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

September 28, 2017

Mr. Amen Omorogbe, P.E.
New York State Department of Environmental Conservation
MGP Remedial Section, Division of Environmental Remediation
Bureau of Western Remedial Action, 11th Floor
625 Broadway
Albany, NY 12233-7017

Re: Pre-Design Investigation Summary Report
Hastings-On-Hudson Former MGP Site (Site # V00728)
8-12 Washington Avenue
Hastings-On-Hudson, NY 10706

Dear Mr. Omorogbe:

This Pre-Design Investigation (PDI) summary report presents the results of the recent investigations in connection with implementation of the selected remedy at the Former Hastings-On-Hudson Manufactured Gas Plant (MGP) Site (the Site) located in Hastings-On-Hudson, New York as identified in the New York State Department of Environmental Conservation (NYSDEC) draft Decision Document dated May 2012 (Draft Decision Document). Con Edison completed the work in accordance with the New York State Department of Environmental Conservation approved PDI Work Plan, dated August 17, 2017. GEI Consultants, Inc., (GEI) collected soil samples in the upper two feet at the Site to generate the analytical data required to identify and delineate any areas that exceed the Restricted Residential Use Soil Cleanup Objective (SCOs) in order to design an appropriate Site cover system. Soil samples were collected from 15 locations on the two properties that currently occupy the Site. The results of the investigation are summarized below.

Shallow Soil Sampling

GEI collected soil samples from 15 locations to a maximum depth of 2 feet below ground surface (bgs) from August 22, 2017 to August 24, 2017. The sample locations were surveyed by a New York State Licensed Land Surveyor. All locations and elevations were referenced to the New York State Plane Eastern Zone North American Datum 1983 and NAVD 1988. The surveyed locations of the samples are included on the figure in **Attachment 1**.

Soil borings were logged for geology and environmental impacts, and a photoionization detector (PID) was used to screen soil for volatile contaminants. Boring logs for each location are presented in **Attachment 2**. There were no MGP-related impacts observed at any of the boring locations. There was no detection of volatile contaminants in the soils screened with the PID.

At each sample location, samples were collected at the following depth intervals:

- 0 to 2 inches bgs,
- 2-6 inches bgs,
- 6-12 inches bgs,
- 12-18 inches bgs
- 18-24 inches bgs

Samples collected from each location were sent to TestAmerica Laboratories, Inc. and analyzed for the following:

- Semi Volatile Organic Compounds (SVOCs) via EPA Method 8270C; and
- Target analyte list (TAL) metals (including mercury) via EPA Method 6010 and EPA Method 7471A.

The sample from the 0 to 2 inch bgs interval from each sample location was analyzed for Volatile Organic Compounds (VOCs) via EPA Method 8260D.

Community Air Monitoring Program

VOCs and PM-10 were monitored upwind and downwind on a continuous basis during intrusive field work using a PID for VOCs and a particulate meter for particulate dust. The work zone air monitoring was implemented in accordance with the Health and Safety Plan (HASP). There were no elevated concentrations of monitored parameters.

Soil Analytical Results

There were no detections of VOCs in the samples collected above the Restricted Residential Use SCOs. Individual SVOCs and metals were detected in analytical samples collected from both properties. SVOCs that were detected above the Restricted Residential Use SCOs at one or more sample locations included Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Chrysene, Dibenz(a,h)anthracene, Indeno(1,2,3-cd)pyrene. Metals detected above the Restricted Residential Use SCOs at one or more sample locations included Arsenic, Barium, Cadmium, Copper, Lead, Manganese, Mercury.

The comprehensive analytical results are presented in the table in **Attachment 3**. A summary of the compounds detected above the Restricted Residential Use SCOs is presented in the following table.

Analytical Detections Above the Restricted Residential Use SCOs

Sample ID	Location	Depth (inches below ground surface)				
		0 – 2	2 - 6	6 – 12	12 - 18	18 - 24
Samples Collected in the Level Portion of the Site						
HOH-SS-101	8 Washington Ave	SVOCs and Metals[1]	SVOCs and Metals[1]	SVOCs and Metals[1]	SVOCs and Metals[1]	SVOCs and Metals[1]
HOH-SS-102	8 Washington Ave	SVOCs and Metals[1]	SVOCs and Metals[1]	SVOCs and Metals[1]	SVOCs and Metals[1]	SVOCs and Metals[1]
HOH-SS-103	8 Washington Ave	Metals only[1]	Metals only[1]	Metals only[1]	Metals only[1]	Metals only[1]
HOH-SS-104	8 Washington Ave	SVOCs and Metals[1]	SVOCs and Metals[1]	Metals only[1]	SVOCs and Metals[1]	-
HOH-SS-105	8 Washington Ave	SVOCs and Metals[1]	SVOCs and Metals[1]	Metals only[1]	SVOCs and Metals[1]	-
HOH-SS-106	8 Washington Ave	Metals only[1]	Metals only[1]	Metals only[1]	Metals only[1]	SVOCs only[1]
HOH-SS-107	10/12 Washington Ave	SVOCs and Metals[1]	SVOCs and Metals[1]	SVOCs and Metals[1]	SVOCs and Metals[1]	SVOCs and Metals[1]
HOH-SS-108	10/12 Washington Ave	-	SVOCs and Metals[1]	-	Metals only[1]	Metals only[1]
HOH-SS-109	10/12 Washington Ave	SVOCs and Metals[1]	Metals only[1]	-	Metals only[1]	SVOCs and Metals[1]
HOH-SS-110	10/12 Washington Ave	Metals only[1]	Metals only[1]	Metals only[1]	Metals only[1]	Metals only[1]
HOH-SS-111	10/12 Washington Ave	-	Metals only[1]	Metals only[1]	-	-
HOH-SS-112	10/12 Washington Ave	-	-	Metals only[1]	SVOCs and Metals[1]	Metals only[1]
Samples Collected in the Sloped Portion of the Site						
HOH-SS-113	10/12 Washington Ave	SVOCs and Metals[1]	SVOCs and Metals[1]	SVOCs and Metals[1]	-	SVOCs and Metals[1]
HOH-SS-114	10/12 Washington Ave	Metals only[1]	-	SVOCs and Metals[1]	Metals only[1]	Metals only[1]
HOH-SS-115	10/12 Washington Ave	-	-	Metals only[1]	Metals only[1]	Metals only[1]

Notes:
[1]Detected Above Restricted Residential Use SCOs
- Indicates Sample Meets Restricted Residential Use SCOs

There were no sample locations where all five sample intervals met the Restricted Residential Use SCOs. There are four locations where the only exceedances are metals. Specifically, HOH-SS-103, HOH-SS-110, HOH-SS-111, and HOH-SS-115 where detections were limited to Barium, Copper, Lead, and Mercury. However, as noted in the Remedial Investigation Report, published background levels of these metals by the Westchester County Department of Health and by Shacklette and Boerngen (1984) indicate that only the samples from sample location HOH-SS-103 samples are above background (**Attachment 4**).

Based on the sampling results, 14 out of 75 samples collected meet the Restricted Residential Use SCOs. SVOCs or metals were detected above the Restricted Residential Use SCOs in 61 of the 75 samples collected. This included 31 that did not meet the Restricted Residential Use SCOs for SVOCs and 60 that did not meet the Restricted Residential Use SCOs for individual metals. SVOCs were detected above the Restricted Residential Use SCOs in at least one sample interval in 11 of the 15 sample locations. Metals were detected above the Restricted Residential Use SCOs in at least one sample interval in all 15 sample locations.

Recommended Site Cover System

Based on the sampling results, the recommended cover system for this Site includes the existing hardscaping and installation of 2 feet of soils which meets the Restricted Residential Use SCOs. To install this cover system, the following actions will be required:

- Shallow Soil Excavation to a depth of 2 feet bgs over the entire level area excluding the existing hardscaped areas
- Installation of 2 feet of soil meeting the Restricted Residential Use SCOs
- Installation of a rip-rap cover on the exposed areas of the slope that did not meet the Restricted Residential Use SCOs

A depiction of the Site cover system is included on Figure 1 (**Attachment 1**). This recommendation has been evaluated based on the following criteria in accordance with Section 4.2 of DER-10 and to meet the requirements of the Site cover component of the remedy for the Site identified in the Draft Decision Document:

1. **Overall Protectiveness of Public Health and the Environment**
   The recommended Site cover system will be protective of the public and environment. The Qualitative Human Health Exposure Assessment (QHHEA) in the Remedial Investigation (RI) concluded that under current conditions, the environmental impacts pose a potential risk to health for residents engaging in activities such as playing, digging, and gardening. Potential future utility and construction workers may contact contaminants in surface soil, subsurface soil, or groundwater during excavation activities. The surface soil impacts will be removed and replaced with soils meeting the Restricted Residential Use SCOs in connection with the installation of the Site cover system and institutional controls will be developed to ensure the protection of public health to any remaining impacts at depth.

2. **Conformance with Site Cleanup Goals (SCGs)**
   The excavation of surface soil and installation of a Site cover system consisting of 2 feet of soils that meet the Restricted Residential Use SCOs will meet the Site SCGs for surface soil at the Site. However, subsurface soil in exceedance of the Restricted Residential Use SCOs will remain beneath the Site. Institutional controls will be implemented to prevent potential exposures to soil and groundwater impacts that exceed the SCGs under current Site use and will specify re-evaluation of remedies for remaining subsurface impacts in exceedance of SCGs if future development at the Site requires demolition of the existing buildings.

3. **Long-term Effectiveness and Permanence**
   Removal of surface soil and installation of a Site cover system consisting of 2 feet of soils that meet the Restricted Residential Use SCOs and implementation of institutional controls will provide a long-term solution to prevent exposure to the remaining impacts.

4. **Reduction of Toxicity, Mobility, or Volume of Contamination**
   The excavation and treatment of surface soil that exceeds the SCOs in connection with the installation of a Site cover system at the Site will permanently reduce the mobility and volume of these impacts through off-Site treatment and/or disposal.

5. **Short-term Impact and Effectiveness**
   The excavation of surface soil in exceedance of SCOs in connection with the installation of a Site cover system may increase the short-term potential exposure to workers and residents at the Site. However, controls, such as covering stockpiles of materials and other dust suppression techniques will be utilized to minimize these exposures. There will also be disruptions to the community during load out of impacted soils and delivery of materials to the Site. These can be minimized by limiting work hours and trucking load out or delivery times.

6. **Implementability**
   Shallow soil excavation and installation of a clean cap are implementable activities involving the use of equipment that will result in manageable challenges, including disruption to residents and maintaining the existing slope during construction.

7. **Cost Effectiveness**
   This remedial approach is cost effective in ensuring a level of permanence and long-term effectiveness.

8. **Land Use**
   The shallow soil excavation and installation of a clean cap is consistent with and supports the current and anticipated future restricted residential land use at the Site.

Schedule

The milestone schedule for the remedial action noted below is conceptual and subject to change based on-Site access, property owner construction, and other factors.

Remedial Action Work Plan (RAWP) and Design	
Submit Draft RAWP and Design to NYSDEC	November 2, 2017
NYSDEC Approve Final Design (anticipated)	November 20, 2017
Remedial Construction	
Contractor Procurement Completion	November 10, 2017
Contractor Mobilization	November 21, 2017
Remediation Construction Completion	January 2018
Final Engineering Report (FER)	
Submit Draft FER to NYSDEC	February 19, 2018
NYSDEC Approve FER (anticipated)	March 20, 2018
Site Management Plan (SMP)	
Submit Draft SMP to NYSDEC	January 30, 2018
NYSDEC Approve SMP (anticipated)	February 28, 2018
Submit Final Approved FER and SMP to NYSDEC	March 30, 2018

Please contact me if you have any questions. Con Edison looks forward to working with you to complete this work.

Sincerely,

 for

Yelena Skorobogatov
Technical Specialist
MGP Remediation
Environment, Health and Safety

Enclosures

cc: Kenneth J. Kaiser, PE, BCEE, PMP, Con Edison
David Brooks, Esq., Con Edison
Matt O'Neil, GEI

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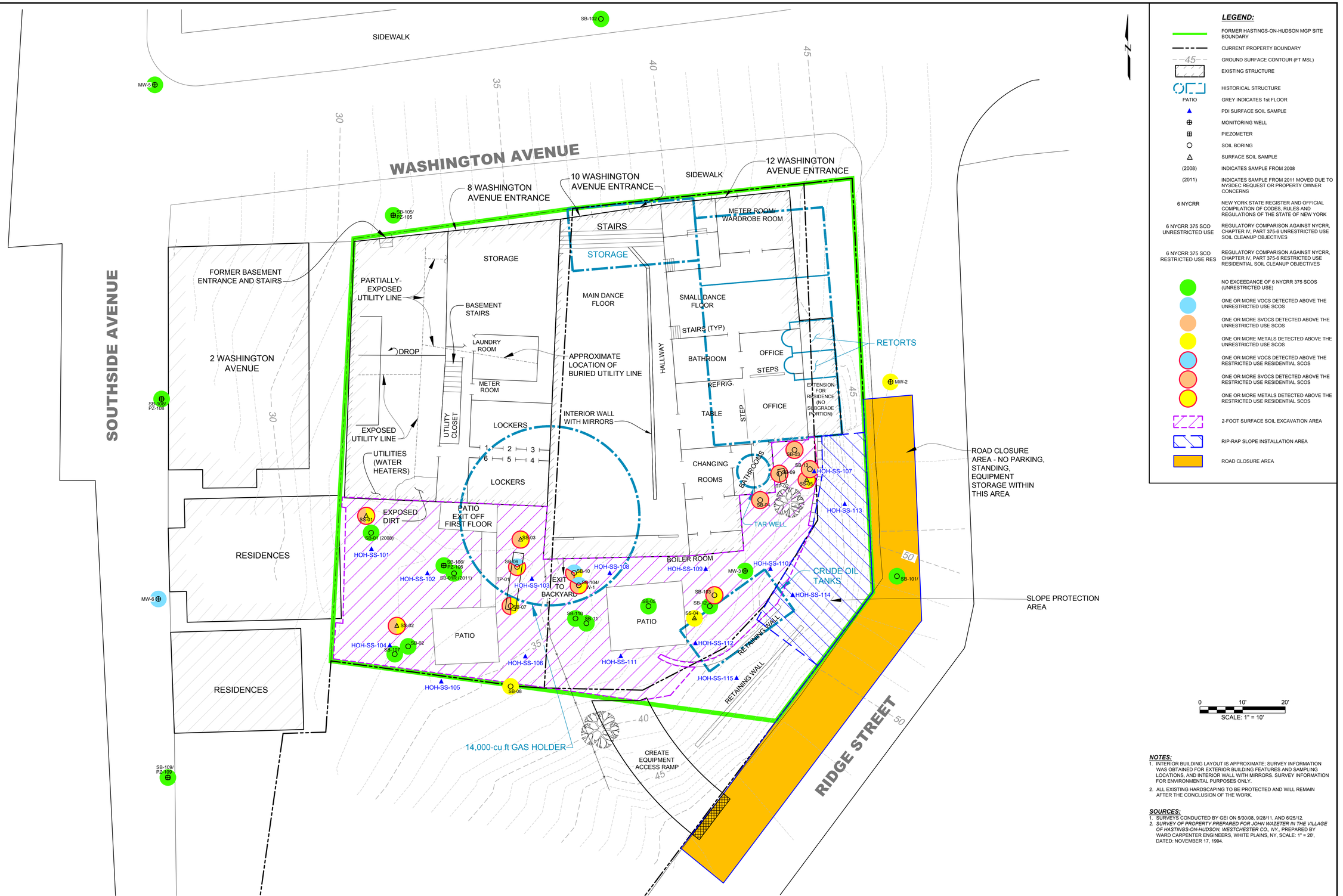

LEGEND:

- FORMER HASTINGS-ON-HUDSON MGP SITE BOUNDARY
- CURRENT PROPERTY BOUNDARY
- 45 — GROUND SURFACE CONTOUR (FT MSL)
- EXISTING STRUCTURE
- HISTORICAL STRUCTURE
- PATIO — GREY INDICATES 1st FLOOR
- PDI SURFACE SOIL SAMPLE
- MONITORING WELL
- PIEZOMETER
- SOIL BORING
- SURFACE SOIL SAMPLE
- (2008) — INDICATES SAMPLE FROM 2008
- (2011) — INDICATES SAMPLE FROM 2011 MOVED DUE TO NYSDEC REQUEST OR PROPERTY OWNER CONCERNS
- 6 NYCRR — NEW YORK STATE REGISTER AND OFFICIAL COMPILATION OF CODES, RULES AND REGULATIONS OF THE STATE OF NEW YORK
- 6 NYCRR 375 SCO UNRESTRICTED USE — REGULATORY COMPARISON AGAINST NYCRR, CHAPTER IV, PART 375-6 UNRESTRICTED USE SOIL CLEANUP OBJECTIVES
- 6 NYCRR 375 SCO RESTRICTED USE RES — REGULATORY COMPARISON AGAINST NYCRR, CHAPTER IV, PART 375-6 RESTRICTED USE RESIDENTIAL SOIL CLEANUP OBJECTIVES
- NO EXCEEDANCE OF 6 NYCRR 375 SCOS (UNRESTRICTED USE)
- ONE OR MORE VOCS DETECTED ABOVE THE UNRESTRICTED USE SCOS
- ONE OR MORE SVOCS DETECTED ABOVE THE UNRESTRICTED USE SCOS
- ONE OR MORE METALS DETECTED ABOVE THE UNRESTRICTED USE SCOS
- ONE OR MORE VOCS DETECTED ABOVE THE RESTRICTED USE RESIDENTIAL SCOS
- ONE OR MORE SVOCS DETECTED ABOVE THE RESTRICTED USE RESIDENTIAL SCOS
- ONE OR MORE METALS DETECTED ABOVE THE RESTRICTED USE RESIDENTIAL SCOS
- 2-FOOT SURFACE SOIL EXCAVATION AREA
- RIP-RAP SLOPE INSTALLATION AREA
- ROAD CLOSURE AREA

N

0 10' 20'
SCALE: 1" = 10'

NOTES:

1. INTERIOR BUILDING LAYOUT IS APPROXIMATE; SURVEY INFORMATION WAS OBTAINED FOR EXTERIOR BUILDING FEATURES AND SAMPLING LOCATIONS, AND INTERIOR WALL WITH MIRRORS. SURVEY INFORMATION FOR ENVIRONMENTAL PURPOSES ONLY.
2. ALL EXISTING HARDSCAPING TO BE PROTECTED AND WILL REMAIN AFTER THE CONCLUSION OF THE WORK.

SOURCES:

1. SURVEYS CONDUCTED BY GEI ON 5/30/08, 9/28/11, AND 6/25/12.
2. *SURVEY OF PROPERTY PREPARED FOR JOHN WAZETER IN THE VILLAGE OF HASTINGS-ON-HUDSON, WESTCHESTER CO., NY*, PREPARED BY WARD CARPENTER ENGINEERS, WHITE PLAINS, NY; SCALE: 1" = 20', DATED: NOVEMBER 17, 1994.

