835 U | 0.68 U | 0.7 U |
| 105-67-9 | 2,4-DIMETHYLPHENOL | ug/l | 1.4 U | 0.899 U | 0.732 U | 0.76 U |
| 51-28-5 | 2,4-DINITROPHENOL | ug/l | 4.2 UJ | 2.7 UJ | 2.2 UJ | 2.2 UJ |
| 121-14-2 | 2,4-DINITROTOLUENE | ug/l | 2.1 U | 1.3 U | 1.1 U | 1.1 U |
| 606-20-2 | 2,6-DINITROTOLUENE | ug/l | 0.64 U | 0.405 U | 0.33 U | 0.34 U |
| 91-58-7 | 2-CHLORONAPHTHALENE | ug/l | 0.32 U | 0.203 U | 0.165 U | 0.17 U |
| 95-57-8 | 2-CHLOROPHENOL | ug/l | 1.1 U | 0.684 U | 0.557 U | 0.57 U |
| 91-57-6 | 2-METHYLNAPHTHALENE | ug/l | 0.64 U | 42.1 | 340 | 0.34 U |
| 95-48-7 | 2-METHYLPHENOL (O-CRESOL) | ug/l | 0.48 U | 0.304 U | 0.247 U | 0.26 U |
| 88-74-4 | 2-NITROANILINE | ug/l | 0.98 U | 0.62 U | 0.505 U | 0.52 U |
| 88-75-5 | 2-NITROPHENOL | ug/l | 1 U | 0.658 U | 0.536 U | 0.55 U |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | ug/l | 4 U | R | 2.1 U | 2.1 U |
| MEPH3MEPH | 3+4-Methylphenols | ug/l | 0.76 U | 0.481 U | 0.392 U | 0.4 U |
| 99-09-2 | 3-NITROANILINE | ug/l | 2.2 U | R | 1.1 U | 1.2 U |
| 534-52-1 | 4,6-DINITRO-2-METHYLPHENOL | ug/l | 1.5 UJ | 0.937 UJ | 0.763 UJ | 0.79 UJ |
| 101-55-3 | 4-BROMOPHENYL PHENYL ETHER | ug/l | 0.46 U | 0.291 U | 0.237 U | 0.24 U |
| 59-50-7 | 4-CHLORO-3-METHYLPHENOL | ug/l | 0.8 U | 0.506 U | 0.412 U | 0.43 U |
| 106-47-8 | 4-CHLOROANILINE | ug/l | 5.7 U | 3.6 U | 2.9 U | 3 U |
| 7005-72-3 | 4-CHLOROPHENYL PHENYL ETHER | ug/l | 0.42 U | 0.266 U | 0.216 U | 0.22 U |
| 100-01-6 | 4-NITROANILINE | ug/l | 2.7 U | 1.7 UJ | 1.4 U | 1.4 U |
| 100-02-7 | 4-NITROPHENOL | ug/l | 4 U | 2.5 U | 2.1 U | 2.1 U |
| 83-32-9 | ACENAPHTHENE | ug/l | 0.42 U | 42.6 | 47.1 | 0.22 U |
| 208-96-8 | ACENAPHTHYLENE | ug/l | 1.4 U | 18.1 | 38.6 | 0.74 U |
| 98-86-2 | ACETOPHENONE | ug/l | 0.28 U | 0.177 U | 0.144 UJ | 0.15 U |
| 120-12-7 | ANTHRACENE | ug/l | 0.32 U | 0.203 U | 26.2 | 0.17 U |
| 1912-24-9 | ATRAZINE | ug/l | 0.8 U | 0.506 U | 0.412 U | 0.43 U |
| 100-52-7 | BENZALDEHYDE | ug/l | 1.5 U | 0.975 U | 0.794 U | 0.82 U |
| 56-55-3 | BENZO(A)ANTHRACENE | ug/l | 0.32 U | 0.203 U | 14.8 | 0.17 U |
| 50-32-8 | BENZO(A)PYRENE | ug/l | 0.28 U | 0.177 U | 9.7 J | 0.15 U |
| 205-99-2 | BENZO(B)FLUORANTHENE | ug/l | 0.58 U | 0.367 U | 8.2 J | 0.31 U |
| 191-24-2 | BENZO(G,H,I)PERYLENE | ug/l | 0.58 U | 0.367 UJ | 0.299 U | 0.31 UJ |
