

William R Jones Lead Sr. Environmental Engineer Environmental Department

April 12, 2005

RECEIVED

APR 1 4 2005

Remedial Bureau C Division of Environmental Remediation

R. Scott Deyette NYS Department of Environmental Conservation Division of Environmental Conservation Remedial Bureau C, 11th Floor 625 Broadway Albany, NY 12233-7014

Re: Oneida (Cedar St.) Voluntary Cleanup Project

Supplemental Post-Remediation Investigation Summary Report

Dear Mr. Deyette:

Enclosed please find three copies of the Supplemental Post-Remediation Investigation Summary Report for the above referenced project. The supplemental investigation activities found three boring locations that exhibited detectable PID readings. Two of those locations (SB-100 and SB-101) exhibited no staining or other visual indications of MGP-related impacts however, SB-100 had a "faint" odor at the four foot depth. The third boring location (SB-107) exhibited both "trace staining" and "moderator MGP odor" at the approximate nine foot depth. No lens of MGP-related tar or mobile NAPL was identified at any of the thirteen boring locations.

These results indicate the requirements of the *Final Remedial Design Work Plan* (BBL, 2002) and the Voluntary Consent Order have been achieved and no further action is necessary to complete site closeout. The City of Oneida is anxious to achieve site closeout on the 141 Cedar Street parcel as part of its NYSDEC approved brownfield redevelopment plan for the city block surrounded by Cedar, Linden and Stoddard streets. To assist the City with that process, Niagara Mohawk has directed BBL to revise the draft Construction Certification Report to include the supplemental investigation results and reissue it as a certified (i.e. stamped by the Professional Engineer of record), *Final Construction Certification Report*. The final report will be forwarded to the NYSDEC within the next two weeks for use in closing this project out. Thank you for your timely assistance with this matter.

Sincerely,

Environmental Department

WRJ/

xc: File

James Bacher, P.E. – City of Oneida Terry Young P.E. – Niagara Mohawk



RECEIVED

APR 1 2005

Remedial Bureau C Division of Environmental Remediation

Transmitted via U.S. Mail

April 8, 2005

Mr. William R. Jones, P.E. Niagara Mohawk, a National Grid Company 300 Erie Boulevard West Syracuse, NY 13202

Re: Oneida (Cedar Street) Voluntary Cleanup Project

Supplemental Post-Remediation Investigation Summary Report

BBL Project #366.56

Dear Bill:

This letter report summarizes the subsurface investigations performed by Blasland, Bouck & Lee, Inc. (BBL) on behalf of Niagara Mohawk, a National Grid Company (Niagara Mohawk) at the Oneida (141 Cedar Street) Former Manufactured Gas Plant (MGP) Site (the Site) located in Oneida, New York. Subsurface investigations were performed between January 24 and 25, 2005, in accordance with the Supplemental Post-Remediation Investigation Work Plan (BBL, January 2005) that was verbally approved by the New York State Department of Environmental Conservation (NYSDEC) on January 21, 2005. The following presents a brief background, an overview of work plan requirements, a summary of investigation activities, and summary of results.

Background

Remedial construction efforts in association with the voluntary cleanup at the Site were performed between March and June 2004 in accordance with the NYSDEC-approved *Final Remedial Design Work Plan* (BBL, November 2002) and the *Final Remedial Design Documents* (BBL, October 2003). The remedial construction efforts resulted in the excavation and offsite disposal of approximately 4,700 cubic yards (cy) (approximately 6,960 tons) of surface and subsurface soil and other debris (primarily concrete) from within prescribed limits of excavation.

During the performance of excavation efforts within the 141 Cedar Street parcel area, suspected MGP-impacted material was observed in an area generally south of the former gas holder. Additional excavation activities were performed at this time within an area of approximately 580 square feet (SF) to remove the suspected material. These efforts resulted in the additional excavation of approximately 100 cy of material beyond the horizontal and vertical excavation limits identified in the approved design. Removal of the additional materials was performed until only small traces of the MGP-impacted material were observed. As a precautionary measure, approximately 180 pounds of an oxygen release compound (ORC) were applied to the open excavation prior to initiating backfill activities.

