



Consolidated Edison Company
of New York, Inc.
31-01 20th Avenue
Long Island City NY 11105-2048
www.conEd.com

April 11, 2025

VIA ELECTRONIC MAIL

Caroline Jalanti, P.E.
Professional Engineer 1
New York State Department of Environmental Conservation
Division of Environmental Remediation, Remedial Bureau C
625 Broadway, 12th Floor
Albany, New York 12233-7014

**Consolidated Edison Company of New York, Inc.
Former Ossining Works Site, OU-3, Site No. 360172
DNAPL Recovery Well Rehabilitation Work Plan**

Dear Ms. Jalanti:

Please find the attached Dense Non-Aqueous Phase Liquid (DNAPL) Recovery Well Rehabilitation Work Plan (Work Plan) for further evaluation and rehabilitation of recovery well RW-D located at Operable Unit No. 3 (OU-3) of the Consolidated Edison Company of New York, Inc. (Con Edison) former Ossining Works site in Ossining, New York (Site No. 360172). The Work Plan has been prepared by Arcadis of New York, Inc. (Arcadis) on behalf of Con Edison.

The Work Plan incorporates the following revisions pursuant to the New York State Department of Environmental Conservation (NYSDEC) comments presented in your March 26, 2025 letter to Con Edison:

- In accordance with the requirements of Section 1.5(b)(1) of the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation document entitled *Technical Guidance for Site Investigation and Remediation* (DER-10, May 2010), a Certification Statement signed by Arcadis' Engineer of Record for the former Ossining Works site is included as Attachment A.
- All references to polyvinyl chloride (PVC) well construction materials have been changed to Type 304 Stainless Steel in the Work Plan text and on the Well Construction Diagram presented as Figure 2.

Please feel free to contact me at 917-658-6715 or skorobogatov@coned.com if you have any questions regarding the above Work Plan.

Very truly yours,

Yelena Skorobogatov
Technical Specialist
EH&S, MGP Remediation
Con Edison

Ms. Caroline Jalanti, P.E.
New York State Department of Environmental Conservation
April 11, 2025

cc: Mihir Chokshi, Con Edison
Michael Jones, Arcadis
Matthew Hysell, P.E., Arcadis
Cynthia Buchanan, Arcadis

enc: DNAPL Recovery Well Rehabilitation Work Plan

VIA ELECTRONIC MAIL

Caroline Jalanti, P.E.
Professional Engineer 1
New York State Department of Environmental Conservation
Division of Environmental Remediation, Remedial Bureau C
625 Broadway, 12th Floor
Albany, New York 12233-7014

Arcadis of New York, Inc.
One Lincoln Center
110 West Fayette Street
Suite 300
Syracuse, NY 13202
United States
Phone: 315 446 9120
Fax: 315 449 0017
www.arcadis.com

Date: April 11, 2025

Our Ref: 30193311

Subject: Consolidated Edison Company of New York, Inc.
Former Ossining Works Site, OU-3, Site No. 360172
DNAPL Recovery Well Rehabilitation Work Plan

Dear Ms. Jalanti:

This letter presents a revised Dense Non-Aqueous Phase Liquid (DNAPL) Recovery Well Rehabilitation Work Plan (Work Plan) for further evaluation and rehabilitation of recovery well RW-D located at Operable Unit No. 3 (OU-3) of the Consolidated Edison Company of New York, Inc. (Con Edison) former Ossining Works site in Ossining, New York (Site No. 360172). The Work Plan has been prepared by Arcadis of New York, Inc. (Arcadis) on behalf of Con Edison. In accordance with the requirements of Section 1.5(b)(1) of the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation document entitled *Technical Guidance for Site Investigation and Remediation* (DER-10, May 2010), a Certification Statement signed by Arcadis' Engineer of Record for the former Ossining Works site is included as Attachment A. The NYSDEC initially requested the Work Plan in an October 25, 2004 letter to Con Edison. The Work Plan was submitted to the NYSDEC on November 22, 2024 and this revised document addresses agency comments that were presented in letters to Con Edison dated January 14, 2025 and March 26, 2025.

Based on a review of recovery well RW-D redevelopment efforts that were implemented during September 2024, Con Edison recommends that recovery well RW-D be abandoned and that a new recovery well be installed at a nearby location for monitoring and recovery of DNAPL.