Pre-Design Investigation Summary
Hastings-On-Hudson Former MGP Site
Village of Hastings-On-Hudson, New York

Consolidated Edison Co. of New York, Inc.
Astoria, New York

GEI Consultants

RECOMMENDED REMEDIAL ALTERNATIVE

Project 070251 | September 2017 | Fig. 1

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DRAFT

GEI Consultants, Inc. P.C.
455 Winding Brook Drive
Suite 201
Glastonbury, CT 06033
(860) 368-5300

CLIENT: Consolidated Edison
PROJECT: Hastings on Hudson Former MGP Site
CITY/STATE: Hastings on Hudson, New York
GEI PROJECT NUMBER: 070251-14-1401

BORING LOG
PAGE 1 of 1
HOH-SS-101

GROUND SURFACE ELEVATION (FT): 29.33 **LOCATION:**
NORTHING (FT): 787031 **EASTING (FT):** 662143 **TOTAL DEPTH (FT):** 2.0
DRILLED BY: ADT / Rob Allen **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: E Spazzarini/C. Akudo **DATE START / END:** 8/24/2017 - 8/24/2017
DRILLING DETAILS: Hand Auger
WATER LEVEL DEPTHS (FT):
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0			0		HOH-SS-101(0-2in)	(0'- 1') SAND WITH SILT (SP-SM); ~85% sand, fine to medium, ~10% fines, ~5% gravel, fine; dry, gray brown, organic roots and fibers.
				0		HOH-SS-101(2-6in)	
				0		HOH-SS-101(6-12in)	
				0		HOH-SS-101(12-18in)	(1'- 1.5') SAND (SP); ~95% sand, fine, ~5% fines; trace gravel, dry, brown, crushed glass.
				0		HOH-SS-101(18-24in)	(1.5'- 2') SAND (SP); ~90% sand, fine to medium, ~5% gravel, fine to coarse, ~5% fines; max. gravel size 1.5, dry, tan.
							End of Boring at 2 feet. Backfilled with soil cuttings

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (PPM)
JHS = JAR HEADSPACE PID READING (PPM)

NA = NOT APPLICABLE
NM = NOT MEASURED
Q_P = POCKET PENETROMETER
S_V = TORVANE PEAK

ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG HOH PDI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 9/13/17

DRAFT

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CLIENT: Consolidated Edison
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CITY/STATE: Hastings on Hudson, New York
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BORING LOG
PAGE 1 of 1
HOH-SS-102

GROUND SURFACE ELEVATION (FT): 29.74 **LOCATION:**
NORTHING (FT): 787025 **EASTING (FT):** 662156 **TOTAL DEPTH (FT):** 2.0
DRILLED BY: ADT / Rob Allen **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: E Spazzarini/C. Akudo **DATE START / END:** 8/24/2017 - 8/24/2017
DRILLING DETAILS: Hand Auger
WATER LEVEL DEPTHS (FT):
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0					HOH-SS-102(0-2in)	(0'- 1') SAND WITH SILT (SP-SM); ~85% sand, fine to medium, ~10% fines, ~5% gravel, fine; dry, brown, organic roots and fibers.
				0		HOH-SS-102(2-6in)	
				0		HOH-SS-102(6-12in)	
							(1'- 2') SAND (SP); ~90% sand, fine to medium, ~5% gravel, fine to coarse, ~5% fines; max. gravel size 1.5, dry, tan.
				0		HOH-SS-102(12-18in)	
				0		HOH-SS-102(18-24in)	
							End of Boring at 2 feet. Backfilled with soil cuttings

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ENVIRONMENTAL BORING LOG HOH PDI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 9/13/17

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BORING LOG
PAGE 1 of 1
HOH-SS-103

GROUND SURFACE ELEVATION (FT): 30.93 **LOCATION:**
NORTHING (FT): 787024 **EASTING (FT):** 662180 **TOTAL DEPTH (FT):** 2.0
DRILLED BY: ADT / Rob Allen **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: E Spazzarini/C. Akudo **DATE START / END:** 8/23/2017 - 8/23/2017
DRILLING DETAILS: Hand Auger
WATER LEVEL DEPTHS (FT):
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0			0		HOH-SS-103(0-2in)	(0'- 1') SAND WITH SILT (SP-SM); ~85% sand, fine to medium, ~10% fines, ~5% gravel, fine; dry, gray brown, organic roots and fibers.
				0		HOH-SS-103(2-6in)	
30				0		HOH-SS-103(6-12in)	
				0		HOH-SS-103(12-18in)	(1'- 2') SAND (SP); ~90% sand, fine to medium, ~5% gravel, fine, ~5% fines; dry, brown, trace organic roots and fibers.
				0		HOH-SS-103(18-24in)	
							End of Boring at 2 feet. Backfilled with soil cuttings

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ENVIRONMENTAL BORING LOG HOH PDI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 9/13/17

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BORING LOG
PAGE 1 of 1
HOH-SS-104

GROUND SURFACE ELEVATION (FT): 29.70 **LOCATION:**
NORTHING (FT): 787008 **EASTING (FT):** 662147 **TOTAL DEPTH (FT):** 2.0
DRILLED BY: ADT / Rob Allen **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: E Spazzarini/C. Akudo **DATE START / END:** 8/24/2017 - 8/24/2017
DRILLING DETAILS: Hand Auger
WATER LEVEL DEPTHS (FT):
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0					HOH-SS-104(0-2in)	(0'- 0.2') SAND WITH SILT (SP-SM); ~85% sand, fine to medium, ~10% fines, ~5% gravel, fine; dry, brown, organic roots and fibers. (0.2'- 1') SAND (SP); ~95% sand, fine, ~5% fines; trace gravel, dry, brown, crushed glass.
				0		HOH-SS-104(2-6in)	
				0		HOH-SS-104(6-12in)	(1'- 2') SAND (SP); ~90% sand, fine to medium, ~5% gravel, fine to coarse, ~5% fines; max. gravel size 1.5, dry, tan.
				0		HOH-SS-104(12-18in)	
				0		HOH-SS-104(18-24in)	
							End of Boring at 2 feet. Backfilled with soil cuttings

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CrLO= CREOSOTE LIKE ODOR
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BORING LOG
PAGE 1 of 1
HOH-SS-105

GROUND SURFACE ELEVATION (FT): 30.91 **LOCATION:**
NORTHING (FT): 786999 **EASTING (FT):** 662159 **TOTAL DEPTH (FT):** 2.0
DRILLED BY: ADT / Rob Allen **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: E Spazzarini/C. Akudo **DATE START / END:** 8/23/2017 - 8/23/2017
DRILLING DETAILS: Hand Auger
WATER LEVEL DEPTHS (FT):
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0						
				0		HOH-SS-105(0-2in)	(0'- 1.5') SAND (SP); ~85% sand, fine to medium, ~10% gravel, fine to coarse, ~5% fines; max. gravel size 1, dry, dark brown, organic roots and fibers.
				0		HOH-SS-105(2-6in)	
30				0		HOH-SS-105(6-12in)	
				0		HOH-SS-105(12-18in)	
							(1.5'- 2') SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines; max. gravel size 1, dry, light brown.
				0		HOH-SS-105(18-24in)	
							End of Boring at 2 feet. Backfilled with soil cuttings

NOTES:

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JHS = JAR HEADSPACE PID READING (PPM)

NA = NOT APPLICABLE
NM = NOT MEASURED
Q_P = POCKET PENETROMETER
S_V = TORVANE PEAK

ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG HOH PDI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 9/13/17

DRAFT

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455 Winding Brook Drive
Suite 201
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(860) 368-5300

CLIENT: Consolidated Edison
PROJECT: Hastings on Hudson Former MGP Site
CITY/STATE: Hastings on Hudson, New York
GEI PROJECT NUMBER: 070251-14-1401

BORING LOG
PAGE 1 of 1
HOH-SS-106

GROUND SURFACE ELEVATION (FT): 31.85 **LOCATION:**
NORTHING (FT): 787005 **EASTING (FT):** 662179 **TOTAL DEPTH (FT):** 2.0
DRILLED BY: ADT / Rob Allen **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: E Spazzarini/C. Akudo **DATE START / END:** 8/23/2017 - 8/23/2017
DRILLING DETAILS: Hand Auger
WATER LEVEL DEPTHS (FT):
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0			0		HOH-SS-106(0-2in)	(0'- 2') SAND (SP); ~90% sand, fine to medium, ~5% gravel, fine to coarse, ~5% fines; max. gravel size 1, dry, light brown, organic roots and fibers.
				0		HOH-SS-106(2-6in)	
				0		HOH-SS-106(6-12in)	
				0		HOH-SS-106(12-18in)	
30				0		HOH-SS-106(18-24in)	

End of Boring at 2 feet.
Backfilled with soil cuttings

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ENVIRONMENTAL BORING LOG HOH PDI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 9/13/17

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BORING LOG
PAGE 1 of 1
HOH-SS-107

GROUND SURFACE ELEVATION (FT): 35.27 **LOCATION:**
NORTHING (FT): 787049 **EASTING (FT):** 662247 **TOTAL DEPTH (FT):** 2.0
DRILLED BY: ADT / Tony Palomegue **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: E Spazzarini/C. Akudo **DATE START / END:** 8/22/2017 - 8/22/2017
DRILLING DETAILS: Hand Auger
WATER LEVEL DEPTHS (FT):
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
35	0			0		HOH-SS-107(0-2in)	(0'- 1') SAND (SP); ~90% sand, fine to medium, ~5% gravel, fine to medium, ~5% fines; max. gravel size 0.5, dry, brown, organic roots and fibers, crushed glass and brick fragments.
				0		HOH-SS-107(2-6in)	
				0		HOH-SS-107(6-12in)	
				0		HOH-SS-107(12-18in)	(1'- 2') SAND (SP); ~85% sand, fine to medium, ~10% gravel, fine to coarse, ~5% fines; max. gravel size 1, dry, grayish brown, crushed glass and brick fragments.
				0		HOH-SS-107(18-24in)	
							End of Boring at 2 feet. Backfilled with soil cuttings

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IN. = INCHES
FT. = FEET

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OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
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ENVIRONMENTAL BORING LOG HOH PDI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 9/13/17

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BORING LOG
PAGE 1 of 1
HOH-SS-108

GROUND SURFACE ELEVATION (FT): 33.26 **LOCATION:**
NORTHING (FT): 787025 **EASTING (FT):** 662199 **TOTAL DEPTH (FT):** 2.0
DRILLED BY: ADT / Tony Palomegue **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: E Spazzarini/C. Akudo **DATE START / END:** 8/22/2017 - 8/22/2017
DRILLING DETAILS: Hand Auger
WATER LEVEL DEPTHS (FT):
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0			0		HOH-SS-108(0-2in)	(0'- 2') SAND (SP); ~90% sand, fine to medium, ~5% gravel, fine to medium, ~5% fines; max. gravel size 0.5, dry, dark brown, organic roots and fibers, crushed glass and brick fragments.
				0		HOH-SS-108(2-6in)	
				0		HOH-SS-108(6-12in)	
				0		HOH-SS-108(12-18in)	
				0		HOH-SS-108(18-24in)	

End of Boring at 2 feet.
Backfilled with soil cuttings

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BORING LOG
PAGE 1 of 1
HOH-SS-109

GROUND SURFACE ELEVATION (FT): 33.67 **LOCATION:**
NORTHING (FT): 787026 **EASTING (FT):** 662221 **TOTAL DEPTH (FT):** 2.0
DRILLED BY: ADT / Tony Palomegue **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: E Spazzarini/C. Akudo **DATE START / END:** 8/22/2017 - 8/22/2017
DRILLING DETAILS: Hand Auger
WATER LEVEL DEPTHS (FT):
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0			0		HOH-SS-109(0-2in)	(0'- 1') SAND (SP); ~90% sand, fine to medium, ~5% gravel, fine to medium, ~5% fines; max. gravel size 0.5, dry, brown, organic roots and fibers, crushed glass and brick fragments.
				0		HOH-SS-109(2-6in)	
				0		HOH-SS-109(6-12in)	
				0		HOH-SS-109(12-18in)	(1'- 2') SAND WITH SILT (SP-SM); ~85% sand, fine to medium, ~10% fines, ~5% gravel, fine to medium; max. gravel size 0.5, dry, dark brown, organic roots and fibers, crushed glass and brick fragments.
				0		HOH-SS-109(18-24in)	
							End of Boring at 2 feet. Backfilled with soil cuttings

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ENVIRONMENTAL BORING LOG HOH PDI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 9/13/17

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BORING LOG
PAGE 1 of 1
HOH-SS-110

GROUND SURFACE ELEVATION (FT): 35.47 **LOCATION:**
NORTHING (FT): 787026 **EASTING (FT):** 662236 **TOTAL DEPTH (FT):** 2.0
DRILLED BY: ADT / Tony Palomegue **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: E Spazzarini/C. Akudo **DATE START / END:** 8/22/2017 - 8/22/2017
DRILLING DETAILS: Hand Auger
WATER LEVEL DEPTHS (FT):
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0						
35				0		HOH-SS-110(0-2in)	(0'- 0.2') SANDY SILT (SM); ~70% sand, fine, ~30% fines; dry, brown.
						HOH-SS-110(2-6in)	(0.2'- 2') SAND (SP); ~85% sand, fine to medium, ~10% gravel, fine to coarse, ~5% fines; max. gravel size 2, dry, gray brown, organic roots and fibers in the top 4 inches.
				0		HOH-SS-110(6-12in)	
				0		HOH-SS-110(12-18in)	
				0		HOH-SS-110(18-24in)	
							End of Boring at 2 feet. Backfilled with soil cuttings

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ENVIRONMENTAL BORING LOG HOH PDI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 9/13/17

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BORING LOG
PAGE 1 of 1
HOH-SS-111

GROUND SURFACE ELEVATION (FT): 33.37 **LOCATION:**
NORTHING (FT): 787005 **EASTING (FT):** 662201 **TOTAL DEPTH (FT):** 2.0
DRILLED BY: ADT / Tony Palomegue **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: E Spazzarini/C. Akudo **DATE START / END:** 8/22/2017 - 8/22/2017
DRILLING DETAILS: Hand Auger
WATER LEVEL DEPTHS (FT):
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0					HOH-SS-111(0-2in)	(0'- 1.5') SAND (SP); ~95% sand, fine, ~5% fines; trace gravel, dry, brown, organic roots & fibers, crushed glass and brick fragments.
				0		HOH-SS-111(2-6in)	
				0		HOH-SS-111(6-12in)	
				0		HOH-SS-111(12-18in)	
							(1.5'- 2') SAND (SP); ~90% sand, fine to medium, ~5% gravel, fine to medium, ~5% fines; dry, tan.
				0		HOH-SS-111(18-24in)	
							End of Boring at 2 feet. Backfilled with soil cuttings

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ENVIRONMENTAL BORING LOG HOH PDI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 9/13/17

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BORING LOG
PAGE 1 of 1
HOH-SS-112

GROUND SURFACE ELEVATION (FT): 33.63 **LOCATION:**
NORTHING (FT): 787008 **EASTING (FT):** 662219 **TOTAL DEPTH (FT):** 2.0
DRILLED BY: ADT / Tony Palomegue **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: E Spazzarini/C. Akudo **DATE START / END:** 8/22/2017 - 8/22/2017
DRILLING DETAILS: Hand Auger
WATER LEVEL DEPTHS (FT):
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0			0		HOH-SS-112(0-2in)	(0'- 1') SAND (SP); ~90% sand, fine to medium, ~5% gravel, fine to medium, ~5% fines; dry, brown, roots, crushed glass and brick fragments.
				0		HOH-SS-112(2-6in)	
				0		HOH-SS-112(6-12in)	
				0		HOH-SS-112(12-18in)	(1'- 2') SAND WITH SILT (SP-SM); ~85% sand, fine to medium, ~10% fines, ~5% gravel, fine to medium; max. gravel size 0.5, dry, dark brown, roots, crushed glass and brick fragments. Crushed angular stone from 1-1.5'.
				0		HOH-SS-112(18-24in)	
							End of Boring at 2 feet. Backfilled with soil cuttings

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BORING LOG
PAGE 1 of 1
HOH-SS-113

GROUND SURFACE ELEVATION (FT): 41.01 **LOCATION:**
NORTHING (FT): 787041 **EASTING (FT):** 662254 **TOTAL DEPTH (FT):** 2.0
DRILLED BY: ADT / Rob Allen **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: E Spazzarini/C. Akudo **DATE START / END:** 8/23/2017 - 8/23/2017
DRILLING DETAILS: Hand Auger
WATER LEVEL DEPTHS (FT):
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0						
				0		HOH-SS-113(0-2in)	(0'- 1') SILTY SAND (SM); ~80% sand, fine to medium, ~15% fines, ~5% gravel, fine to medium; dry, brown, crushed glass, organic roots and fibers.
				0		HOH-SS-113(2-6in)	
				0		HOH-SS-113(6-12in)	
40							(1'- 2') SAND (SP); ~90% sand, fine to medium, ~5% gravel, fine to medium, ~5% fines; max. gravel size 0.5, dry, light brown.
				0		HOH-SS-113(12-18in)	
				0		HOH-SS-113(18-24in)	
							End of Boring at 2 feet. Backfilled with soil cuttings

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ENVIRONMENTAL BORING LOG HOH PDI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 9/13/17

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BORING LOG
PAGE 1 of 1
HOH-SS-114

GROUND SURFACE ELEVATION (FT): 38.06 **LOCATION:**
NORTHING (FT): 787020 **EASTING (FT):** 662242 **TOTAL DEPTH (FT):** 2.0
DRILLED BY: ADT / Rob Allen **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: E Spazzarini/C. Akudo **DATE START / END:** 8/23/2017 - 8/23/2017
DRILLING DETAILS: Hand Auger
WATER LEVEL DEPTHS (FT):
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0					HOH-SS-114(0-2in)	(0'- 1.5') SAND WITH SILT (SP-SM); ~85% sand, fine to medium, ~10% fines, ~5% gravel, fine to medium; dry, brown, crushed glass, organic roots and fibers.
				0		HOH-SS-114(2-6in)	
				0		HOH-SS-114(6-12in)	
				0		HOH-SS-114(12-18in)	
							(1.5'- 2') SAND (SP); ~90% sand, fine to medium, ~5% gravel, fine to medium, ~5% fines; max. gravel size 0.5, dry, light brown.
				0		HOH-SS-114(18-24in)	
							End of Boring at 2 feet. Backfilled with soil cuttings

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(860) 368-5300

CLIENT: Consolidated Edison
PROJECT: Hastings on Hudson Former MGP Site
CITY/STATE: Hastings on Hudson, New York
GEI PROJECT NUMBER: 070251-14-1401

BORING LOG
PAGE 1 of 1
HOH-SS-115

GROUND SURFACE ELEVATION (FT): 39.47 **LOCATION:**
NORTHING (FT): 787000 **EASTING (FT):** 662228 **TOTAL DEPTH (FT):** 2.0
DRILLED BY: ADT / Rob Allen **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: E Spazzarini/C. Akudo **DATE START / END:** 8/23/2017 - 8/23/2017
DRILLING DETAILS: Hand Auger
WATER LEVEL DEPTHS (FT):
GENERAL NOTE:

ELEV. FT.	DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN/REC FT./FT.	SAMPLE INFO: PID (PPM)	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	0						
				0		HOH-SS-115(0-2in)	(0'- 1') SAND WITH SILT (SP-SM); ~85% sand, fine to medium, ~10% fines, ~5% gravel, fine; dry, brown, organic roots and fibers.
				0		HOH-SS-115(2-6in)	
				0		HOH-SS-115(6-12in)	
				0		HOH-SS-115(12-18in)	(1'- 2') SAND (SP); ~85% sand, fine to medium, ~10% gravel, fine to coarse, ~5% fines; dry, light brown, organic roots and fibers.
				0		HOH-SS-115(18-24in)	
							End of Boring at 2 feet. Backfilled with soil cuttings

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (PPM)
JHS = JAR HEADSPACE PID READING (PPM)

NA = NOT APPLICABLE
NM = NOT MEASURED
Q_P = POCKET PENETROMETER
S_V = TORVANE PEAK

ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG HOH PDI BORING LOGS.GPJ GEI TEMPLATE 11-7-13.GDT 9/13/17

Table 1. Shallow Soil Analytical Results
Pre-Design Investigation Summary Report
Con Edison Hastings on Hudson Former MGP Site
Hastings on Hudson, NY abbrev.)