Upon reaching the limits of excavation of the approved design (including the removal of additional material as detailed above), a thin lens (i.e., less than 6 inches thick) of tarry material located approximately 10 feet below ground surface (bgs) was observed in the excavation sidewall at the

southeast corner of the 141 Cedar Street parcel. In the field and at that time, the NYSDEC requested that the excavation continue in an attempt to remove the material. However, the excavation was terminated due to safety concerns regarding the unsupported vertical height of the excavation, and Niagara Mohawk marked the area of concern and backfilled, graded, and restored the area. Niagara Mohawk and the NYSDEC also agreed to continue discussions regarding the need for further investigation of the area of concern. In response, the NYSDEC requested the performance of additional work efforts (via a letter to Niagara Mohawk dated November 12, 2004); Niagara Mohawk subsequently developed a Supplemental Post-Remediation Investigation Work Plan (BBL, January 2005) as detailed further below.

Supplemental Post-Remediation Investigation Work Plan Requirements

The objective of the supplemental investigations described in the Supplemental Post-Remediation Investigation Work Plan was to delineate the extent of a suspected MGP-related subsurface tarry lens located at the southeast corner of the 141 Cedar Street parcel at approximately 10 feet bgs. Implementation of the NYSDEC-approved supplemental post-remediation investigation included the following work plan requirements.

- Initially, install a total of approximately 10 soil borings in the southeast corner of the remediation area. These borings were to be located along four transects spaced at approximately 10-foot intervals.
- Install additional borings at 10-foot intervals in an outward direction to delineate the extents if potential MGP-related material (i.e., tar lens) is encountered at the outer limits of the initial boring locations.
- Advance each soil boring using direct-push sampling techniques to a depth of 2 feet below the targeted tar lens or a maximum depth of 12 feet bgs, whichever occurs first.
- Collect soil samples at 4-foot intervals, classify the soils, and observe the soil samples for the visual presence of potential MGP-related tar-saturated material.

Investigation Activities

BBL performed subsurface investigation activities between the dates of January 24 and 25, 2005 using a tractor-mounted AMS Power-Probe®. The NYSDEC was notified on January 18, 2005 of the scheduled performance of the investigation efforts, but was unable to be on site during the performance of the investigation activities. Dig Safely NY was contacted prior to the initiation of investigation efforts, and buried utilities were cleared under Ticket No. 01185-012-042.

A total of 13 soil borings (SB-100 through SB-112) was installed using direct-push techniques. Refer to Figure 1 (attached) for soil boring locations. Each soil sample was advanced to a depth of approximately 16 feet bgs with the exception of two borings (SB-109 and SB-110), which encountered refusal (wood) at approximately 10 feet bgs. The 13 soil borings were installed (versus the proposed 10 soil borings) and each soil boring was installed to a total depth of 16 feet bgs (versus the proposed 12 feet bgs) to provide for better horizontal and vertical coverage of the investigation area (not as a result of chasing a tar lens).

Visual observations were performed for soils recovered from each of the 13 soil borings by BBL's onsite geologist. Visual observation activities included the following:

- Geologic characteristics of the soil;
- Discolored or stained soils;
- "Wet" or "saturated" soil (indicating the approximate depth of the groundwater table);
- Tarry material or potential MGP-related materials; and
- Field screening of soil samples for organic vapors using a photoionization detector (PID).

Refer to the soil boring logs (attached) for a summary of geologic characteristics and visual observations for each soil boring location.

Investigation Results

As indicated above, a total of 13 soil borings was installed at the southeast corner of the remediation area as part of the supplemental post-remediation investigation activities. The following key visual observations were made during the performance of subsurface investigation activities:

- None of the soil samples exhibited detectable PID readings, with the exception of SB-100 (PID reading of 1.6 ppm at 4 to 5 feet bgs), SB-101 (PID reading of 2.2 ppm at 6 to 7 feet bgs), and SB-107 (PID readings ranging from 2.1 ppm to 63.0 ppm at 7 to 11 feet bgs).
- Slight potentially MGP-related staining of soil was noted at 9 feet bgs at SB-107, but no tar lens was identified, and this observation was not recorded at sample locations further away from the excavation area.
- No lens of MGP-related tarry material was identified at any of the 13 soil boring locations.