| 207-08-9 | BENZO(K)FLUORANTHENE | ug/l | 0.36 U | 0.228 U | 0.186 U | 0.19 U |
| 85-68-7 | BENZYL BUTYL PHTHALATE | ug/l | 0.38 U | 0.241 U | 0.196 U | 0.2 U |
| 92-52-4 | BIPHENYL (DIPHENYL) | ug/l | 0.3 U | 19.6 | 25.7 | 0.16 U |
| 111-91-1 | BIS(2-CHLOROETHOXY) METHANE | ug/l | 1.1 U | 0.696 U | 0.567 U | 0.59 U |
| 111-44-4 | BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER) | ug/l | 1.1 U | 0.696 U | 0.567 U | 0.59 U |
| 108-60-1 | BIS(2-CHLOROISOPROPYL) ETHER | ug/l | 0.34 U | 0.215 U | 0.175 U | 0.18 U |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | ug/l | 0.32 U | 0.203 U | 0.165 U | 0.17 U |
| 105-60-2 | CAPROLACTAM | ug/l | 4 U | 2.5 U | 2.1 U | 2.1 U |
| 86-74-8 | CARBAZOLE | ug/l | 0.44 U | 0.278 U | 5.5 J | 0.23 U |
| 218-01-9 | CHRYSENE | ug/l | 0.36 U | 0.228 U | 14.6 | 0.19 U |
| 53-70-3 | DIBENZ(A,H)ANTHRACENE | ug/l | 0.84 U | 0.532 UJ | 0.433 U | 0.45 UJ |
| 132-64-9 | DIBENZOFURAN | ug/l | 0.48 U | 0.304 U | 6.3 J | 0.26 U |
| 84-66-2 | DIETHYL PHTHALATE | ug/l | 0.76 U | 0.481 U | 0.392 U | 0.4 U |
| 131-11-3 | DIMETHYL PHTHALATE | ug/l | 0.44 U | 0.278 U | 0.227 U | 0.23 U |
| 84-74-2 | DI-N-BUTYL PHTHALATE | ug/l | 4 U | 2.5 U | 2.1 U | 2.1 U |
| 117-84-0 | DI-N-OCTYLPHTHALATE | ug/l | 1 U | 0.646 U | 0.526 U | 0.54 U |
| 206-44-0 | FLUORANTHENE | ug/l | 0.8 U | 0.506 U | 18.8 | 0.43 U |
| 86-73-7 | FLUORENE | ug/l | 0.62 U | 18 | 46.3 | 0.33 U |
| 118-74-1 | HEXACHLOROBENZENE | ug/l | 0.36 U | 0.228 U | 0.186 U | 0.19 U |
| 87-68-3 | HEXACHLOROBUTADIENE | ug/l | 0.5 U | 0.316 U | 0.258 U | 0.27 U |
| 77-47-4 | HEXACHLOROCYCLOPENTADIENE | ug/l | 0.48 U | 0.304 UJ | 0.247 U | 0.26 UJ |
| 67-72-1 | HEXACHLOROETHANE | ug/l | 0.5 U | 0.316 U | 0.258 U | 0.27 U |
| 193-39-5 | INDENO(1,2,3-C,D)PYRENE | ug/l | 0.3 U | 0.19 UJ | 0.155 U | 0.16 UJ |
| 78-59-1 | ISOPHORONE | ug/l | 0.6 U | 0.38 U | 0.309 U | 0.32 U |
| 91-20-3 | NAPHTHALENE | ug/l | 0.24 U | 240 J | 1600 | 0.13 U |
| 98-95-3 | NITROBENZENE | ug/l | 1.4 U | 0.861 U | 0.701 U | 0.72 U |
| 621-64-7 | N-NITROSODI-N-PROPYLAMINE | ug/l | 0.4 U | 0.253 U | 0.206 U | 0.21 U |
| 86-30-6 | N-NITROSODIPHENYLAMINE | ug/l | 1.2 U | 0.759 U | 0.619 U | 0.64 U |
| 87-86-5 | PENTACHLOROPHENOL | ug/l | 3.4 UJ | 2.2 UJ | 1.8 UJ | 1.8 UJ |