Analyte	Units	CAS No.	Unrestricted SCO	Restricted-Residential SCO	Location Name	HOH-SS-101(0-2in)	HOH-SS-101(2-6in)	HOH-SS-101(6-12in)	HOH-SS-101(12-18in)	HOH-SS-101(18-24in)	HOH-SS-102(0-2in)	HOH-SS-102(2-6in)	HOH-SS-102(6-12in)	HOH-SS-102(12-18in)	HOH-SS-102(18-24in)	HOH-SS-103(0-2in)	Dup-03	HOH-SS-103(2-6in)	HOH-SS-103(6-12in)	HOH-SS-103(12-18in)	HOH-SS-103(18-24in)	HOH-SS-104(0-2in)
					Sample Name	HOH-SS-101(0-2in)	HOH-SS-101(2-6in)	HOH-SS-101(6-12in)	HOH-SS-101(12-18in)	HOH-SS-101(18-24in)	HOH-SS-102(0-2in)	HOH-SS-102(2-6in)	HOH-SS-102(6-12in)	HOH-SS-102(12-18in)	HOH-SS-102(18-24in)	HOH-SS-103(0-2in)	Dup-03	HOH-SS-103(2-6in)	HOH-SS-103(6-12in)	HOH-SS-103(12-18in)	HOH-SS-103(18-24in)	HOH-SS-104(0-2in)
					Start Depth	0	2	6	12	18	0	2	6	12	18							
					End Depth	2	6	12	18	24	2	6	12	18	24							
					Depth Unit	in	in	in	in	in	in	in	in	in	in							
					Sample Date	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/23/2017	8/23/2017 HOH-SS-103(0-2IN)_08/23/17	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/24/2017
					Parent Sample																	
VOCs	ug/kg																					
Benzene		71-43-2	60.00	4800		1.1 U					1.3 U					1.6 U						1.1 U
Toluene		108-88-3	700.0	100000		1.1 U					1.3 U					1.6 U						1.1 U
Ethylbenzene		100-41-4	1000	41000		1.1 U					1.3 U					1.6 U						1.1 U
o-Xylene		95-47-6	260.0	100000		1.1 U					1.3 U					1.6 U						1.1 U
m/p-Xylene		179601-23-1	260.0	100000		1.1 U					1.3 U					1.6 U						1.1 U
Total Xylene		1330-20-7	260.0	100000		2.2 U					2.6 U					3.1 U						2.3 U
Acetone		67-64-1	50.00	100000		5.6 U					6.6 U					**9.3 B**						**9.9**
Bromochloromethane		74-97-5	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
Bromodichloromethane		75-27-4	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
Bromoform		75-25-2	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
Bromomethane		74-83-9	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
Carbon disulfide		75-15-0	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
Carbon tetrachloride		56-23-5	760.0	2400		1.1 U					1.3 U					1.6 U						1.1 U
Chlorobenzene		108-90-7	1100	100000		1.1 U					1.3 U					1.6 U						1.1 U
Chloroethane		75-00-3	NE	NE		1.1 U*					1.3 U*					1.6 U						1.1 U*
Chloroform (Trichloromethane)		67-66-3	370.0	49000		1.1 U					1.3 U					1.6 U						1.1 U
Chloromethane		74-87-3	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
Cyclohexane		110-82-7	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
1,2-Dibromo-3-chloropropane		96-12-8	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
Dibromochloromethane		124-48-1	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
1,2-Dibromoethane (EDB)		106-93-4	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
1,2-Dichlorobenzene		95-50-1	1100	100000		1.1 U					1.3 U					1.6 U						1.1 U
1,3-Dichlorobenzene		541-73-1	2400	49000		1.1 U					1.3 U					1.6 U						1.1 U
1,4-Dichlorobenzene		106-46-7	1800	13000		1.1 U					1.3 U					1.6 U						1.1 U
Dichlorodifluoromethane (Freon 12)		75-71-8	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
1,1-Dichloroethane		75-34-3	270.0	26000		1.1 U					1.3 U					1.6 U						1.1 U
1,2-Dichloroethane		107-06-2	20.00	3100		1.1 U					1.3 U					1.6 U						1.1 U
1,1-Dichloroethene		75-35-4	330.0	100000		1.1 U					1.3 U					1.6 U						1.1 U
cis-1,2-Dichloroethene		156-59-2	250.0	100000		1.1 U					1.3 U					1.6 U						1.1 U
trans-1,2-Dichloroethene		156-60-5	190.0	100000		1.1 U					1.3 U					1.6 U						1.1 U
1,2-Dichloropropane		78-87-5	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
cis-1,3-Dichloropropene		10061-01-5	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
trans-1,3-Dichloropropene		10061-02-6	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
1,4-Dioxane		123-91-1	100	13000		22 U*					26 U*					31 U						23 U*
2-Hexanone		591-78-6	NE	NE		5.6 U					6.6 U					7.8 U						5.7 U
Isopropylbenzene		98-82-8	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
Methyl acetate		79-20-9	NE	NE		5.6 U					6.6 U					7.8 U						5.7 U
Methyl ethyl ketone (2-Butanone)		78-93-3	120.0	100000		5.6 U					6.6 U					7.8 U						5.7 U
Methyl tert-butyl ether (MTBE)		1634-04-4	930.0	100000		1.1 U					1.3 U					1.6 U						1.1 U
4-Methyl-2-pentanone (MIBK)		108-10-1	NE	NE		5.6 U					6.6 U					7.8 U						5.7 U
Methylcyclohexane		108-87-2	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
Methylene chloride		75-09-2	50.00	100000		1.1 U					1.3 U					**1.5 JB**						1.1 U
Styrene		100-42-5	NE	NE		1.1 U					1.3 U					1.6 U						**0.65 J**
1,1,2,2-Tetrachloroethane		79-34-5	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
Tetrachloroethene (PCE)		127-18-4	1300	19000		1.1 U					1.3 U					1.6 U						1.1 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		76-13-1	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
1,2,3-Trichlorobenzene		87-61-6	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
1,2,4-Trichlorobenzene		120-82-1	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
1,1,1-Trichloroethane (TCA)		71-55-6	680.0	100000		1.1 U					1.3 U					1.6 U						1.1 U
1,1,2-Trichloroethane		79-00-5	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
Trichloroethene (TCE)		79-01-6	470.0	21000		1.1 U					1.3 U					1.6 U						1.1 U
Trichlorofluoromethane (Freon 11)		75-69-4	NE	NE		1.1 U					1.3 U					1.6 U						1.1 U
Vinyl chloride		75-01-4	20.00	900.0		1.1 U					1.3 U					1.6 U						1.1 U
SVOCs	ug/kg																					
Acenaphthene		83-32-9	20000	100000		400 U	380 U	380 U	370 U	**100**	870 U	400 U	370 U	380 U	**240 J**	**91 J**	180 U	440 U	450 U	440 U	400 U	380 U
Acenaphthylene		208-96-8	100000	100000		**180 J**	**190 J**	**270 J**	**310 J**	**200**	**460 J**	**470**	**320 J**	**230 J**	**290 J**	**120 J**	180 U	440 U	450 U	440 U	400 U	380 U
Anthracene		120-12-7	100000	100000		**200 J**	**340 J**	**210 J**	**400**	**1400**	**710 J**	**450**	**330 J**	**430**	**730**	**200**	**150 J**	440 U	450 U	440 U	400 U	**230 J**
Benzo(a)anthracene		56-55-3	1000	1000		**980**	**1200**	**1700**	**2700**	**7300**	**2800**	**2000**	**1400**	**1400**	**1900**	**780**	**590**	**570**	**300 J**	**360 J**	**260 J**	**870**
Benzo(b)fluoranthene		205-99-2	1000	1000		**1300**	**1600**	**2000**	**3000**	**7100**	**3400**	**2800**	**1900**	**1500**	**2300**	**1000**	**780**	**820**	**400 J**	**580**	**300 J**	**1100**
Benzo(k)fluoranthene		207-08-9	800.0	3900		**700**	**850**	**1100**	**1800**	**2100**	**1800**	**1700**	**1100**	**840**	**1200**	**510**	**340**	**440**	**210 J**	**300 J**	**170 J**	**600**
Benzo(g,h,i)perylene		191-24-2	100000	100000		**740**	**900**	**940**	**1900**	**1800**	**2000**	**1300**	**1000**	**810**	**1400**	**530**	**420**	**490**	**240 J**	**340 J**	400 U	**650**
Benzo(a)pyrene		50-32-8	1000	1000		**1100**	**1400**	**1700**	**2800**	**3800**	**3100**	**2000**	**1500**	**1300**	**2000**	**750**	**610**	**730**	**440 J**	**560**	**370 J**	**990**
Chrysene		218-01-9	1000	3900		**1000**	**1200**	**1600**	**2500**	**6400**	**2600**	**2200**	**1500**	**1300**	**1900**	**880**	**620**	**680**	**290 J**	**440**	**250 J**	**810**
Dibenz(a,h)anthracene		53-70-3	330.0	330.0		**250 J**	**280 J**	**360 J**	**500**	**670**	**600 J**	**440**	**330 J**	**260 J**	**390**	**180**	**130 J**	440 U	450 U	440 U	400 U	**230 J**
Fluoranthene		206-44-0	100000	100000		**1800**	**1800**	**1800**	**3600**	**10000**	**5300**	**4200**	**2200**	**2600**	**3700**	**1500**	**1100**	**1300**	**580**	**790**	**540**	**1400**
Fluorene		86-73-7	30000	100000		400 U	380 U	380 U	370 U	**200**	870 U	400 U	370 U	380 U	**260 J**	**91 J**	180 U	440 U	450 U	440 U	400 U	380 U
Indeno(1,2,3-cd)pyrene		193-39-5	500.0	500		**630**	**800**	**880**	**1600**	**1800**	**1600**	**1300**	**920**	**700**	**1200**	**490**	**380**	**440**	**230 J**	**300 J**	400 U	**590**
2-Methylnaphthalene		91-57-6	NE	NE		400 U	380 U	380 U	370 U	**50 J**	870 U	400 U	370 U	380 U	370 U	170 U	180 U	440 U	450 U	440 U	400 U	380 U
Naphthalene		91-20-3	12000	100000		400 U	380 U	380 U	**180 J**	**96**	870 U	400 U	370 U	380 U	370 U	170 U	180 U	440 U	450 U	440 U	400 U	380 U
Phenanthrene		85-01-8	100000	100000		**690**	**1000**	**580**	**1300**	**3700**	**2900**	**2400**	**930**	**1900**	**3000**	**840**	**510**	**700**	450 U	**410 J**	**330 J**	**670**
Pyrene		129-00-0	100000	100000		**1600**	**1600**	**1800**	**3600**	**6900**	**4600**	**3700**	**2100**	**2400**	**3300**	**1700**	**1200**	**1000**	**450**	**600**	**400**	**1200**
Acetophenone		98-86-2	NE	NE		2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Atrazine		1912-24-9	NE	NE		2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Benzaldehyde		100-52-7	NE	NE		4000 U*	3800 U*	3800 U*	3700 U*	720 U*	8700 U*	4000 U*	3700 U*	3800 U*	3700 U*	1700 U*	1800 U*	4400 U*	4500 U*	4400 U*	4000 U*	3800 U*
Biphenyl (1,1-Biphenyl)		92-52-4	NE	NE		2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Bis(2-chloroethoxy)methane		111-91-1	NE	NE		2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Bis(2-chloroethyl)ether		111-44-4	NE	NE		2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
2,2-oxybis(1-Chloropropane)		108-60-1	NE	NE		2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Bis(2-ethylhexyl)phthalate		117-81-7	NE	NE		2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U

Table 1. Shallow Soil Analytical Results
Pre-Design Investigation Summary Report
Con Edison Hastings on Hudson Former MGP Site
Hastings on Hudson, NY abbrev.)

Location Name																				
Sample Name					HOH-SS-101(0-2in)	HOH-SS-101(2-6in)	HOH-SS-101(6-12in)	HOH-SS-101(12-18in)	HOH-SS-101(18-24in)	HOH-SS-102(0-2in)	HOH-SS-102(2-6in)	HOH-SS-102(6-12in)	HOH-SS-102(12-18in)	HOH-SS-102(18-24in)	HOH-SS-103(0-2in)	Dup-03	HOH-SS-103(2-6in)	HOH-SS-103(6-12in)	HOH-SS-103(12-18in)	HOH-SS-103(18-24in)	HOH-SS-104(0-2in)
Start Depth					0	2	6	12	18	0	2	6	12	18			2	6	12	18	0
End Depth					2	6	12	18	24	2	6	12	18	24			6	12	18	24	2
Depth Unit					in	in	in	in	in	in	in	in	in	in			in	in	in	in	in
Sample Date					8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/23/2017	8/23/2017 HOH-SS-103(0-2IN)_08/23/17	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/24/2017
Parent Sample																					
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Restricted-Residential SCO**																	
4-Bromophenyl phenyl ether		101-55-3	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Butyl benzyl phthalate		85-68-7	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Caprolactam		105-60-2	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Carbazole		86-74-8	NE	NE	2000 U	1900 U	1900 U	1800 U	**650**	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
4-Chloro-3-methylphenol		59-50-7	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
4-Chloroaniline		106-47-8	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
2-Chloronaphthalene		91-58-7	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
2-Chlorophenol		95-57-8	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
4-Chlorophenyl phenyl ether		7005-72-3	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Dibenzofuran		132-64-9	7000	59000	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
3,3-Dichlorobenzidine		91-94-1	NE	NE	4000 U	3800 U	3800 U	3700 U	720 U	8700 U	4000 U	3700 U	3800 U	3700 U	1700 U	1800 U	4400 U	4500 U	4400 U	4000 U	3800 U
2,4-Dichlorophenol		120-83-2	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Diethyl phthalate		84-66-2	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Dimethyl phthalate		131-11-3	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
2,4-Dimethylphenol		105-67-9	NE	NE	4000 U	3800 U	3800 U	3700 U	720 U	8700 U	4000 U	3700 U	3800 U	3700 U	1700 U	1800 U	4400 U	4500 U	4400 U	4000 U	3800 U
Di-n-butyl phthalate		84-74-2	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
4,6-Dinitro-2-methylphenol		534-52-1	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
2,4-Dinitrophenol		51-28-5	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
2,4-Dinitrotoluene		121-14-2	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
2,6-Dinitrotoluene		606-20-2	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Di-n-octyl phthalate		117-84-0	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Hexachlorobenzene		118-74-1	330.0	1200	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
1,3-Hexachlorobutadiene (C-46)		87-68-3	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Hexachlorocyclopentadiene		77-47-4	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Hexachloroethane		67-72-1	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Isophorone		78-59-1	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
2-Methylphenol (o-Cresol)		95-48-7	330.0	100000	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
3,4-Methylphenol (m,p-Cresol)	mg/kg	108394/106445	NE	NE	2 U	1.9 U	1.9 U	1.8 U	0.36 U	4.3 U	2 U	1.8 U	1.9 U	1.9 U	0.85 U	0.87 U	2.2 U	2.2 U	2.2 U	2 U	1.9 U
2-Nitroaniline		88-74-4	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
3-Nitroaniline		99-09-2	NE	NE	4000 U	3800 U	3800 U	3700 U	720 U	8700 U	4000 U	3700 U	3800 U	3700 U	1700 U	1800 U	4400 U	4500 U	4400 U	4000 U	3800 U
4-Nitroaniline		100-01-6	NE	NE	4000 U	3800 U	3800 U	3700 U	720 U	8700 U	4000 U	3700 U	3800 U	3700 U	1700 U	1800 U	4400 U	4500 U	4400 U	4000 U	3800 U
Nitrobenzene		98-95-3	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
2-Nitrophenol		88-75-5	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
4-Nitrophenol		100-02-7	NE	NE	4000 U	3800 U	3800 U	3700 U	720 U	8700 U	4000 U	3700 U	3800 U	3700 U	1700 U	1800 U	4400 U	4500 U	4400 U	4000 U	3800 U
N-Nitrosodiphenylamine (NDFA)		86-30-6	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
N-Nitrosodi-n-propylamine (NDPA)		621-64-7	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Pentachlorophenol		87-86-5	800.0	6700	4000 U	3800 U	3800 U	3700 U	720 U	8700 U	4000 U	3700 U	3800 U	3700 U	1700 U	1800 U	4400 U	4500 U	4400 U	4000 U	3800 U
Phenol		108-95-2	330.0	100000	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
1,2,4,5-Tetrachlorobenzene		95-94-3	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
2,3,4,6-Tetrachlorophenol		58-90-2	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
2,4,5-Trichlorophenol		95-95-4	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
2,4,6-Trichlorophenol		88-06-2	NE	NE	2000 U	1900 U	1900 U	1800 U	360 U	4300 U	2000 U	1800 U	1900 U	1900 U	850 U	870 U	2200 U	2200 U	2200 U	2000 U	1900 U
Total Metals	mg/kg																				
Aluminum		7429-90-5	NE	NE	**9250**	**6310**	**6770**	**6770**	**6510**	**7100**	**6470**	**5240**	**5360**	**5960**	**8820**	**9340**	**7570**	**3620**	**7030**	**7400**	**6780**
Antimony		7440-36-0	NE	NE	4.5 U	4.5 U	4.2 U	4 U	4 U	5.2 U	**1.3 J**	4.2 U	4.5 U	4.4 U	5 U	5 U	4.9 U	5.2 U	5 U	4.7 U	4.4 U
Arsenic		7440-38-2	13.00	16.00	**12.9**	**5.9**	**11.8**	**6.1**	**5.8**	**6.8**	**10.7**	**9.1**	**7.3**	**5.3**	**4.4**	**5.1**	**9.7**	**1.5 J**	**12.8**	**7.8**	**9.1**
Barium		7440-39-3	350.0	400.0	**466**	**727**	**887**	**379**	**374**	**751**	**975**	**427**	**366**	**290**	**275**	**323**	**1220**	**1430**	**2210**	**472**	**308**
Beryllium		7440-41-7	7.200	72.00	**0.39 J**	**0.48**	**0.44**	**0.44**	**0.35 J**	**0.47 J**	**0.42 J**	**0.48**	**0.4 J**	**0.35 J**	**0.43 J**	**0.41 J**	**0.56**	**0.066 J**	**0.53**	**0.44 J**	**0.35 J**
Cadmium		7440-43-9	2.500	4.300	**1.6**	**3.4**	**4.3**	**2.1**	**1.3**	**2.6**	**4.5**	**3.4**	**1.9**	**1.3**	**0.7 J**	**0.89 J**	**3.9**	1 U	**3**	**2.7**	**1.7**
Calcium		7440-70-2	NE	NE	**5280**	**11700**	**16100**	**9670**	**15200**	**12500**	**7000**	**12500**	**5940**	**5350**	**11400**	**10700**	**10200**	**1410**	**25100**	**20300**	**6470**
Chromium		7440-47-3	NE	NE	**26**	**33.6**	**34.7**	**22.4**	**21.3**	**30.4**	**43**	**15.8**	**19.5**	**14.5**	**26.5**	**28.4**	**45.1**	**10.7**	**39**	**25.5**	**18.1**
Cobalt		7440-48-4	NE	NE	**5.3 J**	**8 J**	**8.1 J**	**6 J**	**5.9 J**	**7 J**	**9 J**	**5 J**	**5.3 J**	**5.3 J**	**7 J**	**7.5 J**	**10.2 J**	**2.1 J**	**9.3 J**	**6.8 J**	**5.7 J**
Copper		7440-50-8	50.00	270.0	**218**	**387**	**537**	**553**	**270**	**282**	**550**	**360**	**388**	**312**	**121**	**463**	**376**	**120**	**614**	**296**	**194**
Iron		7439-89-6	NE	NE	**15100**	**21600**	**24300**	**13900**	**14600**	**15600**	**31400**	**16100**	**16800**	**14600**	**19100**	**17000**	**38300**	**4540**	**19800**	**23400**	**17500**
Lead		7439-92-1	63.00	400.0	**1060**	**2060**	**2730**	**847**	**906**	**1530**	**2740**	**1640**	**1030**	**1300**	**515**	**498**	**3250**	**1.4 J**	**18700**	**1280**	**683**
Magnesium		7439-95-4	NE	NE	**2890**	**6830**	**6760**	**6600**	**8210**	**4390**	**3730**	**7240**	**3750**	**4330**	**5670**	**5190**	**3740**	**259 J**	**3810**	**5200**	**3580**
Manganese		7439-96-5	1600	2000	**255**	**463**	**451**	**367**	**359**	**376**	**458**	**1310**	**344**	**410**	**335**	**374**	**479**	**23.8**	**558**	**356**	**277**
Mercury		7439-97-6	0.1800	0.8100	**0.6**	**0.77**	**0.87**	**0.59**	**0.46**	**0.68**	**1.6**	**2.9**	**0.85**	**0.52**	**0.29**	**0.31**	**0.97**	**0.94**	**0.66**	**0.75**	**0.37**
Nickel		7440-02-0	30.00	310.0	**15.7**	**43.1**	**23.7**	**18.8**	**17.4**	**22.8**	**44.9**	**16.4**	**16.6**	**15**	**21.1**	**20.4**	**46.4**	**2.1 J**	**25.2**	**22.4**	**16.2**
Potassium		7440-09-7	NE	NE	**714 J**	**834 J**	**759 J**	**796 J**	**832 J**	**1000 J**	**792 J**	**613 J**	**811 J**	**717 J**	**1880**	**2130**	**961 J**	**186 J**	**1060 J**	**1240**	**801 J**
Selenium		7782-49-2	3.900	180.0	4.5 U	4.5 U	4.2 U	4 U	4 U	5.2 U	4.5 U	4.2 U	4.5 U	4.4 U	5 U	5 U	4.9 U	5.2 U	5 U	4.7 U	4.4 U
Silver		7440-22-4	2.000	180.0	**0.5 J**	**1 J**	**1.2 J**	**0.32 J**	**0.52 J**	**0.74 J**	**2.4**	**0.76 J**	**4.2**	**0.63 J**	2.5 U	2.5 U	**1.1 J**	**1.9 J**	**1.6 J**	2.4 U	**0.34 J**
Sodium		7440-23-5	NE	NE	1140 U	**115 J**	**178 J**	**127 J**	**118 J**	**169 J**	**129 J**	**96.8 J**	**86.5 J**	**126 J**	**107 J**	**122 J**	**191 J**	**3540**	**618 J**	**192 J**	1100 U
Thallium		7440-28-0	NE	NE	4.5 U	4.5 U	4.2 U	4 U	4 U	5.2 U	4.5 U	4.2 U	4.5 U	4.4 U	5 U	5 U	4.9 U	5.2 U	5 U	4.7 U	4.4 U
Vanadium		7440-62-2	NE	NE	**37.1**	**55.9**	**55.5**	**31.3**	**35**	**42**	**124**	**35.4**	**30.6**	**21.8**	**32.3**	**31.9**	**70.6**	13.1 U	**42.1**	**34.8**	**27.6**
Zinc		7440-66-6	109.0	10000	**518**	**811**	**1190**	**540**	**379**	**731**	**1120**	**1030**	**544**	**482**	**416**	**514**	**1440**	**196**	**2240**	**830**	**396**