RW-D Evaluation

Con Edison and NYSDEC agree that RW-D exhibits a very slow recharge of water to static water level conditions following pumping which suggests that either the well is screened in low conductivity material or that the screen has become clogged over time with DNAPL or fine particulates. Redevelopment efforts for RW-D were implemented during the week of September 23, 2024. Based on the results of the redevelopment activities (as summarized in an October 21, 2024 letter to the NYSDEC), Con Edison has concluded that:

- Additional redevelopment of RW-D, even with more aggressive surging techniques, is not anticipated to be successful in unclogging the well screen, given the efforts to date.

- Installation of a new well (RW-D2) near the existing well and subsequent abandonment of the existing well is recommended.

The following sections detail the new well installation, existing well abandonment, and waste management.

New Recovery Well RW-D2 Installation

New well RW-D2 is proposed to be installed approximately 10 feet to the north of the existing RW-D location. This proposed location for the new well is shown on Figure 1. The new well will be installed within the center of a parking space at the 1 Harbor Square property to facilitate access and is contingent upon the property owner's approval of the new well installation activities.

As shown on the well log for the existing RW-D location (included as Attachment B), the boring for the existing well was completed to weathered bedrock at a depth of approximately 90 feet below ground surface (bgs). The top of a continuous peat layer was encountered at a depth of approximately 60 feet bgs and extended to a depth of approximately 76.5 feet bgs. The boring for the new well RW-D2 will be completed using sonic drilling methods to the top of the peat layer at an anticipated depth of approximately 60 feet bgs. Soil samples from the boring will be logged and screened using a photoionization detector (PID) to support selection and placement of the screened interval. Con Edison does not propose to collect any soil samples for laboratory analysis. All subsurface intrusive activities associated with installation of new well RW-D2 or with the abandonment of existing well RW-D will be conducted in accordance with a project-specific Health and Safety Plan (HASP). Community Air Monitoring will be performed during intrusive activities in accordance with the New York State Department of Health Generic Community Air Monitoring Plan (CAMP) included as Appendix 1A of DER-10. The generic CAMP is included as Attachment C.

The proposed construction of new recovery well RW-D2 is shown on Figure 2. The new well will be constructed in general accordance with American Society for Testing Materials (ASTM) D5092 - Standard Practice for Design and Installation of Ground Water Monitoring Wells. RW-D2 will be constructed using 6-inch diameter Type 304 stainless steel (stainless steel) well riser with a 10-foot stainless steel screen and 5-foot stainless steel sump. Con Edison anticipates that the screen for the new well will be installed at a depth of approximately 27 to 37 feet bgs (consistent with the existing RW-D). The screened interval will target areas of visual NAPL and elevated PID headspace screening results and may be adjusted based on soil screening from the RW-D2 boring. After installation, the new well will be developed by pumping and surging until the turbidity of water removed from the well is reduced to less than 50 nephelometric turbidity units (NTUs) or a minimum of three well volumes are removed from the well. Following development, the top of casing and ground surface elevation for the new well will be surveyed. The well will be allowed to equilibrate for one week before gauging. If non-aqueous phase liquid (NAPL) is observed, recovery will be performed using a peristaltic pump to pump the NAPL into a drum, consistent with the current monitoring and recovery approach. The NAPL recovery approach will be re-evaluated if appropriate based on the observed NAPL thickness/quantity in the new recovery well.

Existing Recovery Well RW-D Abandonment

After installation of new well RW-D2, Con Edison will continue to monitor both RW-D and RW-D2 to compare simultaneous data from the recovery wells. If it is determined that RW-D is not providing useful data (subject to approval by the NYSDEC), the existing RW-D will be abandoned in accordance with NYSDEC guidance (CP-43:

Ms. Caroline Jalanti, P.E.
NYSDEC
April 11, 2025

Groundwater Monitoring Well Decommissioning Policy). Decommissioning activities will consist of removing the top 6-feet of well casing, tremie grouting to grade, and removing the surface completion and well cover. Groundwater displaced by the tremie grouting will be captured and pumped into drums for disposal.