| 85-01-8 | PHENANTHRENE | ug/l | 0.52 U | 21.2 | 110 | 0.28 U |
| 108-95-2 | PHENOL | ug/l | 0.42 U | 0.266 U | 0.216 U | 0.22 U |
| 129-00-0 | PYRENE | ug/l | 0.4 U | 0.253 U | 37 | 0.21 U |

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>SDG: E1768 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | MW-4<br>MW-4-20130408<br>E1768-06<br>CTECH<br>E1768<br>WATER<br>4/8/2013 8:40<br>4/30/2013 | MW-5<br>MW-5-20130405<br>E1768-03<br>CTECH<br>E1768<br>WATER<br>4/5/2013 14:10<br>4/30/2013 | MW-7<br>MW-7-20130404<br>E1768-12<br>CTECH<br>E1768<br>WATER<br>4/4/2013 12:32<br>4/30/2013 | MW-9<br>MW-9-20130405<br>E1768-01<br>CTECH<br>E1768<br>WATER<br>4/5/2013 10:35<br>4/30/2013 |
|---|---|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | | | |
| | TOTAL METALS | | | | | |
| 7429-90-5 | ALUMINUM | ug/l | 32100 J | 550 J | 244 J | 91.9 J |
| 7440-36-0 | ANTIMONY | ug/l | 8 U | 12.1 J | 8 U | 8 U |
| 7440-38-2 | ARSENIC | ug/l | 40 | 4.4 J | 4.2 U | 9.05 J |
| 7440-39-3 | BARIUM | ug/l | 523 | 916 | 192 | 380 |
| 7440-41-7 | BERYLLIUM | ug/l | 1.23 J | 0.7 U | 0.7 U | 0.7 U |
| 7440-43-9 | CADMIUM | ug/l | 1.3 J | 2.2 J | R | R |
| 7440-70-2 | CALCIUM | ug/l | 116000 J | 267000 J | 123000 J | 196000 J |
| 7440-47-3 | CHROMIUM, TOTAL | ug/l | 113 J | 1.1 UJ | 7.73 J | 1.1 UJ |
| 7440-48-4 | COBALT | ug/l | 25.1 J | 5.8 UJ | 5.8 UJ | 5.8 UJ |
| 7440-50-8 | COPPER | ug/l | 205 J | 5.86 J | 2.06 J | 2 UJ |
| 7439-89-6 | IRON | ug/l | 55300 | 4550 | 1300 | 11300 |
| 7439-92-1 | LEAD | ug/l | 1200 J | 232 J | 2.6 UJ | 2.6 UJ |
| 7439-95-4 | MAGNESIUM | ug/l | 24500 J | 59800 J | 42200 J | 77600 J |
| 7439-96-5 | MANGANESE | ug/l | 1210 J | 1580 J | 688 J | 3240 J |
| 7439-97-6 | MERCURY | ug/l | 20.182 | 0.092 U | 0.092 U | 0.092 U |
| 7440-02-0 | NICKEL | ug/l | 112 J | 4.2 UJ | 9 J | 4.2 UJ |
| 7440-09-7 | POTASSIUM | ug/l | 11800 | 93500 | 26900 | 15100 |
| 7782-49-2 | SELENIUM | ug/l | 16.1 | 4.8 U | 4.8 U | 4.8 U |
| 7440-22-4 | SILVER | ug/l | 1.5 UJ | 1.5 UJ | 1.5 UJ | 1.5 UJ |
| 7440-23-5 | SODIUM | ug/l | 712000 J | 32700000 J | 2230000 J | 1210000 J |
| 7440-28-0 | THALLIUM | ug/l | 4.02 J | 2.4 UJ | 2.4 UJ | 3.46 J |
| 7440-62-2 | VANADIUM | ug/l | 77.8 J | 6.1 UJ | 6.1 UJ | 6.1 UJ |