Table 1. Shallow Soil Analytical Results
Pre-Design Investigation Summary Report
Con Edison Hastings on Hudson Former MGP Site
Hastings on Hudson, NY abbrev.)

Analyte	Units	CAS No.	Unrestricted SCO	Restricted-Residential SCO	Location Name	Dup-04	HOH-SS-104(2-6in)	HOH-SS-104(6-12in)	HOH-SS-104(12-18in)	HOH-SS-104(18-24in)	HOH-SS-105(0-2in)	HOH-SS-105(2-6in)	HOH-SS-105(6-12in)	HOH-SS-105(12-18in)	HOH-SS-105(18-24in)	HOH-SS-106(0-2in)	HOH-SS-106(2-6in)	HOH-SS-106(6-12in)	HOH-SS-106(12-18in)	HOH-SS-106(18-24in)	HOH-SS-107(0-2in)	DUP-01
					Sample Name																	
					Start Depth	0	2	6	12	18		2	6	12	18						0	0
					End Depth	2	6	12	18	24		6	12	18	24						2	2
					Depth Unit	in	in	in	in	in		in	in	in	in						ft	ft
					Sample Date	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/22/2017	8/22/2017
					Parent Sample	HOH-SS-104(0-2IN)_08/24/17																HOH-SS-107(0-2IN)_08/22/17
VOCs	ug/kg																					
Benzene		71-43-2	60.00	4800						1.2 U					1.1 U					1.1 U	1.1 U
Toluene		108-88-3	700.0	100000						1.2 U					1.1 U					1.1 U	1.1 U
Ethylbenzene		100-41-4	1000	41000						1.2 U					1.1 U					1.1 U	1.1 U
o-Xylene		95-47-6	260.0	100000						1.2 U					1.1 U					1.1 U	1.1 U
m/p-Xylene		179601-23-1	260.0	100000						1.2 U					1.1 U					1.1 U	1.1 U
Total Xylene		1330-20-7	260.0	100000						2.3 U					2.3 U					2.2 U	2.2 U
Acetone		67-64-1	50.00	100000						**7.3 B**					**12 B**					5.4 U	5.6 U
Bromochloromethane		74-97-5	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
Bromodichloromethane		75-27-4	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
Bromoform		75-25-2	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
Bromomethane		74-83-9	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
Carbon disulfide		75-15-0	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
Carbon tetrachloride		56-23-5	760.0	2400						1.2 U					1.1 U					1.1 U	1.1 U
Chlorobenzene		108-90-7	1100	100000						1.2 U					1.1 U					1.1 U	1.1 U
Chloroethane		75-00-3	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
Chloroform (Trichloromethane)		67-66-3	370.0	49000						1.2 U					1.1 U					1.1 U	1.1 U
Chloromethane		74-87-3	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
Cyclohexane		110-82-7	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
1,2-Dibromo-3-chloropropane		96-12-8	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
Dibromochloromethane		124-48-1	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
1,2-Dibromoethane (EDB)		106-93-4	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
1,2-Dichlorobenzene		95-50-1	1100	100000						1.2 U					1.1 U					1.1 U	1.1 U
1,3-Dichlorobenzene		541-73-1	2400	49000						1.2 U					1.1 U					1.1 U	1.1 U
1,4-Dichlorobenzene		106-46-7	1800	13000						1.2 U					1.1 U					1.1 U	1.1 U
Dichlorodifluoromethane (Freon 12)		75-71-8	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
1,1-Dichloroethane		75-34-3	270.0	26000						1.2 U					1.1 U					1.1 U	1.1 U
1,2-Dichloroethane		107-06-2	20.00	3100						1.2 U					1.1 U					1.1 U	1.1 U
1,1-Dichloroethene		75-35-4	330.0	100000						1.2 U					1.1 U					1.1 U	1.1 U
cis-1,2-Dichloroethene		156-59-2	250.0	100000						1.2 U					1.1 U					1.1 U	1.1 U
trans-1,2-Dichloroethene		156-60-5	190.0	100000						1.2 U					1.1 U					1.1 U	1.1 U
1,2-Dichloropropane		78-87-5	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
cis-1,3-Dichloropropene		10061-01-5	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
trans-1,3-Dichloropropene		10061-02-6	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
1,4-Dioxane		123-91-1	100	13000						23 U					23 U					22 U	22 U
2-Hexanone		591-78-6	NE	NE						5.8 U					5.7 U					5.4 U	5.6 U
Isopropylbenzene		98-82-8	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
Methyl acetate		79-20-9	NE	NE						5.8 U					5.7 U					5.4 U	5.6 U
Methyl ethyl ketone (2-Butanone)		78-93-3	120.0	100000						5.8 U					5.7 U					5.4 U	5.6 U
Methyl tert-butyl ether (MTBE)		1634-04-4	930.0	100000						1.2 U					1.1 U					1.1 U	1.1 U
4-Methyl-2-pentanone (MIBK)		108-10-1	NE	NE						5.8 U					5.7 U					5.4 U	5.6 U
Methylcyclohexane		108-87-2	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
Methylene chloride		75-09-2	50.00	100000						**5.2 B**					1.1 U					1.1 U	**0.2 JB**
Styrene		100-42-5	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
1,1,2,2-Tetrachloroethane		79-34-5	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
Tetrachloroethene (PCE)		127-18-4	1300	19000						1.2 U					1.1 U					1.1 U	1.1 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		76-13-1	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
1,2,3-Trichlorobenzene		87-61-6	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
1,2,4-Trichlorobenzene		120-82-1	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
1,1,1-Trichloroethane (TCA)		71-55-6	680.0	100000						1.2 U					1.1 U					1.1 U	1.1 U
1,1,2-Trichloroethane		79-00-5	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
Trichloroethene (TCE)		79-01-6	470.0	21000						1.2 U					1.1 U					1.1 U	1.1 U
Trichlorofluoromethane (Freon 11)		75-69-4	NE	NE						1.2 U					1.1 U					1.1 U	1.1 U
Vinyl chloride		75-01-4	20.00	900.0						1.2 U					1.1 U					1.1 U	1.1 U
SVOCs	ug/kg																					
Acenaphthene		83-32-9	20000	100000	160 U	380 U	**120**	**300**	70 U	**440**	400 U	79 U	370 U	350 U	170 U	150 U	150 U	140 U	140 U	**100 J**	380 U
Acenaphthylene		208-96-8	100000	100000	**95 J**	**400**	**100**	**110**	**40 J**	**680**	**470**	79 U	370 U	350 U	**110 J**	**200**	**170**	**290**	**410**	**350**	**360 J**
Anthracene		120-12-7	100000	100000	**130 J**	**360 J**	**320**	**640**	**60 J**	**1100**	**340 J**	**37 J**	**230 J**	350 U	**140 J**	**190**	**160**	**300**	**460**	**460**	**600**
Benzo(a)anthracene		56-55-3	1000	1000	**570**	**1700**	**820**	**1200**	**280**	**2500**	**1500**	**110**	**1100**	**200 J**	**560**	**760**	**580**	**880**	**1600**	**1900**	**2100**
Benzo(b)fluoranthene		205-99-2	1000	1000	**740**	**2500**	**1000**	**1600**	**370**	**3800**	**2200**	**130**	**1400**	**290 J**	**780**	**1000**	**910**	**1000**	**1600**	**2000**	**2400**
Benzo(k)fluoranthene		207-08-9	800.0	3900	**420**	**1100**	**420**	**560**	**160**	**1400**	**1100**	**69 J**	**770**	**180 J**	**210**	**410**	**320**	**350**	**540**	**850**	**870**
Benzo(g,h,i)perylene		191-24-2	100000	100000	**420**	**1100**	**530**	**660**	**200**	**1800**	**1200**	**69 J**	**980**	**190 J**	**370**	**560**	**470**	**540**	**920**	**1200**	**1300**
Benzo(a)pyrene		50-32-8	1000	1000	**600**	**1600**	**830**	**1100**	**300**	**2600**	**1600**	**130**	**1400**	**360**	**530**	**770**	**640**	**830**	**1500**	**1700**	**1900**
Chrysene		218-01-9	1000	3900	**570**	**1800**	**850**	**1300**	**280**	**2800**	**1600**	**100**	**1000**	350 U	**630**	**830**	**680**	**1000**	**1700**	**2000**	**2000**
Dibenz(a,h)anthracene		53-70-3	330.0	330.0	**130 J**	**420**	**180**	71 U	**85**	**580**	**350 J**	79 U	**340 J**	350 U	**130 J**	**180**	150 U	**180**	**120 J**	**370**	**430**
Fluoranthene		206-44-0	100000	100000	**1000**	**3300**	**1700**	**2800**	**390**	**6400**	**2900**	**210**	**1400**	**300 J**	**840**	**1100**	**960**	**1200**	**1900**	**3300**	**3900**
Fluorene		86-73-7	30000	100000	160 U	380 U	**120**	**270**	70 U	**500**	400 U	79 U	370 U	350 U	170 U	150 U	150 U	**120 J**	**150**	**140 J**	**200 J**
Indeno(1,2,3-cd)pyrene		193-39-5	500.0	500	**370**	**1100**	**490**	**620**	**180**	**1700**	**1000**	**63 J**	**810**	**170 J**	**310**	**470**	**450**	**440**	**710**	**1000**	**1100**
2-Methylnaphthalene		91-57-6	NE	NE	160 U	380 U	**40 J**	**130**	70 U	**100 J**	400 U	79 U	370 U	350 U	170 U	150 U	150 U	**56 J**	140 U	150 U	380 U
Naphthalene		91-20-3	12000	100000	160 U	380 U	**72**	**240**	70 U	**190**	400 U	79 U	370 U	350 U	170 U	150 U	150 U	140 U	140 U	150 U	380 U
Phenanthrene		85-01-8	100000	100000	**450**	**1500**	**1600**	**3000**	**220**	**5700**	**1000**	**140**	**680**	350 U	**500**	**570**	**480**	**1300**	**2400**	**1400**	**2300**
Pyrene		129-00-0	100000	100000	**930**	**3100**	**1700**	**2500**	**420**	**5600**	**2500**	**180**	**1300**	**270 J**	**1200**	**1500**	**1100**	**2000**	**3800**	**3400**	**3700**
Acetophenone		98-86-2	NE	NE	770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Atrazine		1912-24-9	NE	NE	770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Benzaldehyde		100-52-7	NE	NE	1600 U*	3800 U*	720 U*	710 U*	700 U*	1800 U*	4000 U*	790 U*	3700 U*	3500 U*	1700 U*	1500 U*	1500 U*	1400 U*	1400 U*	1500 U	3800 U
Biphenyl (1,1-Biphenyl)		92-52-4	NE	NE	770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Bis(2-chloroethoxy)methane		111-91-1	NE	NE	770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Bis(2-chloroethyl)ether		111-44-4	NE	NE	770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
2,2-oxybis(1-Chloropropane)		108-60-1	NE	NE	770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Bis(2-ethylhexyl)phthalate		117-81-7	NE	NE	770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U

Table 1. Shallow Soil Analytical Results
Pre-Design Investigation Summary Report
Con Edison Hastings on Hudson Former MGP Site
Hastings on Hudson, NY abbrev.)