Waste Management

All waste from the new well installation and well abandonment will be containerized in U.S. Department of Transportation-approved 55-gallon drums. The waste will be temporally staged at a nearby Con Edison-owned substation (located on Central Avenue in Ossining) prior to transport for off-site treatment/disposal at a Con Edison-approval disposal facility. Con Edison anticipates that all waste transport and disposal services will be provided by Clean Earth of New Jersey, Inc. (USEPA ID NJD991291105). Con Edison will notify the NYSDEC if an alternate transport or disposal vendor is to be utilized for any portion of the waste generated by the well installation and abandonment activities.

Reporting

Con Edison will prepare summary letters to document the installation of new recovery well RW-D2 and decommissioning of the existing RW-D (if conducted).

Please feel free to Ms. Yelena Skorobogatov of Con Edison at 917-658-6715 or skorobogatovy@coned.com if you have any questions regarding the above Work Plan.

Sincerely,
Arcadis of New York, Inc.



Michael Jones
Technical Expert

Email: michael.jones@arcadis.com
Direct Line: 315.671.9211
Mobile: 315.247.3244

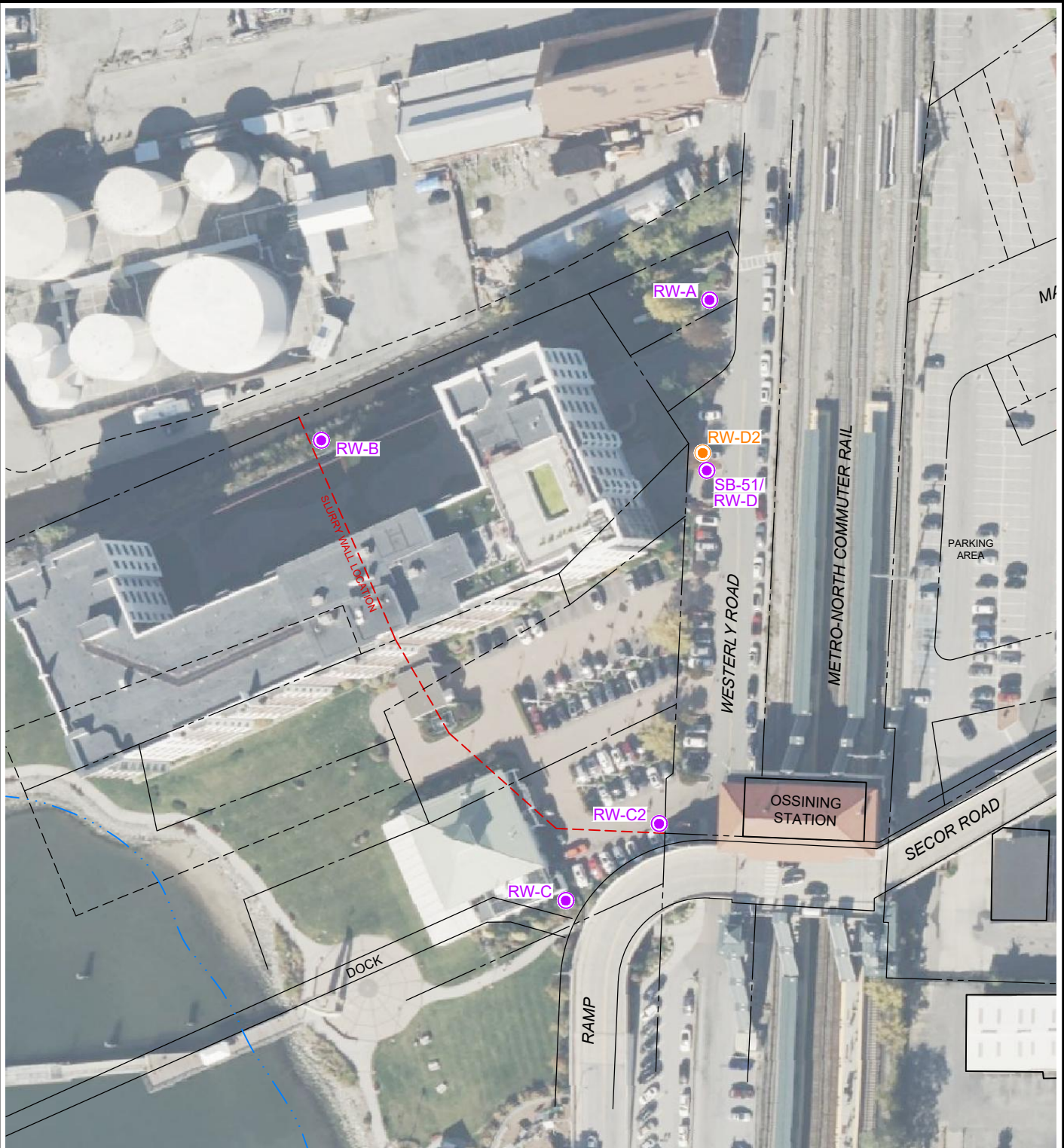
cc: Mihir Chokshi, Con Edison
Michael Jones, Arcadis
Matthew Hysell, P.E., Arcadis
Cynthia Buchanan, Arcadis