| 7440-66-6 | ZINC | ug/l | 715 J | 46.8 J | 10.3 J | 6.5 UJ |
| | DISSOLVED METALS | | | | | |
| 7429-90-5 | ALUMINUM | ug/l | 17.1 J | | | |
| 7440-36-0 | ANTIMONY | ug/l | 9.22 J | | | |
| 7440-38-2 | ARSENIC | ug/l | 6 J | | | |
| 7440-39-3 | BARIUM | ug/l | 243 | | | |
| 7440-41-7 | BERYLLIUM | ug/l | 0.7 U | | | |
| 7440-43-9 | CADMIUM | ug/l | R | | | |
| 7440-70-2 | CALCIUM | ug/l | 143000 J | | | |
| 7440-47-3 | CHROMIUM, TOTAL | ug/l | 7.84 J | | | |
| 7440-48-4 | COBALT | ug/l | 5.8 UJ | | | |
| 7440-50-8 | COPPER | ug/l | 55.2 J | | | |
| 7439-89-6 | IRON | ug/l | 60.5 | | | |
| 7439-92-1 | LEAD | ug/l | 3.29 J | | | |
| 7439-95-4 | MAGNESIUM | ug/l | 21200 J | | | |
| 7439-96-5 | MANGANESE | ug/l | 488 J | | | |
| 7439-97-6 | MERCURY | ug/l | 0.092 U | | | |
| 7440-02-0 | NICKEL | ug/l | 10.2 J | | | |
| 7440-09-7 | POTASSIUM | ug/l | 8920 | | | |
| 7782-49-2 | SELENIUM | ug/l | 16.2 | | | |
| 7440-22-4 | SILVER | ug/l | 1.5 UJ | | | |
| 7440-23-5 | SODIUM | ug/l | 753000 J | | | |
| 7440-28-0 | THALLIUM | ug/l | 2.4 UJ | | | |
| 7440-62-2 | VANADIUM | ug/l | 6.1 UJ | | | |
| 7440-66-6 | ZINC | ug/l | 37.6 J | | | |
| | OTHER | | | | | |
| 57-12-5 | CYANIDE | ug/l | 126 | 174 | 145 | 3 J |

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>SDG: E1768 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | FB040813<br>FB040813-20130408<br>E1768-10<br>CTECH<br>E1768<br>WATER<br>4/8/2013 10:00<br>4/30/2013 | TRIPBLANK<br>TBLANK-20130404<br>E1768-11<br>CTECH<br>E1768<br>WATER<br>4/4/2013 9:00<br>4/30/2013 |
|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | |
| | VOLATILES | | | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | ug/l | 0.4 U | 0.4 U |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | ug/l | 0.31 U | 0.31 U |
| 76-13-1 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE | ug/l | 0.45 U | 0.45 U |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | ug/l | 0.38 U | 0.38 U |
| 75-34-3 | 1,1-DICHLOROETHANE | ug/l | 0.36 U | 0.36 U |
| 75-35-4 | 1,1-DICHLOROETHENE | ug/l | 0.47 U | 0.47 U |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | ug/l | 0.2 U | 0.2 U |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | ug/l | 0.2 U | 0.2 U |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | ug/l | 0.46 U | 0.46 U |