Analyte	Units	CAS No.	Unrestricted SCO	Restricted-Residential SCO	Location Name	Dup-04	HOH-SS-104(2-6in)	HOH-SS-104(6-12in)	HOH-SS-104(12-18in)	HOH-SS-104(18-24in)	HOH-SS-105(0-2in)	HOH-SS-105(2-6in)	HOH-SS-105(6-12in)	HOH-SS-105(12-18in)	HOH-SS-105(18-24in)	HOH-SS-106(0-2in)	HOH-SS-106(2-6in)	HOH-SS-106(6-12in)	HOH-SS-106(12-18in)	HOH-SS-106(18-24in)	HOH-SS-107(0-2in)	DUP-01
					Sample Name																	
					Start Depth	0	2	6	12	18		2	6	12	18						0	0
					End Depth	2	6	12	18	24		6	12	18	24						2	2
					Depth Unit	in	in	in	in	in		in	in	in	in						ft	ft
					Sample Date	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/22/2017	8/22/2017
					Parent Sample	HOH-SS-104(0-2IN)_08/24/17																HOH-SS-107(0-2IN)_08/22/17
4-Bromophenyl phenyl ether		101-55-3	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Butyl benzyl phthalate		85-68-7	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Caprolactam		105-60-2	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Carbazole		86-74-8	NE	NE		770 U	1900 U	360 U	**270 J**	350 U	**750 J**	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
4-Chloro-3-methylphenol		59-50-7	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
4-Chloroaniline		106-47-8	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
2-Chloronaphthalene		91-58-7	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
2-Chlorophenol		95-57-8	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
4-Chlorophenyl phenyl ether		7005-72-3	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Dibenzofuran		132-64-9	7000	59000		770 U	1900 U	360 U	**270 J**	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
3,3-Dichlorobenzidine		91-94-1	NE	NE		1600 U	3800 U	720 U	710 U	700 U	1800 U	4000 U	790 U	3700 U	3500 U	1700 U	1500 U	1500 U	1400 U	1400 U	1500 U	3800 U
2,4-Dichlorophenol		120-83-2	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Diethyl phthalate		84-66-2	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Dimethyl phthalate		131-11-3	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
2,4-Dimethylphenol		105-67-9	NE	NE		1600 U	3800 U	720 U	710 U	700 U	1800 U	4000 U	790 U	3700 U	3500 U	1700 U	1500 U	1500 U	1400 U	1400 U	1500 U	3800 U
Di-n-butyl phthalate		84-74-2	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
4,6-Dinitro-2-methylphenol		534-52-1	NE	NE		770 U	1900 U*	360 U*	350 U*	350 U*	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
2,4-Dinitrophenol		51-28-5	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
2,4-Dinitrotoluene		121-14-2	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
2,6-Dinitrotoluene		606-20-2	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Di-n-octyl phthalate		117-84-0	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Hexachlorobenzene		118-74-1	330.0	1200		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
1,3-Hexachlorobutadiene (C-46)		87-68-3	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Hexachlorocyclopentadiene		77-47-4	NE	NE		770 U	1900 U*	360 U*	350 U*	350 U*	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U*	1900 U*
Hexachloroethane		67-72-1	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Isophorone		78-59-1	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
2-Methylphenol (o-Cresol)		95-48-7	330.0	100000		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
3,4-Methylphenol (m,p-Cresol)	mg/kg	108394/106445	NE	NE		0.77 U	1.9 U	0.36 U	0.35 U	0.35 U	0.87 U	2 U	0.39 U	1.9 U	1.8 U	0.82 U	0.72 U	0.73 U	0.71 U	0.72 U	0.77 U	1.9 U
2-Nitroaniline		88-74-4	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
3-Nitroaniline		99-09-2	NE	NE		1600 U	3800 U	720 U	710 U	700 U	1800 U	4000 U	790 U	3700 U	3500 U	1700 U	1500 U	1500 U	1400 U	1400 U	1500 U	3800 U
4-Nitroaniline		100-01-6	NE	NE		1600 U	3800 U	720 U	710 U	700 U	1800 U	4000 U	790 U	3700 U	3500 U	1700 U	1500 U	1500 U	1400 U	1400 U	1500 U	3800 U
Nitrobenzene		98-95-3	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
2-Nitrophenol		88-75-5	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
4-Nitrophenol		100-02-7	NE	NE		1600 U	3800 U	720 U	710 U	700 U	1800 U	4000 U	790 U	3700 U	3500 U	1700 U	1500 U	1500 U	1400 U	1400 U	1500 U	3800 U
N-Nitrosodiphenylamine (NDFA)		86-30-6	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
N-Nitrosodi-n-propylamine (NDPA)		621-64-7	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Pentachlorophenol		87-86-5	800.0	6700		1600 U	3800 U	720 U	710 U	700 U	1800 U	4000 U	790 U	3700 U	3500 U	1700 U	1500 U	1500 U	1400 U	1400 U	1500 U	3800 U
Phenol		108-95-2	330.0	100000		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
1,2,4,5-Tetrachlorobenzene		95-94-3	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
2,3,4,6-Tetrachlorophenol		58-90-2	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
2,4,5-Trichlorophenol		95-95-4	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
2,4,6-Trichlorophenol		88-06-2	NE	NE		770 U	1900 U	360 U	350 U	350 U	870 U	2000 U	390 U	1900 U	1800 U	820 U	720 U	730 U	710 U	720 U	770 U	1900 U
Total Metals	mg/kg																					
Aluminum		7429-90-5	NE	NE		**6770**	**5810**	**5590**	**4770**	**4580**	**5810**	**4440**	**4890**	**4350**	**4180**	**5410**	**5100**	**4830**	**5000**	**4540**	**6240**	**7530**
Antimony		7440-36-0	NE	NE		4.7 U	**4.1 J**	4.2 U	4.3 U	4.3 U	5.2 U	**1.8 J**	4.6 U	4.3 U	4.2 U	4.9 U	4.2 U	**1.3 J**	4.3 U	4.2 U	4.5 U	4.2 U
Arsenic		7440-38-2	13.00	16.00		**8.5**	**7.1**	**3.7**	**3.6**	**2.9 J**	**6.7**	**6.5**	**9.4**	**5.1**	**2.5 J**	**7**	**12.1**	**16.8**	**8.5**	**6**	**4.3**	**4.5**
Barium		7440-39-3	350.0	400.0		**297**	**1330**	**133**	**128**	**59.3**	**503**	**399**	**275**	**223**	**72.9**	**280**	**467**	**386**	**380**	**162**	**448**	**438**
Beryllium		7440-41-7	7.200	72.00		**0.33 J**	**0.28 J**	**0.26 J**	**0.32 J**	**0.27 J**	**0.38 J**	**0.28 J**	**0.39 J**	**0.29 J**	**0.22 J**	**0.3 J**	**0.31 J**	**0.29 J**	**0.32 J**	**0.27 J**	**0.4 J**	**0.35 J**
Cadmium		7440-43-9	2.500	4.300		**1.9**	**3.1**	**4.6**	**5**	**2**	**2.1**	**1.6**	**1.6**	**1.9**	**0.56 J**	**1.6**	**2.1**	**1.9**	**1.5**	**0.69 J**	**1.7**	**1.8**
Calcium		7440-70-2	NE	NE		**5170**	**6340**	**5750**	**5420**	**3100**	**8550**	**6420**	**6960**	**7030**	**3370**	**6040**	**16600**	**8670**	**5510**	**4240**	**15800**	**16400**
Chromium		7440-47-3	NE	NE		**18.3**	**25.7**	**12.1**	**11.4**	**9.7**	**25.9**	**18.2**	**13.8**	**13.5**	**9.5**	**16.4**	**17.9**	**20.2**	**15**	**11.6**	**26.5**	**26.1**
Cobalt		7440-48-4	NE	NE		**4.9 J**	**5.1 J**	**4.7 J**	**4.4 J**	**4 J**	**6.6 J**	**5.2 J**	**5.5 J**	**4.8 J**	**3.8 J**	**4.8 J**	**5 J**	**6.8 J**	**5 J**	**4.1 J**	**6.9 J**	**6.6 J**
Copper		7440-50-8	50.00	270.0		**210**	**416**	**330**	**342**	**168**	**320**	**285**	**438**	**372**	**75.3**	**173**	**550**	**366**	**326**	**195**	**244**	**219**
Iron		7439-89-6	NE	NE		**15900**	**22700**	**14700**	**11600**	**10200**	**23400**	**17600**	**17100**	**15800**	**9800**	**17000**	**17900**	**31900**	**15200**	**12200**	**26500**	**18000**
Lead		7439-92-1	63.00	400.0		**762**	**2420**	**285**	**378**	**127**	**1460**	**1740**	**820**	**1950**	**153**	**696**	**1220**	**1070**	**901**	**371**	**699**	**662**
Magnesium		7439-95-4	NE	NE		**2890**	**3230**	**3760**	**3690**	**2940**	**4560**	**3700**	**4010**	**4640**	**3100**	**3310**	**5770**	**5220**	**3420**	**3380**	**8210**	**8690**
Manganese		7439-96-5	1600	2000		**279**	**581**	**274**	**322**	**275**	**400**	**331**	**739**	**253**	**226**	**244**	**2200**	**341**	**310**	**261**	**379**	**336**
Mercury		7439-97-6	0.1800	0.8100		**0.37**	**0.76**	**0.54**	**0.32**	**0.17**	**0.94**	**1.1**	**0.56**	**0.5**	**0.12**	**0.24**	**0.85**	**0.32**	**0.28**	**0.28**	**0.86**	**1.1**
Nickel		7440-02-0	30.00	310.0		**14.2**	**20.9**	**13.5**	**12.2**	**10.9**	**22.4**	**16**	**14.3**	**13.1**	**10.1**	**19**	**16.8**	**22.6**	**12.7**	**12.3**	**35.8**	**22.2**
Potassium		7440-09-7	NE	NE		**834 J**	**822 J**	**833 J**	**753 J**	**672 J**	**972 J**	**680 J**	**754 J**	**649 J**	**493 J**	**683 J**	**709 J**	**600 J**	**590 J**	**626 J**	**1600**	**1860**
Selenium		7782-49-2	3.900	180.0		4.7 U	**1.6 J**	4.2 U	4.3 U	4.3 U	5.2 U	4.7 U	4.6 U	4.3 U	4.2 U	4.9 U	4.2 U	4.1 U	4.3 U	4.2 U	4.5 U	4.2 U
Silver		7440-22-4	2.000	180.0		2.3 U	**0.61 J**	2.1 U	2.1 U	2.1 U	**0.45 J**	**0.57 J**	**0.46 J**	2.1 U	2.1 U	2.5 U	**0.91 J**	2 U	2.2 U	2.1 U	2.2 U	2.1 U
Sodium		7440-23-5	NE	NE		**91.9 J**	1050 U	1050 U	**89.2 J**	1070 U	**101 J**	1170 U	**99 J**	**97.2 J**	1050 U	1230 U	**186 J**	**96 J**	**108 J**	**86.6 J**	**142 J**	**143 J**
Thallium		7440-28-0	NE	NE		4.7 U	4.2 U	4.2 U	4.3 U	4.3 U	5.2 U	4.7 U	4.6 U	4.3 U	4.2 U	4.9 U	4.2 U	4.1 U	4.3 U	4.2 U	4.5 U	4.2 U
Vanadium		7440-62-2	NE	NE		**28.5**	**52**	**16.2**	**15.6**	**12.7**	**40.3**	**42.7**	**19.2**	**15.6**	**11.2**	**24.4**	**38.4**	**34.6**	**24.9**	**17.2**	**34.2**	**33.1**
Zinc		7440-66-6	109.0	10000		**447**	**859**	**434**	**398**	**244**	**666**	**518**	**615**	**440**	**126**	**378**	**739**	**513**	**355**	**196**	**706**	**693**

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Pre-Design Investigation Summary Report
Con Edison Hastings on Hudson Former MGP Site
Hastings on Hudson, NY abbrev.)

Analyte	Units	CAS No.	Unrestricted SCO	Restricted-Residential SCO	Location Name	HOH-SS-107(2-6in)	HOH-SS-107(6-12in)	HOH-SS-107(12-18in)	HOH-SS-107(18-24in)	HOH-SS-108(0-2in)	HOH-SS-108(2-6in)	HOH-SS-108(6-12in)	HOH-SS-108(12-18in)	HOH-SS-108(18-24in)	HOH-SS-109(0-2in)	HOH-SS-109(2-6in)	HOH-SS-109(6-12in)	HOH-SS-109(12-18in)	HOH-SS-109(18-24in)	HOH-SS-110(0-2in)	HOH-SS-110(2-6in)	HOH-SS-110(6-12in)
					Sample Name	HOH-SS-107(2-6in)	HOH-SS-107(6-12in)	HOH-SS-107(12-18in)	HOH-SS-107(18-24in)	HOH-SS-108(0-2in)	HOH-SS-108(2-6in)	HOH-SS-108(6-12in)	HOH-SS-108(12-18in)	HOH-SS-108(18-24in)	HOH-SS-109(0-2in)	HOH-SS-109(2-6in)	HOH-SS-109(6-12in)	HOH-SS-109(12-18in)	HOH-SS-109(18-24in)	HOH-SS-110(0-2in)	HOH-SS-110(2-6in)	HOH-SS-110(6-12in)
					Start Depth	2	6	12	18	0	2	6	12	18	0	2	6	12	18	0		
					End Depth	6	12	18	24	2	6	12	18	24	2	6	12	18	24	2		
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft		
					Sample Date	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017
					Parent Sample																	
VOCs	ug/kg																					
Benzene		71-43-2	60.00	4800						2.7 U					0.95 U					1.2 U		
Toluene		108-88-3	700.0	100000						2.7 U					0.95 U					1.2 U		
Ethylbenzene		100-41-4	1000	41000						2.7 U					0.95 U					1.2 U		
o-Xylene		95-47-6	260.0	100000						2.7 U					0.95 U					**0.22 J**		
m/p-Xylene		179601-23-1	260.0	100000						2.7 U					0.95 U					**0.31 J**		
Total Xylene		1330-20-7	260.0	100000						5.4 U					1.9 U					**0.53 J**		
Acetone		67-64-1	50.00	100000						14 U					4.8 U					6.2 U		
Bromochloromethane		74-97-5	NE	NE						2.7 U					0.95 U					1.2 U		
Bromodichloromethane		75-27-4	NE	NE						2.7 U					0.95 U					1.2 U		
Bromoform		75-25-2	NE	NE						2.7 U					0.95 U					1.2 U		
Bromomethane		74-83-9	NE	NE						2.7 U					0.95 U					1.2 U		
Carbon disulfide		75-15-0	NE	NE						2.7 U					0.95 U					1.2 U		
Carbon tetrachloride		56-23-5	760.0	2400						2.7 U					0.95 U					1.2 U		
Chlorobenzene		108-90-7	1100	100000						2.7 U					0.95 U					1.2 U		
Chloroethane		75-00-3	NE	NE						2.7 U					0.95 U					1.2 U		
Chloroform (Trichloromethane)		67-66-3	370.0	49000						2.7 U					0.95 U					1.2 U		
Chloromethane		74-87-3	NE	NE						2.7 U					0.95 U					1.2 U		
Cyclohexane		110-82-7	NE	NE						2.7 U					0.95 U					1.2 U		
1,2-Dibromo-3-chloropropane		96-12-8	NE	NE						2.7 U					0.95 U					1.2 U		
Dibromochloromethane		124-48-1	NE	NE						2.7 U					0.95 U					1.2 U		
1,2-Dibromoethane (EDB)		106-93-4	NE	NE						2.7 U					0.95 U					1.2 U		
1,2-Dichlorobenzene		95-50-1	1100	100000						2.7 U					0.95 U					1.2 U		
1,3-Dichlorobenzene		541-73-1	2400	49000						2.7 U					0.95 U					1.2 U		
1,4-Dichlorobenzene		106-46-7	1800	13000						2.7 U					0.95 U					1.2 U		
Dichlorodifluoromethane (Freon 12)		75-71-8	NE	NE						2.7 U					0.95 U					1.2 U		
1,1-Dichloroethane		75-34-3	270.0	26000						2.7 U					0.95 U					1.2 U		
1,2-Dichloroethane		107-06-2	20.00	3100						2.7 U					0.95 U					1.2 U		
1,1-Dichloroethene		75-35-4	330.0	100000						2.7 U					0.95 U					1.2 U		
cis-1,2-Dichloroethene		156-59-2	250.0	100000						2.7 U					0.95 U					1.2 U		
trans-1,2-Dichloroethene		156-60-5	190.0	100000						2.7 U					0.95 U					1.2 U		
1,2-Dichloropropane		78-87-5	NE	NE						2.7 U					0.95 U					1.2 U		
cis-1,3-Dichloropropene		10061-01-5	NE	NE						2.7 U					0.95 U					1.2 U		
trans-1,3-Dichloropropene		10061-02-6	NE	NE						2.7 U					0.95 U					1.2 U		
1,4-Dioxane		123-91-1	100	13000						54 U					19 U					25 U		
2-Hexanone		591-78-6	NE	NE						14 U					4.8 U					6.2 U		
Isopropylbenzene		98-82-8	NE	NE						2.7 U					0.95 U					1.2 U		
Methyl acetate		79-20-9	NE	NE						14 U					4.8 U					6.2 U		
Methyl ethyl ketone (2-Butanone)		78-93-3	120.0	100000						14 U					4.8 U					6.2 U		
Methyl tert-butyl ether (MTBE)		1634-04-4	930.0	100000						2.7 U					0.95 U					1.2 U		
4-Methyl-2-pentanone (MIBK)		108-10-1	NE	NE						14 U					4.8 U					6.2 U		
Methylcyclohexane		108-87-2	NE	NE						2.7 U					0.95 U					1.2 U		
Methylene chloride		75-09-2	50.00	100000						2.7 U					0.95 U					1.2 U		
Styrene		100-42-5	NE	NE						2.7 U					0.95 U					1.2 U		
1,1,2,2-Tetrachloroethane		79-34-5	NE	NE						2.7 U					0.95 U					1.2 U		
Tetrachloroethene (PCE)		127-18-4	1300	19000						2.7 U					0.95 U					1.2 U		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		76-13-1	NE	NE						2.7 U					0.95 U					1.2 U		
1,2,3-Trichlorobenzene		87-61-6	NE	NE						2.7 U					0.95 U					1.2 U		
1,2,4-Trichlorobenzene		120-82-1	NE	NE						2.7 U					0.95 U					1.2 U		
1,1,1-Trichloroethane (TCA)		71-55-6	680.0	100000						2.7 U					0.95 U					1.2 U		
1,1,2-Trichloroethane		79-00-5	NE	NE						2.7 U					0.95 U					1.2 U		
Trichloroethene (TCE)		79-01-6	470.0	21000						2.7 U					0.95 U					1.2 U		
Trichlorofluoromethane (Freon 11)		75-69-4	NE	NE						2.7 U					0.95 U					1.2 U		
Vinyl chloride		75-01-4	20.00	900.0						2.7 U					0.95 U					1.2 U		
SVOCs	ug/kg																					
Acenaphthene		83-32-9	20000	100000	390 U	420 U	410 U	370 U	160 U	150 U	140 U	390 U	150 U	**390**	380 U	140 U	160 U	160 U	160 U	150 U	150 U	
Acenaphthylene		208-96-8	100000	100000	**380 J**	**670**	**360 J**	**600**	160 U	**220**	**110 J**	390 U	150 U	**330 J**	380 U	**75 J**	**210**	**210**	**180**	150 U	**85 J**	
Anthracene		120-12-7	100000	100000	**360 J**	**340 J**	**370 J**	**920**	160 U	**350**	**130 J**	**170 J**	150 U	**1700**	380 U	**64 J**	**200**	**170**	**150 J**	**70 J**	**110 J**	
Benzo(a)anthracene		56-55-3	1000	1000	**2000**	**1800**	**1800**	**3100**	160 U	**1300**	**540**	**600**	**87 J**	**6600**	**500**	**260**	**770**	**600**	**680**	**320**	**510**	
Benzo(b)fluoranthene		205-99-2	1000	1000	**1600**	**1800**	**2300**	**3000**	**150 J**	**1300**	**590**	**570**	**110 J**	**6000**	**600**	**310**	**790**	**1200**	**750**	**360**	**540**	
Benzo(k)fluoranthene		207-08-9	800.0	3900	**960**	**580**	**1400**	**1200**	**76 J**	**720**	**290**	**270 J**	**60 J**	**4000**	**300 J**	**160**	**470**	**390**	**420**	**180**	**290**	
Benzo(g,h,i)perylene		191-24-2	100000	100000	**1200**	**2100**	**1400**	**1300**	**110 J**	**650**	**320**	**330 J**	**81 J**	**3900**	**360 J**	**190**	**530**	**1500**	**460**	**200**	**300**	
Benzo(a)pyrene		50-32-8	1000	1000	**1800**	**1800**	**1900**	**2400**	**180**	**1100**	**510**	**640**	**140 J**	**5700**	**630**	**300**	**730**	**1100**	**700**	**340**	**500**	
Chrysene		218-01-9	1000	3900	**2000**	**1800**	**1800**	**2900**	**130 J**	**1200**	**510**	**720**	150 U	**5900**	**580**	**260**	**770**	**860**	**720**	**320**	**490**	
Dibenz(a,h)anthracene		53-70-3	330.0	330.0	**500**	**780**	**410**	**510**	160 U	**210**	140 U	390 U	150 U	**1000**	380 U	140 U	**150 J**	**350**	**160**	150 U	**98 J**	
Fluoranthene		206-44-0	100000	100000	**2300**	**1800**	**2400**	**5100**	**200**	**2900**	**1000**	**810**	**160**	**14000**	**960**	**470**	**1400**	**1100**	**1100**	**630**	**930**	
Fluorene		86-73-7	30000	100000	390 U	420 U	410 U	**220 J**	160 U	**83 J**	140 U	390 U	150 U	**410**	380 U	140 U	160 U	160 U	160 U	150 U	150 U	
Indeno(1,2,3-cd)pyrene		193-39-5	500.0	500	**910**	**1200**	**1000**	**1200**	**91 J**	**610**	**280**	**290 J**	**76 J**	**3400**	**320 J**	**160**	**440**	**1200**	**390**	**170**	**240**	
2-Methylnaphthalene		91-57-6	NE	NE	390 U	420 U	410 U	370 U	160 U	150 U	140 U	390 U	150 U	360 U	380 U	140 U	160 U	160 U	160 U	150 U	150 U	
Naphthalene		91-20-3	12000	100000	390 U	420 U	410 U	370 U	160 U	150 U	140 U	390 U	150 U	360 U	380 U	140 U	160 U	160 U	160 U	150 U	150 U	
Phenanthrene		85-01-8	100000	100000	**1100**	**590**	**690**	**3000**	**90 J**	**1000**	**440**	**580**	**89 J**	**5500**	**320 J**	**220**	**690**	**470**	**450**	**300**	**420**	
Pyrene		129-00-0	100000	100000	**3400**	**2900**	**3400**	**4500**	**190**	**2300**	**880**	**990**	**140 J**	**12000**	**950**	**450**	**1300**	**1100**	**1200**	**540**	**840**	
Acetophenone		98-86-2	NE	NE	1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U	
Atrazine		1912-24-9	NE	NE	1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U	
Benzaldehyde		100-52-7	NE	NE	3900 U	4200 U	4100 U	3700 U	1600 U	1500 U	1400 U	3900 U*	1500 U	3600 U*	3800 U*	1400 U	1600 U	1600 U	1600 U	1500 U	1500 U	
Biphenyl (1,1-Biphenyl)		92-52-4	NE	NE	1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U	
Bis(2-chloroethoxy)methane		111-91-1	NE	NE	1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U	
Bis(2-chloroethyl)ether		111-44-4	NE	NE	1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U	
2,2-oxybis(1-Chloropropane)		108-60-1	NE	NE	1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U	
Bis(2-ethylhexyl)phthalate		117-81-7	NE	NE	1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U	

Table 1. Shallow Soil Analytical Results
Pre-Design Investigation Summary Report
Con Edison Hastings on Hudson Former MGP Site
Hastings on Hudson, NY abbrev.)