Ms. Caroline Jalanti, P.E.
NYSDEC
April 11, 2025

enc: Figure 1 – Proposed New Recovery Well Location
 Figure 2 – NAPL Recovery Well Specifications
 Attachment A – Certification Statement
 Attachment B – RW-D Well Log
 Attachment C – Generic Community Air Monitoring Plan

FIGURES





LEGEND:

- RW-C2 EXISTING RECOVERY WELL
- RW-D2 PROPOSED RECOVERY WELL

NOTE:

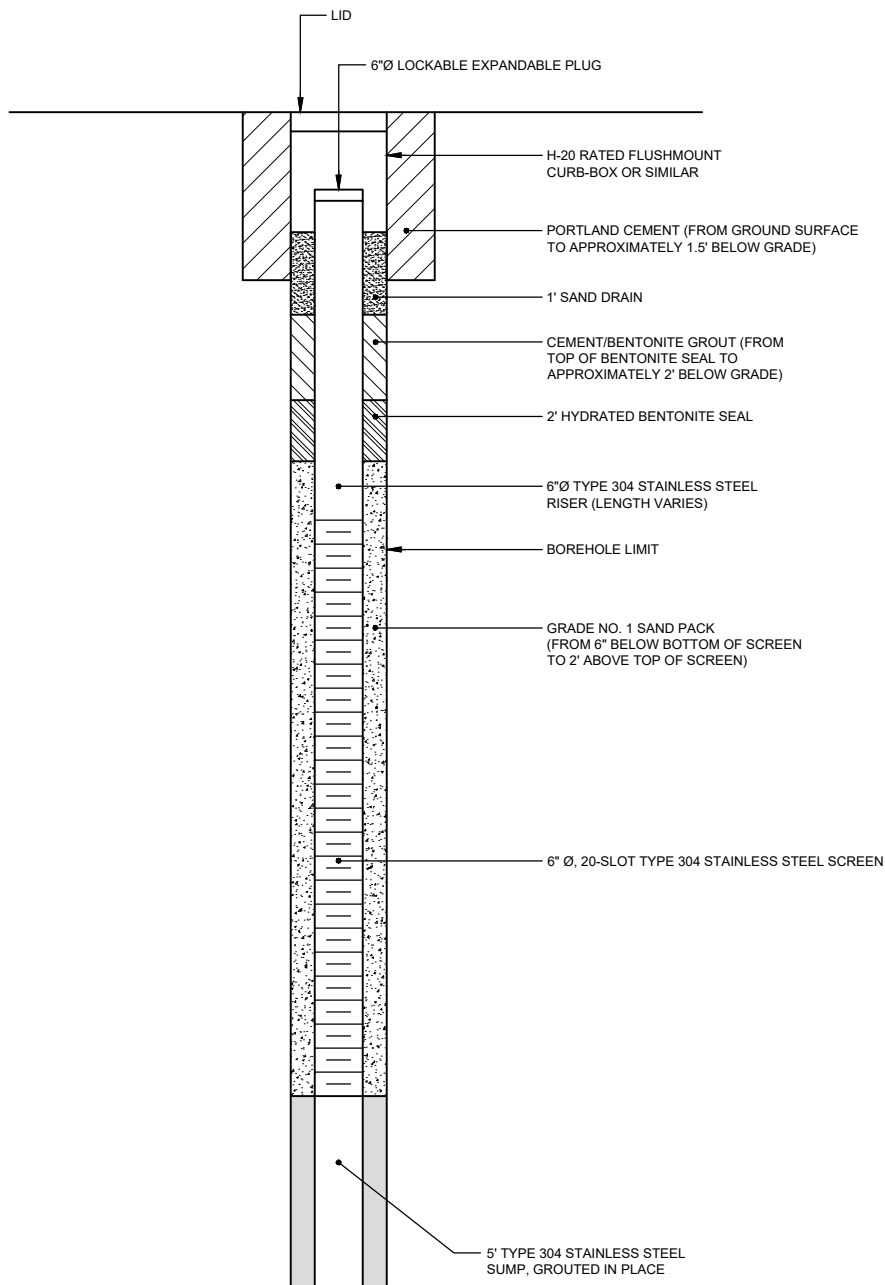
SITE AERIAL PHOTOGRAPH FROM © 2024
 MICROSOFT CORPORATION © 2024 MAXAR
 © CNES (2024) DISTRIBUTION AIRBUS DS.