| 106-93-4 | 1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE) | ug/l | 0.41 U | 0.41 U |
| 95-50-1 | 1,2-DICHLOROBENZENE | ug/l | 0.45 U | 0.45 U |
| 107-06-2 | 1,2-DICHLOROETHANE | ug/l | 0.48 U | 0.48 U |
| 78-87-5 | 1,2-DICHLOROPROPANE | ug/l | 0.46 U | 0.46 U |
| 541-73-1 | 1,3-DICHLOROBENZENE | ug/l | 0.43 U | 0.43 U |
| 106-46-7 | 1,4-DICHLOROBENZENE | ug/l | 0.32 U | 0.32 U |
| 591-78-6 | 2-HEXANONE | ug/l | 1.9 U | 1.9 U |
| 67-64-1 | ACETONE | ug/l | 0.5 UJ | 0.5 UJ |
| 71-43-2 | BENZENE | ug/l | 0.32 U | 0.32 U |
| 74-97-5 | BROMOCHLOROMETHANE | ug/l | 0.2 U | 0.2 U |
| 75-27-4 | BROMODICHLOROMETHANE | ug/l | 0.36 U | 0.36 U |
| 75-25-2 | BROMOFORM | ug/l | 0.47 U | 0.47 U |
| 74-83-9 | BROMOMETHANE | ug/l | 0.2 UJ | 0.2 UJ |
| 75-15-0 | CARBON DISULFIDE | ug/l | 5.4 | 0.2 U |
| 56-23-5 | CARBON TETRACHLORIDE | ug/l | 0.2 U | 0.2 U |
| 108-90-7 | CHLOROBENZENE | ug/l | 0.49 U | 0.49 U |
| 75-00-3 | CHLOROETHANE | ug/l | 0.2 U | 0.2 U |
| 67-66-3 | CHLOROFORM | ug/l | 0.34 U | 0.34 U |
| 74-87-3 | CHLOROMETHANE | ug/l | 0.2 U | 0.2 U |
| 156-59-2 | CIS-1,2-DICHLOROETHYLENE | ug/l | 0.35 U | 0.35 U |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | ug/l | 0.31 U | 0.31 U |
| 110-82-7 | CYCLOHEXANE | ug/l | 0.2 UJ | 0.2 UJ |
| 124-48-1 | DIBROMOCHLOROMETHANE | ug/l | 0.2 U | 0.2 U |
| 75-71-8 | DICHLORODIFLUOROMETHANE | ug/l | 0.2 U | 0.2 U |
| 100-41-4 | ETHYLBENZENE | ug/l | 0.2 U | 0.2 U |
| 98-82-8 | ISOPROPYLBENZENE (CUMENE) | ug/l | 0.45 U | 0.45 U |
| XYLMP | M,P-XYLENE (SUM OF ISOMERS) | ug/l | 0.95 U | 0.95 U |
| 79-20-9 | METHYL ACETATE | ug/l | 0.2 U | 0.2 U |
| 78-93-3 | METHYL ETHYL KETONE (2-BUTANONE) | ug/l | 1.3 U | 1.3 U |
| 108-10-1 | METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE) | ug/l | 2.1 U | 2.1 U |
| 108-87-2 | METHYLCYCLOHEXANE | ug/l | 0.2 U | 0.2 U |
| 75-09-2 | METHYLENE CHLORIDE | ug/l | 0.41 U | 0.41 U |
| 95-47-6 | O-XYLENE (1,2-DIMETHYLBENZENE) | ug/l | 0.43 U | 0.43 U |
| 100-42-5 | STYRENE | ug/l | 0.36 U | 0.36 U |
| 1634-04-4 | TERT-BUTYL METHYL ETHER | ug/l | 0.35 U | 0.35 U |
| 127-18-4 | TETRACHLOROETHYLENE(PCE) | ug/l | 0.27 U | 0.27 U |