Analyte	Units	CAS No.	Unrestricted SCO	Restricted-Residential SCO	Location Name	HOH-SS-107(2-6in)	HOH-SS-107(6-12in)	HOH-SS-107(12-18in)	HOH-SS-107(18-24in)	HOH-SS-108(0-2in)	HOH-SS-108(2-6in)	HOH-SS-108(6-12in)	HOH-SS-108(12-18in)	HOH-SS-108(18-24in)	HOH-SS-109(0-2in)	HOH-SS-109(2-6in)	HOH-SS-109(6-12in)	HOH-SS-109(12-18in)	HOH-SS-109(18-24in)	HOH-SS-110(0-2in)	HOH-SS-110(2-6in)	HOH-SS-110(6-12in)
					Sample Name	HOH-SS-107(2-6in)	HOH-SS-107(6-12in)	HOH-SS-107(12-18in)	HOH-SS-107(18-24in)	HOH-SS-108(0-2in)	HOH-SS-108(2-6in)	HOH-SS-108(6-12in)	HOH-SS-108(12-18in)	HOH-SS-108(18-24in)	HOH-SS-109(0-2in)	HOH-SS-109(2-6in)	HOH-SS-109(6-12in)	HOH-SS-109(12-18in)	HOH-SS-109(18-24in)	HOH-SS-110(0-2in)	HOH-SS-110(2-6in)	HOH-SS-110(6-12in)
					Start Depth	2	6	12	18	0	2	6	12	18	0	2	6	12	18	0		
					End Depth	6	12	18	24	2	6	12	18	24	2	6	12	18	24	2		
					Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft		
					Sample Date	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017
					Parent Sample																	
4-Bromophenyl phenyl ether		101-55-3	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
Butyl benzyl phthalate		85-68-7	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	**1400 J**	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
Caprolactam		105-60-2	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
Carbazole		86-74-8	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
4-Chloro-3-methylphenol		59-50-7	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
4-Chloroaniline		106-47-8	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
2-Chloronaphthalene		91-58-7	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
2-Chlorophenol		95-57-8	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
4-Chlorophenyl phenyl ether		7005-72-3	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
Dibenzofuran		132-64-9	7000	59000		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
3,3-Dichlorobenzidine		91-94-1	NE	NE		3900 U	4200 U	4100 U	3700 U	1600 U	1500 U	1400 U	3900 U	1500 U	3600 U	3800 U	1400 U	1600 U	1600 U	1600 U	1500 U	1500 U
2,4-Dichlorophenol		120-83-2	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
Diethyl phthalate		84-66-2	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
Dimethyl phthalate		131-11-3	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
2,4-Dimethylphenol		105-67-9	NE	NE		3900 U	4200 U	4100 U	3700 U	1600 U	1500 U	1400 U	3900 U	1500 U	3600 U	3800 U	1400 U	1600 U	1600 U	1600 U	1500 U	1500 U
Di-n-butyl phthalate		84-74-2	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	**570 J**	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
4,6-Dinitro-2-methylphenol		534-52-1	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
2,4-Dinitrophenol		51-28-5	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
2,4-Dinitrotoluene		121-14-2	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
2,6-Dinitrotoluene		606-20-2	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
Di-n-octyl phthalate		117-84-0	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
Hexachlorobenzene		118-74-1	330.0	1200		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
1,3-Hexachlorobutadiene (C-46)		87-68-3	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
Hexachlorocyclopentadiene		77-47-4	NE	NE		1900 U*	2100 U*	2000 U*	1900 U*	780 U*	750 U*	720 U*	1900 U*	740 U*	1800 U*	1900 U*	720 U*	790 U*	820 U*	790 U*	750 U	740 U
Hexachloroethane		67-72-1	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
Isophorone		78-59-1	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
2-Methylphenol (o-Cresol)		95-48-7	330.0	100000		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
3,4-Methylphenol (m,p-Cresol)	mg/kg	108394/106445	NE	NE		1.9 U	2.1 U	2 U	1.9 U	0.78 U	0.75 U	0.72 U	1.9 U	0.74 U	1.8 U	1.9 U	0.72 U	0.79 U	0.82 U	0.79 U	0.75 U	0.74 U
2-Nitroaniline		88-74-4	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
3-Nitroaniline		99-09-2	NE	NE		3900 U	4200 U	4100 U	3700 U	1600 U	1500 U	1400 U	3900 U	1500 U	3600 U	3800 U	1400 U	1600 U	1600 U	1600 U	1500 U	1500 U
4-Nitroaniline		100-01-6	NE	NE		3900 U	4200 U	4100 U	3700 U	1600 U	1500 U	1400 U	3900 U	1500 U	3600 U	3800 U	1400 U	1600 U	1600 U	1600 U	1500 U	1500 U
Nitrobenzene		98-95-3	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
2-Nitrophenol		88-75-5	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
4-Nitrophenol		100-02-7	NE	NE		3900 U	4200 U	4100 U	3700 U	1600 U	1500 U	1400 U	3900 U	1500 U	3600 U	3800 U	1400 U	1600 U	1600 U	1600 U	1500 U	1500 U
N-Nitrosodiphenylamine (NDFA)		86-30-6	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
N-Nitrosodi-n-propylamine (NDPA)		621-64-7	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
Pentachlorophenol		87-86-5	800.0	6700		3900 U	4200 U	4100 U	3700 U	1600 U	1500 U	1400 U	3900 U	1500 U	3600 U	3800 U	1400 U	1600 U	1600 U	1600 U	1500 U	1500 U
Phenol		108-95-2	330.0	100000		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
1,2,4,5-Tetrachlorobenzene		95-94-3	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
2,3,4,6-Tetrachlorophenol		58-90-2	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
2,4,5-Trichlorophenol		95-95-4	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
2,4,6-Trichlorophenol		88-06-2	NE	NE		1900 U	2100 U	2000 U	1900 U	780 U	750 U	720 U	1900 U	740 U	1800 U	1900 U	720 U	790 U	820 U	790 U	750 U	740 U
Total Metals	mg/kg																					
Aluminum		7429-90-5	NE	NE		**6120**	**5040**	**4890**	**6360**	**5120**	**5860**	**2960**	**3910**	**5830**	**4680**	**7000**	**4530**	**7360**	**7960**	**6030**	**5150**	**5320**
Antimony		7440-36-0	NE	NE		**1 J**	**1.2 J**	**0.64 J**	3.7 U	4.6 U	4.5 U	4 U	4.5 U	4.3 U	**1.1 J**	4.2 U	4.2 U	**0.94 J**	5 U	4.8 U	4.4 U	4.2 U
Arsenic		7440-38-2	13.00	16.00		**5.7**	**12.2**	**6.9**	**7.8**	**2.8 J**	**5.6**	**3.2**	**9.1**	**11.4**	**4.5**	**3.8**	**2.3 J**	**9.3**	**12**	**3.8**	**4.1**	**5.3**
Barium		7440-39-3	350.0	400.0		**1390**	**2540**	**1470**	**1020**	**241**	**504**	**113**	**530**	**890**	**230**	**171**	**113**	**534**	**1330**	**205**	**150**	**180**
Beryllium		7440-41-7	7.200	72.00		**0.21 J**	**0.24 J**	**0.23 J**	**0.25 J**	**0.33 J**	**0.31 J**	**0.13 J**	**0.2 J**	**0.3 J**	**0.22 J**	**0.27 J**	**0.18 J**	**0.39 J**	**0.44 J**	**0.32 J**	**0.32 J**	**0.33 J**
Cadmium		7440-43-9	2.500	4.300		**3.4**	**4.4**	**3.6**	**4.7**	**1.2**	**2.6**	**0.82**	**2.5**	**2.4**	**1.2**	**0.91**	**0.58 J**	**3.4**	**5.2**	**1.4**	**1.1**	**1.6**
Calcium		7440-70-2	NE	NE		**10300**	**10500**	**15300**	**17100**	**3950**	**7030**	**4580**	**11500**	**8780**	**7510**	**6510**	**5180**	**6160**	**11100**	**16800**	**14300**	**18200**
Chromium		7440-47-3	NE	NE		**28.2**	**31.5**	**20.4**	**26.2**	**12.9**	**20.5**	**13.2**	**29.1**	**23.4**	**24.8**	**51.4**	**28.7**	**35.8**	**48.9**	**22.2**	**18.2**	**17.8**
Cobalt		7440-48-4	NE	NE		**5.1 J**	**3.6 J**	**3.2 J**	**4.9 J**	**4 J**	**5.9 J**	**2.6 J**	**4.7 J**	**5.3 J**	**3.9 J**	**6.4 J**	**4.1 J**	**7.2 J**	**6.9 J**	**5 J**	**4.9 J**	**5 J**
Copper		7440-50-8	50.00	270.0		**385**	**548**	**402**	**436**	**129**	**270**	**101**	**244**	**408**	**168**	**280**	**145**	**582**	**846**	**256**	**240**	**326**
Iron		7439-89-6	NE	NE		**15500**	**26900**	**12500**	**17400**	**12200**	**19700**	**8110**	**25300**	**16700**	**17100**	**19500**	**10900**	**24300**	**24900**	**14900**	**11800**	**12600**
Lead		7439-92-1	63.00	400.0		**2770**	**6030**	**1980**	**1430**	**332**	**835**	**253**	**949**	**1130**	**502**	**628**	**337**	**1400**	**2130**	**564**	**468**	**594**
Magnesium		7439-95-4	NE	NE		**4500**	**3700**	**4670**	**5400**	**2870**	**4100**	**2040**	**6060**	**5050**	**4580**	**5650**	**4100**	**4090**	**6280**	**7340**	**7260**	**9280**
Manganese		7439-96-5	1600	2000		**355**	**337**	**263**	**316**	**256**	**292**	**194**	**247**	**448**	**225**	**256**	**176**	**374**	**376**	**313**	**277**	**283**
Mercury		7439-97-6	0.1800	0.8100		**1**	**1.1**	**1.3**	**1.1**	**0.23**	**0.49**	**0.18**	**0.46**	**0.63**	**0.45**	**0.4**	**0.29**	**1.2**	**1**	**0.47**	**0.5**	**0.6**
Nickel		7440-02-0	30.00	310.0		**24.3**	**21.6**	**19.5**	**17.9**	**11.8**	**19.2**	**9**	**20.1**	**27.1**	**15.8**	**33.6**	**18.7**	**35.3**	**36.4**	**20**	**18.6**	**22**
Potassium		7440-09-7	NE	NE		**1160**	**679 J**	**711 J**	**840 J**	**651 J**	**730 J**	**358 J**	**501 J**	**727 J**	**786 J**	**974 J**	**683 J**	**860 J**	**911 J**	**1170 J**	**803 J**	**756 J**
Selenium		7782-49-2	3.900	180.0		**1.1 J**	4 U	4 U	3.7 U	4.6 U	4.5 U	4 U	4.5 U	4.3 U	4.3 U	4.2 U	4.2 U	4.6 U	**1.5 J**	4.8 U	4.4 U	4.2 U
Silver		7440-22-4	2.000	180.0		**0.6 J**	**1 J**	**1.4 J**	**0.79 J**	2.3 U	**0.4 J**	2 U	**1.6 J**	**0.89 J**	2.1 U	2.1 U	2.1 U	**1.1 J**	**1.5 J**	2.4 U	2.2 U	**0.47 J**
Sodium		7440-23-5	NE	NE		**117 J**	**98.8 J**	**99.4 J**	**130 J**	**103 J**	**142 J**	1010 U	**89.4 J**	**114 J**	**110 J**	**180 J**	**84.4 J**	**164 J**	**169 J**	**144 J**	**139 J**	**149 J**
Thallium		7440-28-0	NE	NE		3.7 U	4 U	4 U	3.7 U	4.6 U	4.5 U	4 U	4.5 U	4.3 U	4.3 U	4.2 U	4.2 U	4.6 U	5 U	4.8 U	4.4 U	4.2 U
Vanadium		7440-62-2	NE	NE		**74.2**	**66.7**	**24.2**	**24.1**	**20**	**38.6**	**14.5**	**46.6**	**71.3**	**26.2**	**47.1**	**26.1**	**78.2**	**72.1**	**33.3**	**33.8**	**49.9**
Zinc		7440-66-6	109.0	10000		**1730**	**2860**	**2090**	**1580**	**357**	**769**	**255**	**878**	**1160**	**482**	**354**	**202**	**766**	**1060**	**389**	**288**	**364**

Table 1. Shallow Soil Analytical Results
Pre-Design Investigation Summary Report
Con Edison Hastings on Hudson Former MGP Site
Hastings on Hudson, NY abbrev.)

Location Name					HOH-SS-110(12-18in)	HOH-SS-110(18-24in)	HOH-SS-111(0-2in)	HOH-SS-111(2-6in)	HOH-SS-111(6-12in)	HOH-SS-111(12-18in)	HOH-SS-111(18-24in)	HOH-SS-112(0-2in)	HOH-SS-112(2-6in)	HOH-SS-112(6-12in)	HOH-SS-112(12-18in)	HOH-SS-112(18-24in)	HOH-SS-113(0-2in)	HOH-SS-113(2-6in)	DUP-02	HOH-SS-113(6-12in)	HOH-SS-113(12-18in)
Sample Name																					
Start Depth							0	2	6	12	18	0									
End Depth							2	6	12	18	24	2									
Depth Unit							ft	ft	ft	ft	ft	ft									
Sample Date					8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/23/2017	8/23/2017	8/23/2017 HOH-SS-113(2-6IN)_08/23/17	8/23/2017	8/23/2017
Parent Sample																					
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Restricted-Residential SCO**																	
VOCs	ug/kg																				
Benzene		71-43-2	60.00	4800			0.97 U					1.2 U					1 U				
Toluene		108-88-3	700.0	100000			0.97 U					1.2 U					1 U				
Ethylbenzene		100-41-4	1000	41000			0.97 U					1.2 U					1 U				
o-Xylene		95-47-6	260.0	100000			0.97 U					1.2 U					1 U				
m/p-Xylene		179601-23-1	260.0	100000			0.97 U					1.2 U					1 U				
Total Xylene		1330-20-7	260.0	100000			1.9 U					2.3 U					2.1 U				
Acetone		67-64-1	50.00	100000			4.9 U					5.8 U					**9 B**				
Bromochloromethane		74-97-5	NE	NE			0.97 U					1.2 U					1 U				
Bromodichloromethane		75-27-4	NE	NE			0.97 U					1.2 U					1 U				
Bromoform		75-25-2	NE	NE			0.97 U					1.2 U					1 U				
Bromomethane		74-83-9	NE	NE			0.97 U					1.2 U					1 U				
Carbon disulfide		75-15-0	NE	NE			0.97 U					1.2 U					1 U				
Carbon tetrachloride		56-23-5	760.0	2400			0.97 U					1.2 U					1 U				
Chlorobenzene		108-90-7	1100	100000			0.97 U					1.2 U					1 U				
Chloroethane		75-00-3	NE	NE			0.97 U					1.2 U					1 U				
Chloroform (Trichloromethane)		67-66-3	370.0	49000			0.97 U					1.2 U					1 U				
Chloromethane		74-87-3	NE	NE			0.97 U					1.2 U					1 U				
Cyclohexane		110-82-7	NE	NE			0.97 U					1.2 U					1 U				
1,2-Dibromo-3-chloropropane		96-12-8	NE	NE			0.97 U					1.2 U					1 U				
Dibromochloromethane		124-48-1	NE	NE			0.97 U					1.2 U					1 U				
1,2-Dibromoethane (EDB)		106-93-4	NE	NE			0.97 U					1.2 U					1 U				
1,2-Dichlorobenzene		95-50-1	1100	100000			0.97 U					1.2 U					1 U				
1,3-Dichlorobenzene		541-73-1	2400	49000			0.97 U					1.2 U					1 U				
1,4-Dichlorobenzene		106-46-7	1800	13000			0.97 U					1.2 U					1 U				
Dichlorodifluoromethane (Freon 12)		75-71-8	NE	NE			0.97 U					1.2 U					1 U				
1,1-Dichloroethane		75-34-3	270.0	26000			0.97 U					1.2 U					1 U				
1,2-Dichloroethane		107-06-2	20.00	3100			0.97 U					1.2 U					1 U				
1,1-Dichloroethene		75-35-4	330.0	100000			0.97 U					1.2 U					1 U				
cis-1,2-Dichloroethene		156-59-2	250.0	100000			0.97 U					1.2 U					1 U				
trans-1,2-Dichloroethene		156-60-5	190.0	100000			0.97 U					1.2 U					1 U				
1,2-Dichloropropane		78-87-5	NE	NE			0.97 U					1.2 U					1 U				
cis-1,3-Dichloropropene		10061-01-5	NE	NE			0.97 U					1.2 U					1 U				
trans-1,3-Dichloropropene		10061-02-6	NE	NE			0.97 U					1.2 U					1 U				
1,4-Dioxane		123-91-1	100	13000			19 U					23 U					21 U				
2-Hexanone		591-78-6	NE	NE			4.9 U					5.8 U					5.2 U				
Isopropylbenzene		98-82-8	NE	NE			0.97 U					1.2 U					1 U				
Methyl acetate		79-20-9	NE	NE			4.9 U					5.8 U					5.2 U				
Methyl ethyl ketone (2-Butanone)		78-93-3	120.0	100000			4.9 U					5.8 U					5.2 U				
Methyl tert-butyl ether (MTBE)		1634-04-4	930.0	100000			0.97 U					1.2 U					1 U				
4-Methyl-2-pentanone (MIBK)		108-10-1	NE	NE			4.9 U					5.8 U					5.2 U				
Methylcyclohexane		108-87-2	NE	NE			0.97 U					1.2 U					1 U				
Methylene chloride		75-09-2	50.00	100000			0.97 U					1.2 U					**0.31 JB**				
Styrene		100-42-5	NE	NE			0.97 U					1.2 U					1 U				
1,1,2,2-Tetrachloroethane		79-34-5	NE	NE			0.97 U					1.2 U					1 U				
Tetrachloroethene (PCE)		127-18-4	1300	19000			0.97 U					1.2 U					1 U				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		76-13-1	NE	NE			0.97 U					1.2 U					1 U				
1,2,3-Trichlorobenzene		87-61-6	NE	NE			0.97 U					1.2 U					1 U				
1,2,4-Trichlorobenzene		120-82-1	NE	NE			0.97 U					1.2 U					1 U				
1,1,1-Trichloroethane (TCA)		71-55-6	680.0	100000			0.97 U					1.2 U					1 U				
1,1,2-Trichloroethane		79-00-5	NE	NE			0.97 U					1.2 U					1 U				
Trichloroethene (TCE)		79-01-6	470.0	21000			0.97 U					1.2 U					1 U				
Trichlorofluoromethane (Freon 11)		75-69-4	NE	NE			0.97 U					1.2 U					1 U				
Vinyl chloride		75-01-4	20.00	900.0			0.97 U					1.2 U					1 U				
SVOCs	ug/kg																				
Acenaphthene		83-32-9	20000	100000	140 U	140 U	69 U	350 U	370 U	71 U	70 U	170 U	140 U	150 U	140 U	150 U	140 U	140 U	140 U	140 U	140 U
Acenaphthylene		208-96-8	100000	100000	**520**	**190**	**46 J**	350 U	370 U	71 U	70 U	170 U	140 U	150 U	**320**	**99 J**	**920**	**520**	**740**	**240**	**230**
Anthracene		120-12-7	100000	100000	**230**	**220**	**45 J**	**150 J**	**160 J**	**40 J**	**55 J**	**140 J**	140 U	**99 J**	**440**	**150**	**970**	**410**	**690**	**200**	**200**
Benzo(a)anthracene		56-55-3	1000	1000	**820**	**590**	**200**	**440**	**560**	**180**	**240**	**500**	**78 J**	**410**	**2500**	**730**	**5000**	**2500**	**4800**	**1100**	**1000**
Benzo(b)fluoranthene		205-99-2	1000	1000	**770**	**580**	**240**	**580**	**670**	**220**	**270**	**620**	**110 J**	**510**	**2200**	**800**	**3800**	**2100**	**3700**	**1000**	**960**
Benzo(k)fluoranthene		207-08-9	800.0	3900	**390**	**300**	**120**	**280 J**	**330 J**	**110**	**140**	**360**	**58 J**	**250**	**1500**	**450**	**1300**	**1000**	**1300**	**330**	**340**
Benzo(g,h,i)perylene		191-24-2	100000	100000	**530**	**410**	**150**	**320 J**	**380**	**130**	**160**	**350**	140 U	**300**	**1200**	**420**	**2100**	**1000**	**1800**	**560**	**550**
Benzo(a)pyrene		50-32-8	1000	1000	**800**	**610**	**230**	**560**	**640**	**200**	**230**	**520**	**130 J**	**430**	**2000**	**680**	**3300**	**1900**	**3100**	**940**	**940**
Chrysene		218-01-9	1000	3900	**880**	**570**	**250**	**510**	**530**	**180**	**230**	**520**	140 U	**420**	**2300**	**700**	**4600**	**2500**	**4300**	**1100**	**1100**
Dibenz(a,h)anthracene		53-70-3	330.0	330.0	**180**	**130 J**	**50 J**	350 U	370 U	71 U	**44 J**	170 U	140 U	150 U	**330**	**130 J**	**740**	**370**	**710**	**200**	**190**
Fluoranthene		206-44-0	100000	100000	**1100**	**1100**	**330**	**970**	**1100**	**330**	**490**	**1100**	**160**	**850**	**4300**	**1300**	**5500**	**2900**	**5300**	**1200**	**1100**
Fluorene		86-73-7	30000	100000	**110 J**	**77 J**	69 U	350 U	370 U	71 U	70 U	170 U	140 U	150 U	140 U	150 U	**450**	**150**	**190**	140 U	**71 J**
Indeno(1,2,3-cd)pyrene		193-39-5	500.0	500	**400**	**320**	**120**	**300 J**	**320 J**	**110**	**140**	**310**	140 U	**250**	**1100**	**380**	**1600**	**880**	**1500**	**440**	**410**
2-Methylnaphthalene		91-57-6	NE	NE	140 U	140 U	69 U	350 U	370 U	71 U	70 U	170 U	140 U	150 U	140 U	150 U	**100 J**	140 U	140 U	140 U	140 U
Naphthalene		91-20-3	12000	100000	140 U	140 U	69 U	350 U	370 U	71 U	70 U	170 U	140 U	150 U	140 U	150 U	**160**	**87 J**	**99 J**	**67 J**	140 U
Phenanthrene		85-01-8	100000	100000	**530**	**770**	**170**	**560**	**530**	**170**	**210**	**510**	140 U	**440**	**1400**	**510**	**5800**	**1200**	**3100**	**590**	**630**
Pyrene		129-00-0	100000	100000	**1400**	**1200**	**360**	**800**	**920**	**290**	**410**	**920**	**130 J**	**710**	**3500**	**1100**	**8400**	**3800**	**7900**	**1900**	**1800**
Acetophenone		98-86-2	NE	NE	710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Atrazine		1912-24-9	NE	NE	710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Benzaldehyde		100-52-7	NE	NE	1400 U	1400 U	690 U*	3500 U*	3700 U*	710 U*	700 U	1700 U	1400 U	1500 U	1400 U	1500 U	1400 U	1400 U	1400 U	1400 U	1400 U
Biphenyl (1,1-Biphenyl)		92-52-4	NE	NE	710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Bis(2-chloroethoxy)methane		111-91-1	NE	NE	710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Bis(2-chloroethyl)ether		111-44-4	NE	NE	710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
2,2-oxybis(1-Chloropropane)		108-60-1	NE	NE	710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Bis(2-ethylhexyl)phthalate		117-81-7	NE	NE	710 U	690 U	340 U	1700 U	1800 U	350 U	**450**	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U