Recommendations

Based upon the results of the supplemental post-remediation investigation activities, the requirements of the Final Remedial Design Work Plan (BBL, 2002) and the VCA have been achieved and no further action is necessary to complete site closeout. As you are aware, the City of Oneida (the City) is anxious to achieve site closeout on the 141 Cedar Street parcel as the City is currently pursuing the sale of the properties surrounded by Cedar, Linden, and Stoddard Streets. In the spirit of assisting the City with this process, BBL will revise the Construction Certification Report to include the supplemental post-remediation investigation results and will issue Niagara Mohawk the certified (stamped by a Professional Engineer) Final Construction Certification Report for issuance to the NYSDEC so they can complete the site closeout process.

If you have any questions, please call me.

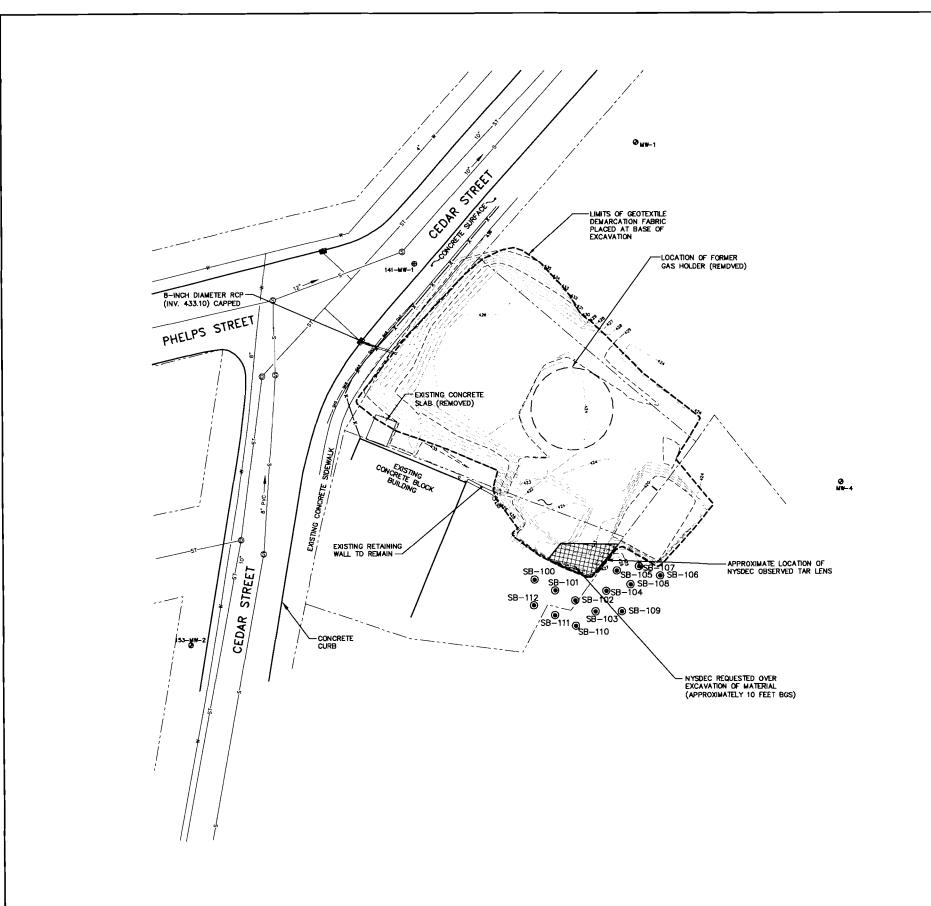
Sincerely,

BLASLAND, BOUCK & LEE, INC.

James M. Nuss, P.E. Vice President

GPC/lar

cc: Gerald P. Cummins, Blasland, Bouck & Lee, Inc.