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
 FORMER OSSINING WORKS SITE
 OPERABLE UNIT 3
DNAPL MONITORING AND RECOVERY PROGRAM

PROPOSED NEW RECOVERY WELL LOCATION



FIGURE
1



NAPL RECOVERY WELL
 NOT TO SCALE

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
 FORMER OSSINING WORKS SITE
 OPERABLE UNIT 3
DNAPL MONITORING AND RECOVERY PROGRAM

**NAPL RECOVERY WELL
 SPECIFICATIONS**

Attachment A

Certification Statement

DNAPL Recovery Well Rehabilitation Work Plan

Former Ossining Works Site

Site No. 360172

Ossining, New York

April 11, 2025

Prepared By:

Arcadis of New York, Inc.
One Lincoln Center, 110 West Fayette Street, Suite 300
Syracuse
New York 13202
Phone: 315 446 9120
Fax: 315 449 0017

Prepared For:

Consolidated Edison Company of New
York, Inc.

Our Ref:

30193311

Certification Statement

I, Matthew S. Hysell, P.E., certify that I am currently a New York State registered professional engineer as defined in Title 6 of the New York Codes, Rules, and Regulations Part 375 and that this DNAPL Recovery Well Rehabilitation Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10). Based on my inquiry of the persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



A handwritten signature in blue ink, reading "Matthew S. Hysell", is written over a horizontal line.

Date 4/11/2025

Matthew S. Hysell, P.E.


NYS PE License No. 091121

Attachment B

RW-D Well Log

Date Start/Finish: 3/23/12 Drilling Company: Boart Longyear Driller's Name: Kevin Regan Drilling Method: Rotary Sonic Sampling Method: 8"x5' override casing, 4"x5' core barrel Rig Type: Track Mounted Mini SONIC	Northing: 847457.72 Easting: 665753.19 Casing Elevation: NA Borehole Depth: 90' bgs Surface Elevation: 7.04' amsl Descriptions By: L.Terrell & M. Skowronek	Well/Boring ID: SB-51/RW-D Client: Consolidated Edison Company of New York. Location: 20 Water Street, Ossining, NY.
---	--	---

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
10									
8								ASPHALT, little red Brick and Subbase..	Steel Flushmount over Locking J-Plug
5		1	0-5	5.0	0.0			Dark brown fine to medium SAND, little sub-angular to sub-rounded Gravel, trace Silt, Cobbles, Brick, moist.	Concrete Pad (0-1' bgs) Steel Flushmount Cover Sand Drain (0.5-1' bgs)
5								Grayish brown fine to medium SAND, trace Silt, coarse Sand and sub-angular to sub-rounded Gravel, wet.	
0		2	5-10	5.0	0.0	×		Brown fine to medium SAND, little fine to coarse sub-rounded Gravel, trace Silt, moist.	
0								Gray/brown medium SAND, little fine Sand, trace coarse Sand and fine to coarse sub-rounded to sub-angular Gravel and Mica, wet.	Grout (1-22' bgs)
10								Gray/brown fine to medium SAND, trace fine to coarse sub-rounded to sub-angular Gravel and Mica, wet.	
5		3	10-15	5.0	0.0			Dark gray-black coarse SAND, some fine sub-angular Gravel, trace medium to coarse sub-rounded Gravel, fine Sand and Mica, wet.	6" Sch 40 PVC Riser (0.5-27' bgs)
5								Gray/brown fine to medium SAND, little-trace coarse Sand, trace fine to coarse sub-rounded to sub-angular Gravel and Mica, wet.	
15								Dark gray coarse SAND, some fine sub-rounded to sub-angular Gravel, little fine to medium Sand, trace medium to coarse sub-rounded Gravel and Mica, wet.	
15		4	15-20	5.0	0.0			Dark gray medium SAND, little fine to coarse Sand, trace fine to coarse sub-rounded to sub-angular multi-colored Gravel, Mica and Shells, wet.	