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Con Edison Hastings on Hudson Former MGP Site
Hastings on Hudson, NY abbrev.)

Analyte	Units	CAS No.	Unrestricted SCO	Restricted-Residential SCO	Location Name	HOH-SS-110(12-18in)	HOH-SS-110(18-24in)	HOH-SS-111(0-2in)	HOH-SS-111(2-6in)	HOH-SS-111(6-12in)	HOH-SS-111(12-18in)	HOH-SS-111(18-24in)	HOH-SS-112(0-2in)	HOH-SS-112(2-6-in)	HOH-SS-112(6-12in)	HOH-SS-112(12-18in)	HOH-SS-112(18-24in)	HOH-SS-113(0-2in)	HOH-SS-113(2-6in)	DUP-02	HOH-SS-113(6-12in)	HOH-SS-113(12-18in)
					Sample Name																	
					Start Depth			0	2	6	12	18	0									
					End Depth			2	6	12	18	24	2									
					Depth Unit			ft	ft	ft	ft	ft	ft									
					Sample Date	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/23/2017	8/23/2017	8/23/2017 HOH-SS-113(2-6IN)_08/23/17	8/23/2017	8/23/2017
					Parent Sample																	
4-Bromophenyl phenyl ether		101-55-3	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Butyl benzyl phthalate		85-68-7	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Caprolactam		105-60-2	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Carbazole		86-74-8	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
4-Chloro-3-methylphenol		59-50-7	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
4-Chloroaniline		106-47-8	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
2-Chloronaphthalene		91-58-7	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
2-Chlorophenol		95-57-8	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
4-Chlorophenyl phenyl ether		7005-72-3	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Dibenzofuran		132-64-9	7000	59000		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
3,3-Dichlorobenzidine		91-94-1	NE	NE		1400 U	1400 U	690 U	3500 U	3700 U	710 U	700 U	1700 U	1400 U	1500 U	1400 U	1500 U	1400 U	1400 U	1400 U	1400 U	1400 U
2,4-Dichlorophenol		120-83-2	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Diethyl phthalate		84-66-2	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Dimethyl phthalate		131-11-3	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
2,4-Dimethylphenol		105-67-9	NE	NE		1400 U	1400 U	690 U	3500 U	3700 U	710 U	700 U	1700 U	1400 U	1500 U	1400 U	1500 U	1400 U	1400 U	1400 U	1400 U	1400 U
Di-n-butyl phthalate		84-74-2	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
4,6-Dinitro-2-methylphenol		534-52-1	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
2,4-Dinitrophenol		51-28-5	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
2,4-Dinitrotoluene		121-14-2	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
2,6-Dinitrotoluene		606-20-2	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Di-n-octyl phthalate		117-84-0	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Hexachlorobenzene		118-74-1	330.0	1200		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
1,3-Hexachlorobutadiene (C-46)		87-68-3	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Hexachlorocyclopentadiene		77-47-4	NE	NE		710 U	690 U	340 U*	1700 U*	1800 U*	350 U*	350 U*	830 U*	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Hexachloroethane		67-72-1	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Isophorone		78-59-1	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
2-Methylphenol (o-Cresol)		95-48-7	330.0	100000		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
3,4-Methylphenol (m,p-Cresol)	mg/kg	108394/106445	NE	NE		0.71 U	0.69 U	0.34 U	1.7 U	1.8 U	0.35 U	0.35 U	0.83 U	0.7 U	0.75 U	0.72 U	0.74 U	0.7 U	0.68 U	0.7 U	0.7 U	0.69 U
2-Nitroaniline		88-74-4	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
3-Nitroaniline		99-09-2	NE	NE		1400 U	1400 U	690 U	3500 U	3700 U	710 U	700 U	1700 U	1400 U	1500 U	1400 U	1500 U	1400 U	1400 U	1400 U	1400 U	1400 U
4-Nitroaniline		100-01-6	NE	NE		1400 U	1400 U	690 U	3500 U	3700 U	710 U	700 U	1700 U	1400 U	1500 U	1400 U	1500 U	1400 U	1400 U	1400 U	1400 U	1400 U
Nitrobenzene		98-95-3	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
2-Nitrophenol		88-75-5	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
4-Nitrophenol		100-02-7	NE	NE		1400 U	1400 U	690 U	3500 U	3700 U	710 U	700 U	1700 U	1400 U	1500 U	1400 U	1500 U	1400 U	1400 U	1400 U	1400 U	1400 U
N-Nitrosodiphenylamine (NDFA)		86-30-6	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
N-Nitrosodi-n-propylamine (NDPA)		621-64-7	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Pentachlorophenol		87-86-5	800.0	6700		1400 U	1400 U	690 U	3500 U	3700 U	710 U	700 U	1700 U	1400 U	1500 U	1400 U	1500 U	1400 U	1400 U	1400 U	1400 U	1400 U
Phenol		108-95-2	330.0	100000		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
1,2,4,5-Tetrachlorobenzene		95-94-3	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
2,3,4,6-Tetrachlorophenol		58-90-2	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
2,4,5-Trichlorophenol		95-95-4	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
2,4,6-Trichlorophenol		88-06-2	NE	NE		710 U	690 U	340 U	1700 U	1800 U	350 U	350 U	830 U	700 U	750 U	720 U	740 U	700 U	680 U	700 U	700 U	690 U
Total Metals	mg/kg																					
Aluminum		7429-90-5	NE	NE		**5340**	**4850**	**2680**	**3720**	**4860**	**4880**	**5130**	**4700**	**2350**	**6330**	**5070**	**4310**	**5220**	**6090**	**5700**	**6510**	**6360**
Antimony		7440-36-0	NE	NE		4.3 U	4.1 U	3.9 U	3.9 U	4.5 U	4.2 U	4 U	3.9 U	**0.51 J**	4.3 U	4.3 U	4.4 U	4.1 U	3.9 U	3.9 U	4 U	4 U
Arsenic		7440-38-2	13.00	16.00		**6**	**5**	**1 J**	**2.8 J**	**3.8**	**6.8**	**2 J**	**2.6 J**	**1.7 J**	**8.3**	**6.4**	**5.4**	**3.9**	**5.7**	**4.2**	**5**	**5.3**
Barium		7440-39-3	350.0	400.0		**183**	**151**	**132**	**299**	**414**	**182**	**108**	**191**	**77.7**	**506**	**255**	**225**	**86.1**	**119**	**72.2**	**62.4**	**64.7**
Beryllium		7440-41-7	7.200	72.00		**0.34 J**	**0.31 J**	**0.13 J**	**0.2 J**	**0.28 J**	**0.46**	**0.25 J**	**0.19 J**	**0.14 J**	**0.35 J**	**0.32 J**	**0.29 J**	**0.31 J**	**0.36 J**	**0.35 J**	**0.41**	**0.44**
Cadmium		7440-43-9	2.500	4.300		**2.9**	**2.6**	**0.34 J**	**0.88**	**2.2**	**2.4**	**1.3**	**1.2**	**0.43 J**	**4**	**3.9**	**2.8**	**0.44 J**	**0.32 J**	**0.24 J**	0.81 U	0.8 U
Calcium		7440-70-2	NE	NE		**19400**	**14000**	**2300**	**3210**	**5090**	**11800**	**3710**	**8410**	**4330**	**11900**	**12900**	**10500**	**5180**	**2970**	**2490**	**2540**	**2600**
Chromium		7440-47-3	NE	NE		**15.6**	**17.1**	**8.4**	**14.5**	**17.7**	**22.9**	**17.7**	**25.1**	**10.9**	**32.9**	**24.8**	**22**	**13.1**	**13.7**	**13.2**	**14.1**	**41.9**
Cobalt		7440-48-4	NE	NE		**5 J**	**4.6 J**	**2.3 J**	**3.2 J**	**4.2 J**	**4.6 J**	**4.2 J**	**4.3 J**	**2.2 J**	**6.7 J**	**5 J**	**4.2 J**	**4.6 J**	**5 J**	**5.1 J**	**6 J**	**9.9 J**
Copper		7440-50-8	50.00	270.0		**461**	**454**	**45.4**	**109**	**205**	**248**	**99.6**	**136**	**63.9**	**442**	**557**	**337**	**117**	**111**	**102**	**65.6**	**56.4**
Iron		7439-89-6	NE	NE		**13300**	**11800**	**7060**	**12200**	**13600**	**63300**	**12300**	**10900**	**5550**	**20400**	**14200**	**15400**	**11200**	**13300**	**12100**	**14300**	**18300**
Lead		7439-92-1	63.00	400.0		**660**	**595**	**226**	**485**	**747**	**396**	**196**	**394**	**155**	**838**	**716**	**501**	**204**	**203**	**233**	**131**	**81.3**
Magnesium		7439-95-4	NE	NE		**10500**	**7270**	**1700**	**1850**	**2940**	**7190**	**3030**	**3420**	**2690**	**6430**	**6760**	**5260**	**3230**	**2870**	**2660**	**3100**	**4940**
Manganese		7439-96-5	1600	2000		**333**	**257**	**110**	**165**	**218**	**393**	**235**	**238**	**106**	**307**	**267**	**248**	**243**	**321**	**299**	**336**	**472**
Mercury		7439-97-6	0.1800	0.8100		**0.49**	**0.36**	**0.15**	**0.2**	**0.31**	**0.32**	**0.16**	**0.31**	**0.13**	**0.91**	**0.64**	**0.67**	**0.26**	**0.23**	**0.34**	**0.21**	**0.14**
Nickel		7440-02-0	30.00	310.0		**16.7**	**15.7**	**6.7 J**	**12.5**	**14.1**	**21.1**	**13.6**	**18.2**	**8.9**	**27.2**	**21.4**	**18.8**	**12.1**	**14**	**13.5**	**15.3**	**23.7**
Potassium		7440-09-7	NE	NE		**711 J**	**678 J**	**463 J**	**503 J**	**659 J**	**694 J**	**763 J**	**1040**	**524 J**	**820 J**	**798 J**	**733 J**	**859 J**	**882 J**	**895 J**	**1250**	**1380**
Selenium		7782-49-2	3.900	180.0		4.3 U	4.1 U	3.9 U	3.9 U	4.5 U	4.2 U	4 U	3.9 U	3.9 U	4.3 U	4.3 U	4.4 U	4.1 U	3.9 U	3.9 U	4 U	4 U
Silver		7440-22-4	2.000	180.0		**0.48 J**	2.1 U	2 U	1.9 U	2.2 U	2.1 U	2 U	2 U	1.9 U	**0.78 J**	**0.6 J**	**0.44 J**	2.1 U	1.9 U	1.9 U	2 U	2 U
Sodium		7440-23-5	NE	NE		**130 J**	**157 J**	984 U	971 U	**90.3 J**	**89.6 J**	**83.6 J**	980 U	967 U	**150 J**	**117 J**	**103 J**	1030 U	**88.9 J**	974 U	1010 U	**86.2 J**
Thallium		7440-28-0	NE	NE		4.3 U	4.1 U	3.9 U	3.9 U	4.5 U	4.2 U	4 U	3.9 U	3.9 U	4.3 U	4.3 U	4.4 U	4.1 U	3.9 U	3.9 U	4 U	4 U
Vanadium		7440-62-2	NE	NE		**40.8**	**30.3**	**11.6**	**25.4**	**28.4**	**19.7**	**20.2**	**24.5**	**14.7**	**54.1**	**39.6**	**44.9**	**17.4**	**24.2**	**21.1**	**21.9**	**24.6**
Zinc		7440-66-6	109.0	10000		**574**	**355**	**171**	**289**	**488**	**542**	**264**	**369**	**169**	**1170**	**777**	**563**	**195**	**136**	**124**	**86**	**76.4**

Table 1. Shallow Soil Analytical Results
Pre-Design Investigation Summary Report
Con Edison Hastings on Hudson Former MGP Site
Hastings on Hudson, NY abbrev.)