LEGEND:

---- PROPERTY LINE

GROUND SURFACE CONTOUR (5' INCREMENT)

GROUND SURFACE CONTOUR (1' INCREMENT)

TEMPORARY STEEL SHEETING (REMOVED)

 \aleph WATER VALVE

DROP INLET

SANITARY MANHOLE

UTILITY POLE

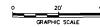
EXISTING MONITORING WELL

EXISTING MONITORING WELL (INSTALLED

DIRECT PUSH SOIL BORING LOCATION (INSTALLED BY BBL, JANUARY 2005)

NOTES:

- SITE FEATURE LOCATIONS AND CONTOURS BASED UPON SITE SURVEY INFORMATION AS DEVELOPED BY C.T. MALE ASSOCIATES, P.C., 5/24/04.
- CONTOURS DEPICTED ON THIS FIGURE DO NOT REPRESENT CURRENT SITE CONDITIONS. CONTOURS SHOWN ON THIS FIGURE REPRESENT THE BOTTOM OF THE 141 CEDAR STREET EXCAVATION AREAS PRIOR TO INSTALLATION OF BACKFILL ESTABLISH FINAL GRADE.
- DIRECT PUSH SOIL BORING LOCATIONS (INSTALLED BY BBL, JANUARY 2005) AS DEPICTED, ARE LOCATED BASED UPON FIELD MEASUREMENTS.



DRAFT

NIAGARA MOHAWK, A NATIONAL GRID COMPANY ONEIDA (141 CEDAR STREET) FORMER MGP SITE SUPPLEMENTAL POST-REMEDIATION INVESTIGATION SUMMARY REPORT

BORING LOCATION PLAN

FIGURE

Sampler Size: 2" ID x 4'

Rig Type: Tractor-mounted AMS Powerprobe

Northing: NA Easting: NA

Casing Elevation: NA

Borehole Depth: 16' below grade **Surface Elevation:** NA

Descriptions By: David Cornell

Boring ID: SB-100

Client: Niagara Mohawk,

A National Grid Company

Location: Cedar Street

Oneida, NY

DEРТН	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PiD Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
-		ı							
		1	0-4	2.9	ND ND		H4444 4444-	Brown Silty fine SAND, trace fine Gravet, Brick Fragments and medium Sand, trace Roots at surface, non-plastic, moist. Brown-black fine SAND, some Cinders and Ash, little Organics, trace Stag, non-plastic, moist.	x x x x x x x x x x x x x x x x x x x
-]				ND ND			Trace medium Sand, slight dark gray coloration and faint odor, wet at 4.3' bgs.	x x x x x x x
-5 -	-5 -	2	4-8	2.6	ND ND				X
-	-)		ND ND ND		4 4 4 4 4 4 4 4	Brown ORGANICS and SILT, non-plastic, moist. [PEAT]	*
10- -	10 -	3	8-12	3.4	ND ND		4 4 4 4 4		x x x x x x
<u> </u> -	-	4	12-16	3.2	ND ND			Grow horours DEAT and SILT trace Clay non-Months work	x x x x x x x
15-	15 -				ND ND			Gray-brown PEAT and SILT, trace Clay, non-plastic, wet. Remarks: NA = Not Available; bgs = below ground surface	× × × x
						LEE, I	NC.	To the state of th	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

Project: 366.56.004 Data File: SB-100.dat Template: J:\Rockware\LogPlot 2001\LogFiles\36656\CEDARST.ldf Date: 1/27/05

Sampler Size: 2" ID x 4'

Rig Type: Tractor-mounted AMS Powerprobe

Northing: NA Easting: NA

Casing Elevation: NA

Borehole Depth: 16' below grade Surface Elevation: NA

Descriptions By: David Cornell

Boring ID: SB-101

Client: Niagara Mohawk,

A National Grid Company

Location: Cedar Street Oneida, NY

ОЕРТН	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
	-								
•	9				ND		두구	Brown-gray Sitly fine SAND, and fine to medium angular GRAVEL, trace Roots, non-plastic, moist.	x x
•	-	1	0-4	3.2	ND			Brown-dark brown fine to medium SAND, little Brick fragments and Cinder, trace Organics, non-plastic, moist.	× × × × Borehole backfilled × with native × material.
	-				ND			Trace to little Ash and Slag, non plastic, saturaled, from 4.0' - 6.2' bgs.	× × × × × ×
-5 -	- 5	•			ND ND			Trace to little ASIT and Slag, non plastic, saturated. If OH 4.0 - 0.2 Ugs.	
-		2	4-8	3.5	2.2 ND			Dark gray fine SAND and ORGANICS, little Silt, faint MGP odor at 6.4' bgs, non-plastic, saturated.	X
					ND ND			Brown-gray Silty fine to medium SAND, non-plastic, saturated.	
- 10- <i>1</i> -	_	3	8-12	4.0	ND		T T	Gray Sitty fine SAND, non-plastic, moist. Brown-dark brown ORGANICS, some Silt, non-plastic, moist. [PEAT]	
-	1				ND ND]	<u></u>		×× ×× ××
		4	12-16	25	ND		77 77 77 77	Gray Sil.T, little Organics, trace Clay, non-plastic, moist.	x x x x x x
- 15-1	15 -	•	12-10	2.3	ND ND			олау отст, яше отдажо, насе скау, пон-равис, тоск.	x