| 108-88-3 | TOLUENE | ug/l | 0.37 U | 0.37 U |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | ug/l | 0.41 U | 0.41 U |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | ug/l | 0.29 U | 0.29 U |
| 79-01-6 | TRICHLOROETHYLENE (TCE) | ug/l | 0.28 U | 0.28 U |
| 75-69-4 | TRICHLOROFLUOROMETHANE | ug/l | 0.35 U | 0.35 U |
| 75-01-4 | VINYL CHLORIDE | ug/l | 0.34 U | 0.34 U |
| 123-91-1 | 1,4-DIOXANE (P-DIOXANE) | ug/l | 100 U | 100 U |

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>SDG: E1768 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | FB040813<br>FB040813-20130408<br>E1768-10<br>CTECH<br>E1768<br>WATER<br>4/8/2013 10:00<br>4/30/2013 | TRIPBLANK<br>TBLANK-20130404<br>E1768-11<br>CTECH<br>E1768<br>WATER<br>4/4/2013 9:00<br>4/30/2013 |
|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | |
| | SEMIVOLATILES | | | |
| 95-94-3 | 1,2,4,5-TETRACHLOROBENZENE | ug/l | 0.217 U | |
| 58-90-2 | 2,3,4,6-TETRACHLOROPHENOL | ug/l | 0.217 U | |
| 95-95-4 | 2,4,5-TRICHLOROPHENOL | ug/l | 0.435 U | |
| 88-06-2 | 2,4,6-TRICHLOROPHENOL | ug/l | 0.609 U | |
| 120-83-2 | 2,4-DICHLOROPHENOL | ug/l | 0.717 U | |
| 105-67-9 | 2,4-DIMETHYLPHENOL | ug/l | 0.772 U | |
| 51-28-5 | 2,4-DINITROPHENOL | ug/l | 2.3 UJ | |
| 121-14-2 | 2,4-DINITROTOLUENE | ug/l | 1.1 U | |
| 606-20-2 | 2,6-DINITROTOLUENE | ug/l | 0.348 U | |
| 91-58-7 | 2-CHLORONAPHTHALENE | ug/l | 0.174 U | |
| 95-57-8 | 2-CHLOROPHENOL | ug/l | 0.587 U | |
| 91-57-6 | 2-METHYLNAPHTHALENE | ug/l | 0.348 U | |
| 95-48-7 | 2-METHYLPHENOL (O-CRESOL) | ug/l | 0.261 U | |
| 88-74-4 | 2-NITROANILINE | ug/l | 0.533 U | |
| 88-75-5 | 2-NITROPHENOL | ug/l | 0.565 U | |
| 91-94-1 | 3,3'-DICHLOROBENZIDINE | ug/l | 2.2 U | |
| MEPH3MEPH | 3+4-Methylphenols | ug/l | 0.413 U | |
| 99-09-2 | 3-NITROANILINE | ug/l | 1.2 U | |
| 534-52-1 | 4,6-DINITRO-2-METHYLPHENOL | ug/l | 0.804 UJ | |
| 101-55-3 | 4-BROMOPHENYL PHENYL ETHER | ug/l | 0.25 U | |
| 59-50-7 | 4-CHLORO-3-METHYLPHENOL | ug/l | 0.435 U | |
| 106-47-8 | 4-CHLOROANILINE | ug/l | 3.1 U | |
| 7005-72-3 | 4-CHLOROPHENYL PHENYL ETHER | ug/l | 0.228 U | |
| 100-01-6 | 4-NITROANILINE | ug/l | 1.5 U | |
| 100-02-7 | 4-NITROPHENOL | ug/l | 2.2 U | |
| 83-32-9 | ACENAPHTHENE | ug/l | 0.228 U | |
| 208-96-8 | ACENAPHTHYLENE | ug/l | 0.761 U | |
| 98-86-2 | ACETOPHENONE | ug/l | 0.152 U | |