	Remarks: bgs = below ground surface; NA = Not Applicable/Available; AMSL = Above Mean Sea Level. Analytical sample collected from 5-6'bgs, 29-30' bgs, 32-33' bgs, 59-60' bgs and 83-84' bgs for VOCs, SVOCs, TAL Metals and Cyanide. A blank duplicate BD032812 was also collected on 03/28/12.
--	--

Client: Consolidated Edison Company of New York.

Well/Boring ID: SB-51/RW-D

Site Location:

20 Water Street, Ossining, NY.

Borehole Depth: 90' bgs

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
-10		4	15-20	5.0	0.0			Dark gray medium SAND, little fine to coarse Sand, trace fine to coarse sub-rounded to sub-angular multi-colored Gravel, Mica and Shells, wet.	<div>Grout (1-22' bgs)</div> <div>6" Sch 40 PVC Riser (0.5-27' bgs)</div> <div>Bentonite Seal (22-24' bgs)</div> <div>#1 Silica Sand Pack (24-37' bgs)</div> <div>6" Sch 40 PVC 0.010" Slot Screen (27-37' bgs)</div>
-20		5	20-25	5.0	1.3			Gray SILT, trace Clay, fine Sand, Mica, fine to coarse Sand, Wood and Shells, chemical like odor at 24-25' bgs, wet.	
-15					3.4				
					8.6				
					40				
		6	25-30	4.5	2.1				
-25					49.4			Gray medium SAND, some coarse Sand, trace fine Sand, Mica and Shells, coal tar-like odor, wet.	
-20					145			Gray SILT, trace fine to coarse Sand, fine to coarse sub-rounded Gravel, Shells and Mica.	
					127				
		7	30-35	4.5	523				
-30					1491	X			
					365			Gray fine SAND, trace fine to coarse sub-rounded to rounded Gravel and Cobbles, saturated with oil-like material, strong coal tar-like odor, wet.	
-25					1367				
		8	35-40	5.0	1125	X		Gray SILT and CLAY, trace Shells, soft, some plasticity, wet.	
					164				
					1019			Gray fine to medium SAND, trace Shells, fine to coarse Gravel, Mica and Silt, saturated with brown oil-like material, wet.	
-35					114			Gray clayey SILT, trace Shells, Wood and Sand, trace brown oil-like material, sheen, coal tar-like odor, wet.	



Remarks: bgs = below ground surface; NA = Not Applicable/Available; AMSL = Above Mean Sea Level.

Analytical sample collected from 5-6'bgs, 29-30' bgs, 32-33' bgs, 59-60' bgs and 83-84' bgs for VOCs, SVOCs, TAL Metals and Cyanide. A blank duplicate BD032812 was also collected on 03/28/12.

Site Location:

20 Water Street, Ossining, NY.

Borehole Depth: 90' bgs

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
-30		8	35-40	5.0	10.6			Gray fine to coarse SAND, trace Mica, Shells and Wood, faint coal tar-like odor, wet.	<p>#1 Silica Sand Pack (24-37' bgs)</p> <p>6" Sch 40 PVC 0.010" Slot Screen (27-37' bgs)</p> <p>Grout (37-90' bgs)</p> <p>6" Sch 40 PVC Sump (37-42' bgs)</p> <p>Grout (37-90' bgs)</p>
					8			Gray SILT and fine SAND, trace Shells, wet.	
					7			Gray medium to coarse SAND, some fine Sand, little fine sub-rounded Gravel, trace Shells, faint coal tar-like odor, wet.	
					3.4				
-40					118			Gray fine SAND, little medium Sand, coal tar-like odor, wet.	
					140				
-35		9	40-45	5.0	167			Gray fine to medium SAND, trace fine to coarse sub-rounded to sub-angular Gravel, Shells and Mica, coal tar-like odor.	
					19.3				
					9.9				
-45					223				
					13.6				
-40		10	45-50	5.0	10.9				<p>#1 Silica Sand Pack (24-37' bgs)</p> <p>6" Sch 40 PVC 0.010" Slot Screen (27-37' bgs)</p> <p>Grout (37-90' bgs)</p> <p>6" Sch 40 PVC Sump (37-42' bgs)</p> <p>Grout (37-90' bgs)</p>
					8.6				
					7.5				
-50									
-45		11	50-55	2.0	265				
-55									
		12	55-60	4.5	194				



Remarks: bgs = below ground surface; NA = Not Applicable/Available; AMSL = Above Mean Sea Level.