Project: 366.56.004 Data File: SB-101.dat

BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

> Template: J:\Rockware\LogPlot 2001\LogFiles\36656\CEDARST.ldf Date: 1/27/05

Date Start/Finish: 1/25/05 Drilling Company: BBL
Driller's Name: J. Gutkowski
Drilling Method: Push/Percussion
Sampler Size: 2" ID x 4'

Rig Type: Tractor-mounted AMS Powerprobe

Northing: NA Easting: NA

Casing Elevation: NA

Borehole Depth: 16' below grade

Surface Elevation: NA

Descriptions By: David Cornell

Boring ID: SB-102

Client: Niagara Mohawk,

A National Grid Company

Location: Cedar Street Oneida, NY

DEPTH	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
<u> </u>	-				1.			
0 0	 			ND ND		王士	Brown Sitty fine SAND, trace fine Gravel and Roots, non-plastic, moist. Gray-brown fine SAND, some medium Sand, little Brick fragments and fine to medium Gravel, trace Cinders and Roots, non-plastic, moist.	X X X X X X Borehole backfille
	1	0-4	2.4	ND ND				x with native material. x x x x x x x
5 -5		4-8	3.0	ND ND			Brown-gray Sitty fine SAND and ASH, little Slag and Brick fragments, non-plastic, saturated.	x
	_			ND ND			Dark gray Sitty fine SAND, trace Organics, non-plastic, saturated.	× × × ×
				ND ND			Gray fine Sandy SILT, tittle Organics, non-plastic, moist.	× × × ×
10-10 ·	_ 3 	8-12	3.9	ND		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Brown SILT and ORGANICS, non-plastic, moist. [PEAT]	*
				ND		77 77 77 77 77 77 77 77 77 77 77 77 77		x
15- <i>15</i> -	4	12-16	2.6	DN GN		77 77 77 77	Brown-gray SILT and ORGANICS, trace Clay, non-plastic, moist.	× × × ×
				ND		Ø	Remarks: NA = Not Available; bgs = below ground surface	× × × × × × × × × × × × × × × × × × ×
QI A	E A	SIND, B	Olic	5	EE I	A NC		

Project: 366.56.004 Data File: SB-102.dat

engineers, scientists, economists

Template: J:\Rockware\LogPlot 2001\LogFiles\36656\CEDARST.ldf Date: 1/27/05

Date Start/Finish: 1/25/05 Drilling Company: BBL
Driller's Name: J. Gutkowski
Drilling Method: Push/Percussion
Sampler Size: 2" ID x 4"