| 120-12-7 | ANTHRACENE | ug/l | 0.174 U | |
| 1912-24-9 | ATRAZINE | ug/l | 0.435 U | |
| 100-52-7 | BENZALDEHYDE | ug/l | 0.837 U | |
| 56-55-3 | BENZO(A)ANTHRACENE | ug/l | 0.174 U | |
| 50-32-8 | BENZO(A)PYRENE | ug/l | 0.152 U | |
| 205-99-2 | BENZO(B)FLUORANTHENE | ug/l | 0.315 U | |
| 191-24-2 | BENZO(G,H,I)PERYLENE | ug/l | 0.315 U | |
| 207-08-9 | BENZO(K)FLUORANTHENE | ug/l | 0.196 U | |
| 85-68-7 | BENZYL BUTYL PHTHALATE | ug/l | 0.207 U | |
| 92-52-4 | BIPHENYL (DIPHENYL) | ug/l | 0.163 U | |
| 111-91-1 | BIS(2-CHLOROETHOXY) METHANE | ug/l | 0.598 U | |
| 111-44-4 | BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER) | ug/l | 0.598 U | |
| 108-60-1 | BIS(2-CHLOROISOPROPYL) ETHER | ug/l | 0.185 U | |
| 117-81-7 | BIS(2-ETHYLHEXYL) PHTHALATE | ug/l | 0.174 U | |
| 105-60-2 | CAPROLACTAM | ug/l | 2.2 U | |
| 86-74-8 | CARBAZOLE | ug/l | 0.239 U | |
| 218-01-9 | CHRYSENE | ug/l | 0.196 U | |
| 53-70-3 | DIBENZ(A,H)ANTHRACENE | ug/l | 0.457 U | |
| 132-64-9 | DIBENZOFURAN | ug/l | 0.261 U | |
| 84-66-2 | DIETHYL PHTHALATE | ug/l | 0.413 U | |
| 131-11-3 | DIMETHYL PHTHALATE | ug/l | 0.239 U | |
| 84-74-2 | DI-N-BUTYL PHTHALATE | ug/l | 2.2 U | |
| 117-84-0 | DI-N-OCTYLPHTHALATE | ug/l | 0.554 U | |
| 206-44-0 | FLUORANTHENE | ug/l | 0.435 U | |
| 86-73-7 | FLUORENE | ug/l | 0.337 U | |
| 118-74-1 | HEXACHLOROBENZENE | ug/l | 0.196 U | |
| 87-68-3 | HEXACHLOROBUTADIENE | ug/l | 0.272 U | |
| 77-47-4 | HEXACHLOROCYCLOPENTADIENE | ug/l | 0.261 U | |
| 67-72-1 | HEXACHLOROETHANE | ug/l | 0.272 U | |
| 193-39-5 | INDENO(1,2,3-C,D)PYRENE | ug/l | 0.163 U | |
| 78-59-1 | ISOPHORONE | ug/l | 0.326 U | |
| 91-20-3 | NAPHTHALENE | ug/l | 0.13 U | |
| 98-95-3 | NITROBENZENE | ug/l | 0.739 U | |
| 621-64-7 | N-NITROSODI-N-PROPYLAMINE | ug/l | 0.217 U | |
| 86-30-6 | N-NITROSODIPHENYLAMINE | ug/l | 0.652 U | |
| 87-86-5 | PENTACHLOROPHENOL | ug/l | 1.9 UJ | |
| 85-01-8 | PHENANTHRENE | ug/l | 0.283 U | |
| 108-95-2 | PHENOL | ug/l | 0.228 U | |
| 129-00-0 | PYRENE | ug/l | 0.217 U | |

| Consolidated Edison<br>Ludlow Street Site<br>Validated Groundwater Analytical Data<br>SDG: E1768 | | Location ID:<br>Sample ID:<br>Lab Sample Id:<br>Source:<br>SDG:<br>Matrix:<br>Sampled:<br>Validated: | FB040813<br>FB040813-20130408<br>E1768-10<br>CTECH<br>E1768<br>WATER<br>4/8/2013 10:00<br>4/30/2013 | TRIPBLANK<br>TBLANK-20130404<br>E1768-11<br>CTECH<br>E1768<br>WATER<br>4/4/2013 9:00<br>4/30/2013 |