Analytical sample collected from 5-6'bgs, 29-30' bgs, 32-33' bgs, 59-60' bgs and 83-84' bgs for VOCs, SVOCs, TAL Metals and Cyanide. A blank duplicate BD032812 was also collected on 03/28/12.


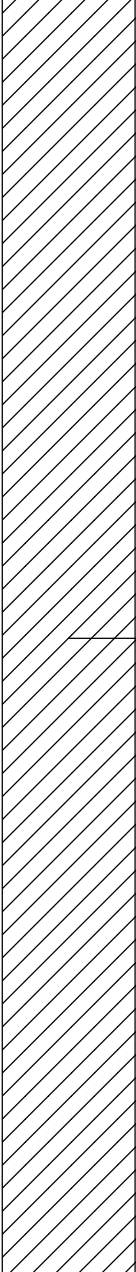


































































Client: Consolidated Edison Company of New York.

Well/Boring ID: SB-51/RW-D

Site Location:

Borehole Depth: 90' bgs

20 Water Street, Ossining, NY.

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
-50		12	55-60	2.5	31.2			Gray fine to medium SAND, trace fine to coarse sub-rounded to sub-angular Gravel, Shells and Mica, coal tar-like odor.	
								Dark gray to black SILT, trace Peat, Wood, Shells and Mica, sulfur like odor, wet.	
						X			
60								Brown PEAT, trace Wood and Mica, moist.	
					0.0				
-55					57				
					3.2				
					0.0				
65		13	60-70	7.5					
					0.0				
					0.0				
-60					0.0				
					0.0				
					0.0				
					0.0				
70					0.0				
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									

Remarks: bgs = below ground surface; NA = Not Applicable/Available; AMSL = Above Mean Sea Level.

Analytical sample collected from 5-6'bgs, 29-30' bgs, 32-33' bgs, 59-60' bgs and 83-84' bgs for VOCs, SVOCs, TAL Metals and Cyanide. A blank duplicate BD032812 was also collected on 03/28/12.



Site Location:

Borehole Depth: 90' bgs

20 Water Street, Ossining, NY.

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
-70		14	70-80	5.0	0.0			Brown PEAT and SILT, trace fine Sand and mica, very soft, wet. Gray fine to medium SAND, trace coarse Sand, Peat and Mica, wet.	Grout (37-90' bgs)
-80								Gray/black/white/olive green SILT, fine to coarse angular Gravel, trace fine to coarse Sand and Mica, moist.	
-75					59.5			Gray fine to medium SAND, trace coarse Sand and Mica, moth ball-like odor, wet.	
					75.3				
					132	X			
-85		15	80-90	10.0	109			Gray/white/black/orange fine to coarse sub-rounded to sub-angular GRAVEL, trace fine to coarse Sand, wet.	
					46				
-80					2.7				
					2.3			Gray COBBLES, little fine to coarse sub-angular to angular Gravel, trace fine to coarse Sand, Silt and Mica.	
					1.9				
-90					0.9			Last 6" of the sample is weathered bedrock.	
								Bottom of boring at 90' bgs.	
-85									
-95									



Remarks: bgs = below ground surface; NA = Not Applicable/Available; AMSL = Above Mean Sea Level.

Analytical sample collected from 5-6'bgs, 29-30' bgs, 32-33' bgs, 59-60' bgs and 83-84' bgs for VOCs, SVOCs, TAL Metals and Cyanide. A blank duplicate BD032812 was also collected on 03/28/12.

Attachment C

Generic Community Air Monitoring Plan

Appendix 1A

New York State Department of Health Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.
4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed $150 \text{ mcg}/\text{m}^3$ above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than $150 \text{ mcg}/\text{m}^3$ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within $150 \text{ mcg}/\text{m}^3$ of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009