Location Name					HOH-SS-113(18-24in)	HOH-SS-114(0-2in)	HOH-SS-114(2-6in)	HOH-SS-114(6-12in)	HOH-SS-114(12-18in)	HOH-SS-114(18-24)	HOH-SS-115(0-2in)	HOH-SS-115(2-6in)	HOH-SS-115(6-12in)	HOH-SS-115(12-18in)	HOH-SS-115(18-24in)
Sample Name															
Start Depth															
End Depth															
Depth Unit															
Sample Date					8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017
Parent Sample															
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Restricted-Residential SCO**											
VOCs	ug/kg														
Benzene		71-43-2	60.00	4800		1.8 U					1.3 U				
Toluene		108-88-3	700.0	100000		1.8 U					1.3 U				
Ethylbenzene		100-41-4	1000	41000		1.8 U					1.3 U				
o-Xylene		95-47-6	260.0	100000		1.8 U					1.3 U				
m/p-Xylene		179601-23-1	260.0	100000		1.8 U					1.3 U				
Total Xylene		1330-20-7	260.0	100000		3.6 U					2.5 U				
Acetone		67-64-1	50.00	100000		**14 B**					**12 B**				
Bromochloromethane		74-97-5	NE	NE		1.8 U					1.3 U				
Bromodichloromethane		75-27-4	NE	NE		1.8 U					1.3 U				
Bromoform		75-25-2	NE	NE		1.8 U					1.3 U				
Bromomethane		74-83-9	NE	NE		1.8 U					1.3 U				
Carbon disulfide		75-15-0	NE	NE		1.8 U					1.3 U				
Carbon tetrachloride		56-23-5	760.0	2400		1.8 U					1.3 U				
Chlorobenzene		108-90-7	1100	100000		1.8 U					1.3 U				
Chloroethane		75-00-3	NE	NE		1.8 U					1.3 U				
Chloroform (Trichloromethane)		67-66-3	370.0	49000		1.8 U					1.3 U				
Chloromethane		74-87-3	NE	NE		1.8 U					1.3 U				
Cyclohexane		110-82-7	NE	NE		1.8 U					1.3 U				
1,2-Dibromo-3-chloropropane		96-12-8	NE	NE		1.8 U					1.3 U				
Dibromochloromethane		124-48-1	NE	NE		1.8 U					1.3 U				
1,2-Dibromoethane (EDB)		106-93-4	NE	NE		1.8 U					1.3 U				
1,2-Dichlorobenzene		95-50-1	1100	100000		1.8 U					1.3 U				
1,3-Dichlorobenzene		541-73-1	2400	49000		1.8 U					1.3 U				
1,4-Dichlorobenzene		106-46-7	1800	13000		1.8 U					1.3 U				
Dichlorodifluoromethane (Freon 12)		75-71-8	NE	NE		1.8 U					1.3 U				
1,1-Dichloroethane		75-34-3	270.0	26000		1.8 U					1.3 U				
1,2-Dichloroethane		107-06-2	20.00	3100		1.8 U					1.3 U				
1,1-Dichloroethene		75-35-4	330.0	100000		1.8 U					1.3 U				
cis-1,2-Dichloroethene		156-59-2	250.0	100000		1.8 U					1.3 U				
trans-1,2-Dichloroethene		156-60-5	190.0	100000		1.8 U					1.3 U				
1,2-Dichloropropane		78-87-5	NE	NE		1.8 U					1.3 U				
cis-1,3-Dichloropropene		10061-01-5	NE	NE		1.8 U					1.3 U				
trans-1,3-Dichloropropene		10061-02-6	NE	NE		1.8 U					1.3 U				
1,4-Dioxane		123-91-1	100	13000		36 U					25 U				
2-Hexanone		591-78-6	NE	NE		8.9 U					6.3 U				
Isopropylbenzene		98-82-8	NE	NE		1.8 U					1.3 U				
Methyl acetate		79-20-9	NE	NE		8.9 U					6.3 U				
Methyl ethyl ketone (2-Butanone)		78-93-3	120.0	100000		8.9 U					6.3 U				
Methyl tert-butyl ether (MTBE)		1634-04-4	930.0	100000		1.8 U					1.3 U				
4-Methyl-2-pentanone (MIBK)		108-10-1	NE	NE		8.9 U					6.3 U				
Methylcyclohexane		108-87-2	NE	NE		1.8 U					1.3 U				
Methylene chloride		75-09-2	50.00	100000		1.8 U					1.3 U				
Styrene		100-42-5	NE	NE		1.8 U					1.3 U				
1,1,2,2-Tetrachloroethane		79-34-5	NE	NE		1.8 U					1.3 U				
Tetrachloroethene (PCE)		127-18-4	1300	19000		1.8 U					1.3 U				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)		76-13-1	NE	NE		1.8 U					1.3 U				
1,2,3-Trichlorobenzene		87-61-6	NE	NE		1.8 U					1.3 U				
1,2,4-Trichlorobenzene		120-82-1	NE	NE		1.8 U					1.3 U				
1,1,1-Trichloroethane (TCA)		71-55-6	680.0	100000		1.8 U					1.3 U				
1,1,2-Trichloroethane		79-00-5	NE	NE		1.8 U					1.3 U				
Trichloroethene (TCE)		79-01-6	470.0	21000		1.8 U					1.3 U				
Trichlorofluoromethane (Freon 11)		75-69-4	NE	NE		1.8 U					1.3 U				
Vinyl chloride		75-01-4	20.00	900.0		1.8 U					1.3 U				
SVOCs	ug/kg														
Acenaphthene		83-32-9	20000	100000	140 U	190 U	140 U	140 U	140 U	140 U	180 U	150 U	150 U	140 U	150 U
Acenaphthylene		208-96-8	100000	100000	**250**	190 U	140 U	**210**	**93 J**	140 U	180 U	150 U	150 U	140 U	150 U
Anthracene		120-12-7	100000	100000	**230**	**120 J**	**180**	**310**	**120 J**	**80 J**	180 U	150 U	150 U	140 U	150 U
Benzo(a)anthracene		56-55-3	1000	1000	**1300**	**370**	**510**	**1600**	**450**	**290**	**260**	**190**	**93 J**	**180**	**170**
Benzo(b)fluoranthene		205-99-2	1000	1000	**1200**	**470**	**640**	**1200**	**460**	**280**	**330**	**270**	**130 J**	**240**	**240**
Benzo(k)fluoranthene		207-08-9	800.0	3900	**430**	**250**	**230**	**460**	**250**	**150**	**170 J**	**91 J**	150 U	**96 J**	**110 J**
Benzo(g,h,i)perylene		191-24-2	100000	100000	**630**	**280**	**440**	**640**	**260**	**190**	**190**	**130 J**	150 U	**140**	**180**
Benzo(a)pyrene		50-32-8	1000	1000	**1100**	**420**	**520**	**1200**	**440**	**310**	**300**	**180**	**87 J**	**180**	**210**
Chrysene		218-01-9	1000	3900	**1300**	**380**	**510**	**1600**	**410**	**280**	**260**	**200**	**100 J**	**200**	**180**
Dibenz(a,h)anthracene		53-70-3	330.0	330.0	**220**	190 U	**100 J**	**250**	**82 J**	140 U	180 U	150 U	150 U	140 U	150 U
Fluoranthene		206-44-0	100000	100000	**1400**	**790**	**1100**	**1900**	**750**	**480**	**500**	**310**	**170**	**310**	**320**
Fluorene		86-73-7	30000	100000	**77 J**	190 U	140 U	**85 J**	140 U	140 U	180 U	150 U	150 U	140 U	150 U
Indeno(1,2,3-cd)pyrene		193-39-5	500.0	500	**490**	**240**	**340**	**510**	**240**	**160**	**170 J**	**120 J**	150 U	**110 J**	**140 J**
2-Methylnaphthalene		91-57-6	NE	NE	140 U	190 U	140 U	140 U	140 U	140 U	180 U	150 U	150 U	140 U	150 U
Naphthalene		91-20-3	12000	100000	140 U	190 U	140 U	140 U	140 U	140 U	180 U	150 U	150 U	140 U	150 U
Phenanthrene		85-01-8	100000	100000	**850**	**350**	**810**	**1000**	**360**	**280**	**200**	**91 J**	**96 J**	**150**	**150**
Pyrene		129-00-0	100000	100000	**2400**	**720**	**1200**	**2800**	**720**	**510**	**460**	**340**	**180**	**330**	**320**
Acetophenone		98-86-2	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Atrazine		1912-24-9	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Benzaldehyde		100-52-7	NE	NE	1400 U	1900 U	1400 U*	1400 U	1400 U	1400 U	1800 U	1500 U*	1500 U*	1400 U*	1500 U*
Biphenyl (1,1-Biphenyl)		92-52-4	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Bis(2-chloroethoxy)methane		111-91-1	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Bis(2-chloroethyl)ether		111-44-4	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
2,2-oxybis(1-Chloropropane)		108-60-1	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Bis(2-ethylhexyl)phthalate		117-81-7	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U

Table 1. Shallow Soil Analytical Results
Pre-Design Investigation Summary Report
Con Edison Hastings on Hudson Former MGP Site
Hastings on Hudson, NY abbrev.)

Location Name					HOH-SS-113(18-24in)	HOH-SS-114(0-2in)	HOH-SS-114(2-6in)	HOH-SS-114(6-12in)	HOH-SS-114(12-18in)	HOH-SS-114(18-24)	HOH-SS-115(0-2in)	HOH-SS-115(2-6in)	HOH-SS-115(6-12in)	HOH-SS-115(12-18in)	HOH-SS-115(18-24in)
Sample Name															
Start Depth															
End Depth															
Depth Unit															
Sample Date					8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017
Parent Sample															
Analyte	**Units**	**CAS No.**	**Unrestricted SCO**	**Restricted-Residential SCO**											
4-Bromophenyl phenyl ether		101-55-3	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Butyl benzyl phthalate		85-68-7	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Caprolactam		105-60-2	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Carbazole		86-74-8	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
4-Chloro-3-methylphenol		59-50-7	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
4-Chloroaniline		106-47-8	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
2-Chloronaphthalene		91-58-7	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
2-Chlorophenol		95-57-8	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
4-Chlorophenyl phenyl ether		7005-72-3	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Dibenzofuran		132-64-9	7000	59000	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
3,3-Dichlorobenzidine		91-94-1	NE	NE	1400 U	1900 U	1400 U	1400 U	1400 U	1400 U	1800 U	1500 U	1500 U	1400 U	1500 U
2,4-Dichlorophenol		120-83-2	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Diethyl phthalate		84-66-2	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Dimethyl phthalate		131-11-3	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
2,4-Dimethylphenol		105-67-9	NE	NE	1400 U	1900 U	1400 U	1400 U	1400 U	1400 U	1800 U	1500 U	1500 U	1400 U	1500 U
Di-n-butyl phthalate		84-74-2	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
4,6-Dinitro-2-methylphenol		534-52-1	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
2,4-Dinitrophenol		51-28-5	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
2,4-Dinitrotoluene		121-14-2	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
2,6-Dinitrotoluene		606-20-2	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Di-n-octyl phthalate		117-84-0	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Hexachlorobenzene		118-74-1	330.0	1200	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
1,3-Hexachlorobutadiene (C-46)		87-68-3	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Hexachlorocyclopentadiene		77-47-4	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Hexachloroethane		67-72-1	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Isophorone		78-59-1	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
2-Methylphenol (o-Cresol)		95-48-7	330.0	100000	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
3,4-Methylphenol (m,p-Cresol)	mg/kg	108394/106445	NE	NE	0.69 U	0.93 U	0.71 U	0.7 U	0.69 U	0.71 U	0.91 U	0.74 U	0.73 U	0.69 U	0.73 U
2-Nitroaniline		88-74-4	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
3-Nitroaniline		99-09-2	NE	NE	1400 U	1900 U	1400 U	1400 U	1400 U	1400 U	1800 U	1500 U	1500 U	1400 U	1500 U
4-Nitroaniline		100-01-6	NE	NE	1400 U	1900 U	1400 U	1400 U	1400 U	1400 U	1800 U	1500 U	1500 U	1400 U	1500 U
Nitrobenzene		98-95-3	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
2-Nitrophenol		88-75-5	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
4-Nitrophenol		100-02-7	NE	NE	1400 U	1900 U	1400 U	1400 U	1400 U	1400 U	1800 U	1500 U	1500 U	1400 U	1500 U
N-Nitrosodiphenylamine (NDFA)		86-30-6	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
N-Nitrosodi-n-propylamine (NDPA)		621-64-7	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Pentachlorophenol		87-86-5	800.0	6700	1400 U	1900 U	1400 U	1400 U	1400 U	1400 U	1800 U	1500 U	1500 U	1400 U	1500 U
Phenol		108-95-2	330.0	100000	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
1,2,4,5-Tetrachlorobenzene		95-94-3	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
2,3,4,6-Tetrachlorophenol		58-90-2	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
2,4,5-Trichlorophenol		95-95-4	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
2,4,6-Trichlorophenol		88-06-2	NE	NE	690 U	930 U	710 U	700 U	690 U	710 U	910 U	740 U	730 U	690 U	730 U
Total Metals	mg/kg														
Aluminum		7429-90-5	NE	NE	**5930**	**7340**	**6610**	**5630**	**5770**	**5860**	**11800**	**15900**	**14700**	**7250**	**10400**
Antimony		7440-36-0	NE	NE	4 U	5.4 U	4.3 U	4.1 U	4 U	4 U	5.3 U	4.3 U	4.1 U	3.9 U	4.1 U
Arsenic		7440-38-2	13.00	16.00	**3.8**	**4.1**	**3.5**	**6.8**	**6.1**	**4.6**	**3.9 J**	**2.1 J**	**8.7**	**5.5**	**3.6**
Barium		7440-39-3	350.0	400.0	**63.9**	**136**	**112**	**158**	**129**	**114**	**166**	**134**	**126**	**131**	**124**
Beryllium		7440-41-7	7.200	72.00	**0.39 J**	**0.36 J**	**0.35 J**	**0.4 J**	**0.36 J**	**0.34 J**	**0.44 J**	**0.49**	**0.52**	**0.39**	**0.43**
Cadmium		7440-43-9	2.500	4.300	0.8 U	**0.59 J**	**0.61 J**	**1.1**	**1.7**	**1.5**	**0.27 J**	0.86 U	**0.71 J**	**2.1**	**1.1**
Calcium		7440-70-2	NE	NE	**3670**	**17100**	**10300**	**15800**	**11800**	**13300**	**8430**	**5430**	**8510**	**17300**	**16100**
Chromium		7440-47-3	NE	NE	**15**	**39.1**	**31.3**	**20.2**	**21.8**	**24.9**	**92.8**	**146**	**131**	**41.2**	**76.9**
Cobalt		7440-48-4	NE	NE	**5.2 J**	**6.6 J**	**6.1 J**	**5.2 J**	**5.1 J**	**5.2 J**	**10.8 J**	**14**	**17.1**	**6.4 J**	**8.9 J**
Copper		7440-50-8	50.00	270.0	**67.5**	**171**	**226**	**387**	**398**	**1260**	**110**	**86.6**	**233**	**435**	**288**
Iron		7439-89-6	NE	NE	**13000**	**17700**	**14100**	**14800**	**17700**	**13200**	**22200**	**24000**	**36500**	**15000**	**19800**
Lead		7439-92-1	63.00	400.0	**97.8**	**524**	**400**	**996**	**441**	**423**	**261**	**212**	**1040**	**1760**	**441**
Magnesium		7439-95-4	NE	NE	**3670**	**9410**	**8300**	**9460**	**6980**	**8260**	**9870**	**13300**	**14100**	**10500**	**13700**
Manganese		7439-96-5	1600	2000	**307**	**344**	**296**	**283**	**297**	**309**	**381**	**343**	**336**	**269**	**314**
Mercury		7439-97-6	0.1800	0.8100	**0.17**	**0.51**	**0.43**	**1.1**	**0.81**	**0.5**	**0.59**	**0.47**	**0.45**	**0.7**	**0.54**
Nickel		7440-02-0	30.00	310.0	**14.5**	**25.7**	**33.4**	**17.3**	**16.3**	**21.1**	**51.2**	**72.3**	**73.6**	**25.7**	**40.4**
Potassium		7440-09-7	NE	NE	**1210**	**1800**	**1180**	**868 J**	**932 J**	**940 J**	**2730**	**3430**	**2630**	**995**	**1950**
Selenium		7782-49-2	3.900	180.0	4 U	5.4 U	4.3 U	4.1 U	4 U	4 U	5.3 U	4.3 U	4.1 U	3.9 U	4.1 U
Silver		7440-22-4	2.000	180.0	2 U	2.7 U	**0.4 J**	**0.49 J**	**0.31 J**	**0.69 J**	2.7 U	2.2 U	2 U	2 U	2 U
Sodium		7440-23-5	NE	NE	**87.9 J**	**147 J**	**116 J**	**139 J**	**139 J**	**142 J**	**141 J**	**181 J**	**211 J**	**216 J**	**202 J**
Thallium		7440-28-0	NE	NE	4 U	5.4 U	4.3 U	4.1 U	4 U	4 U	5.3 U	4.3 U	4.1 U	3.9 U	4.1 U
Vanadium		7440-62-2	NE	NE	**20.1**	**28.7**	**35.9**	**40.4**	**26.6**	**27.1**	**39.9**	**51.1**	**57**	**26.1**	**32.7**
Zinc		7440-66-6	109.0	10000	**89**	**271**	**210**	**459**	**377**	**364**	**235**	**137**	**298**	**353**	**278**

Table 1. Shallow Soil Analytical Results
Pre-Design Investigation Summary Report
Con Edison Hastings on Hudson Former MGP Site
Hastings on Hudson, NY abbrev.)

Notes:

Data for these sampling events have not been validated. Qualifiers are Lab Qualifiers.
mg/kg = milligrams/kilogram or parts per million (ppm)
ug/kg = micrograms per kilogram

SVOC = Semi-Volatile Organic Compound
VOC = Volatile Organic Compound

6 NYCRR = New York State Register and Official Compilation of Codes, Rules and Regulations of the State of New York
Comparison of detected results are performed against one or more of the following NYCRR, Chapter IV, Part 375-6 Soil Cleanup Objectives (SCO)s: Unrestricted Use, Restricted-Residential

CAS No. = Chemical Abstracts Service Number
NE = Not Established
Bolding indicates a detected result concentration
Shading and bolding indicates that the detected concentration is above the NYSDEC guidance it was compared to
Gray shading and bolding indicates that the detected result value exceeds the Unrestricted SCO
Yellow shading and bolding indicates that the detected result value exceeds the Restricted Residential SCO

J = The result is an estimated value.
JN = The analyte is presumptively present at an approximated quantity.
R = The result is rejected.
U = The result was not detected above the reporting limit.
UJ = The results was not detected at or above the reporting limit shown and the reporting limit is estimated.

Table 12
Typical Background Concentrations of Metals and PAH's in Soil
Hastings-on-Hudson Former MGP Site
Remedial Investigation
Hastings-on-Hudson, New York

Compounds	Background Concentration Range (mg/kg)	Arithmetic Means (mg/kg)	Westchester County Department of Health Background Study (mg/kg)
PAHs [1]			
2-Methylnaphthalene	0.017 - 0.64	0.151	NA
Acenaphthene	0.024 - 0.34	0.201	NA
Acenaphthylene	0.018 - 1.10	0.173	NA
Anthracene	0.029 - 5.70	0.351	NA
Benz(a)anthracene	0.048 - 15.00	1.319	NA
Benzo(a)pyrene	0.040 - 13.00	1.323	NA
Benzo(b)fluoranthene	0.049 - 12.00	1.435	NA
Benzo(g,h,i)perylene	0.200 - 5.90	0.891	NA
Benzo(k)fluoranthene	0.043 - 25.00	1.681	NA
Chrysene	0.038 - 21.00	1.841	NA
Dibenz(a,h)anthracene	0.020 - 2.90	0.388	NA
Fluoranthene	0.110 - 39.00	3.047	NA
Fluorene	0.022 - 3.30	0.214	NA
Indeno(1,2,3-c,d)pyrene	0.093 - 6.00	0.987	NA
Naphthalene	0.018 - 0.66	0.125	NA
Phenanthrene	0.071 - 36.00	1.838	NA
Pyrene	0.082 - 11.00	2.398	NA
Total PAHs	2.292 - 166.65	18.361	NA
Metals[2]			
Aluminum	7,000 - > 100,000	72,000	NA
Antimony	< 1 - 8.8	0.66	NA
Arsenic	< 0.1 - 73	7.2	NA
Barium	10 - 1,500	580	NA
Beryllium	< 1 - 7	0.92	NA
Cadmium[3]	0.01 - 22	-	NA
Calcium	100 - 280,000	24,000	NA
Chromium	1 - 1,000	54	NA
Cobalt	< 0.3 - 70	9.1	NA
Copper	< 1 - 700	25	17 - 45,000
Iron	100 - >100,000	26,000	NA
Lead	> 10 - 300	19	21 - 1,800
Magnesium	50 - 50,000	9,000	NA
Manganese	< 2 - 7,000	550	NA
Mercury	0.01 - 3.4	0.09	NA
Nickel	< 5 - 700	19	NA
Potassium	50 - 37,000	15,000	NA
Selenium	< 0.1 - 3.9	0.39	NA
Silver[3]	0.01 - 5	0.05	NA
Sodium	<500 - 50,000	12,000	NA
Thallium	NE	2,900	NA
Vanadium	<7 - 300	80	NA
Zinc	<5 - 2,900	60	NA

Notes:

1. Bradley, B.H., et al. 1994. "Background Levels of Polycyclic Aromatic Hydrocarbons (PAH) and Selected Metals in New England Urban Soils," Journal of Soil Contamination, 3(4), p. 349-361.
2. H.T. Shacklette and J.G. Boerngen, USGS Professional Paper 1270, 1984.
3. USEPA, *Metals in Soils: A Brief Summary* , 1980.
4. "-" Not presented in source

mg/kg - milligrams per kilogram; PAHs - polycyclic aromatic hydrocarbons