|---|---|---|---|---|
| CAS NO. | COMPOUND | UNITS: | | |
| | TOTAL METALS | | | |
| 7429-90-5 | ALUMINUM | ug/l | 6.5 UJ | |
| 7440-36-0 | ANTIMONY | ug/l | 8 U | |
| 7440-38-2 | ARSENIC | ug/l | 4.2 U | |
| 7440-39-3 | BARIUM | ug/l | 4 U | |
| 7440-41-7 | BERYLLIUM | ug/l | 0.7 U | |
| 7440-43-9 | CADMIUM | ug/l | R | |
| 7440-70-2 | CALCIUM | ug/l | 99.7 J | |
| 7440-47-3 | CHROMIUM, TOTAL | ug/l | 1.1 UJ | |
| 7440-48-4 | COBALT | ug/l | 5.8 UJ | |
| 7440-50-8 | COPPER | ug/l | 2 UJ | |
| 7439-89-6 | IRON | ug/l | 27.8 J | |
| 7439-92-1 | LEAD | ug/l | 2.6 UJ | |
| 7439-95-4 | MAGNESIUM | ug/l | 35.3 J | |
| 7439-96-5 | MANGANESE | ug/l | 1.7 U | |
| 7439-97-6 | MERCURY | ug/l | 0.092 U | |
| 7440-02-0 | NICKEL | ug/l | 4.2 UJ | |
| 7440-09-7 | POTASSIUM | ug/l | 594 J | |
| 7782-49-2 | SELENIUM | ug/l | 4.8 U | |
| 7440-22-4 | SILVER | ug/l | 1.5 UJ | |
| 7440-23-5 | SODIUM | ug/l | 34500 J | |
| 7440-28-0 | THALLIUM | ug/l | 2.4 UJ | |
| 7440-62-2 | VANADIUM | ug/l | 6.1 UJ | |
| 7440-66-6 | ZINC | ug/l | 6.5 UJ | |
| | DISSOLVED METALS | | | |
| 7429-90-5 | ALUMINUM | ug/l | 6.5 UJ | |
| 7440-36-0 | ANTIMONY | ug/l | 8 U | |
| 7440-38-2 | ARSENIC | ug/l | 4.2 U | |
| 7440-39-3 | BARIUM | ug/l | 4 U | |
| 7440-41-7 | BERYLLIUM | ug/l | 0.7 U | |
| 7440-43-9 | CADMIUM | ug/l | R | |
| 7440-70-2 | CALCIUM | ug/l | 210 J | |
| 7440-47-3 | CHROMIUM, TOTAL | ug/l | 1.1 UJ | |
| 7440-48-4 | COBALT | ug/l | 5.8 UJ | |
| 7440-50-8 | COPPER | ug/l | 2 UJ | |
| 7439-89-6 | IRON | ug/l | 20.4 U | |
| 7439-92-1 | LEAD | ug/l | 2.6 UJ | |
| 7439-95-4 | MAGNESIUM | ug/l | 32.5 U | |
| 7439-96-5 | MANGANESE | ug/l | 2.59 J | |
| 7439-97-6 | MERCURY | ug/l | 0.092 U | |
| 7440-02-0 | NICKEL | ug/l | 4.2 UJ | |
| 7440-09-7 | POTASSIUM | ug/l | 273 J | |
| 7782-49-2 | SELENIUM | ug/l | 4.8 U | |
| 7440-22-4 | SILVER | ug/l | 1.5 UJ | |
| 7440-23-5 | SODIUM | ug/l | 3160 J | |
| 7440-28-0 | THALLIUM | ug/l | 2.4 UJ | |
| 7440-62-2 | VANADIUM | ug/l | 6.1 UJ | |
| 7440-66-6 | ZINC | ug/l | 26.9 J | |
| | OTHER | | | |
| 57-12-5 | CYANIDE | ug/l | 3 U | |