Rig Type: Tractor-mounted AMS Powerprobe

Northing: NA Easting: NA

Casing Elevation: NA

Borehole Depth: 16' below grade Surface Elevation: NA

Descriptions By: David Comell

Boring ID: SB-103

Client: Niagara Mohawk,

A National Grid Company

Location: Cedar Street Oneida, NY

ОЕРТН	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
-	3	S	5?	X	<u>а</u> ,	4			
-	- 0	1	0-4	3.3	ND ND ND			Dark brown SILT and fine SAND, trace Organics, non-plastic, moist. Brown fine to medium SAND, trace fine Gravel, trace Roots, non-plastic, wet.	x x x x x x x x x x x x x x x x x x x
- 5 -	-5-	2	4-8	3.9	ND ND ND ND ND			Brown-gray SILT and fine SAND, trace medium Sand and fine Gravel, non-plastic, saturated. Gray black fine SAND, trace Brick fragments and Ash, trace Organics and Cinders, non-plastic, moist. Brown ORGANICS, little Silt, non-plastic, moist. [PEAT]	× × × × × × × × × × × × × × × × × × ×
- - - 10- <i>1</i>	10 -	3	8-12	3.0	ND ND ND ND				x x x x x x x x x x x x x x x x x x x
- - 15- <i>1</i>	.5 -	4	12-16	3.8	ND ND ND			Brown-pink SiLT, trace fine Sand and Clay, slightly plastic, saturated.	x
-	LAS	LAN	D. B	OUC	S K &	EE, I	NC.	Remarks: NA = Not Available; bgs = below ground surface	e; ND = Not Detected

Project: 366.56.004 Data File: SB-103.dat

engineers, scientists, economists

Template: J:\Rockware\LogPlot 2001\LogFiles\36656\CEDARST.ldf Date: 1/27/05

Date Start/Finish: 1/25/05 Drilling Company: BBL
Driller's Name: J. Gutkowski
Drilling Method: Push/Percussion
Sampler Size: 2" ID x 4'

Rig Type: Tractor-mounted AMS Powerprobe

Northing: NA

Easting: NA
Casing Elevation: NA

Borehole Depth: 16' below grade Surface Elevation: NA

Descriptions By: David Cornell

Boring ID: SB-104

Client: Niagara Mohawk,

A National Grid Company

Location: Cedar Street

Oneida, NY

ОЕРТН	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
	-								
-	-	1	0-4	3.6	ND ND			Brown SILT and fine SAND, trace Roots and fine Gravel, non-plastic, moist. Brown fine to medium SAND, trace fine Gravel, non-plastic, moist.	× × × × × × Borehole backfilled , with native
- -	+				ND ND	,		Uttle Silt and becoming saturated at 4.0' bgs.	x material.
-5 -	-5 -	2	4-8	3.9	ND ND ND			Brown-pink SILT and CLAY, little to trace fine Sand, moderately plastic, saturated.	× × - × × × × × × × × × × × × × × × × ×
- -	-				ND ND		4 4 4 4	Dark gray-brown SILT and ORGANICS, trace fine Sand , non-plastic, moist. [PEAT]	x
- 10-1	0 -	3	8-12	2.4	ND ND		4 4 4 4 4		× × × × × ×
	1				ND ND			Brown-pink Sitty CLAY, moderately plastic, moist. Brown-pink Sitty fine SAND, non-plastic, saturated.	×
-	-	4	12-16	2.3	ND ND		HHHH HHHH		× × -
15-1	5 -				ND		6	Remarks: NA = Not Available; bgs = below ground surfa	ace; ND = Not Detected
					3	LEE, I	NC.		

Project: 366.56.004 Data File: SB-104.dat

engineers, scientists, economists

Template: J:\Rockware\LogPlot 2001\LogFiles\36656\CEDARST.ldf Date: 1/27/05

Sampler Size: 2" ID x 4'

Rig Type: Tractor-mounted AMS Powerprobe

Northing: NA Easting: NA Casing Elevation: NA

Borehole Depth: 16' below grade

Surface Elevation: NA

Descriptions By: David Comell

Boring ID: SB-105

Client: Niagara Mohawk,

A National Grid Company

Location: Cedar Street

Oneida, NY

ОЕРТН	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
-	-								_
-		1	0-4	2.5	ND ND ND ND ND			Brown fine to medium SAND, little angular Gravel, trace Silt, non-plastic, moist.	× × × × × × Borehole backfilled with native material. × × × × × × × × × × × × × × × × × ×
5 	-5 -	2	4-8	2.9	ZD			Becoming saturated at 4.0' bgs. Dark brown-gray Silty fine SAND, some Organics, little fine to medium Gravel, non-plastic, saturated. Dark brown SILT, little fine Sand, non-plastic, moist.	x x x x x x x x x x x x x x x x x x x
- 10-	10 -	3	8-12	3.1	ND ND NO		3 4 4 7	Faint odor between 8.0' and 9.3' bgs. Brown ORGANICS, some Silt, non-pastic, moist. [PEAT]	
-	-	4	12-16	3.1	ND ND ND		4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Brown-pink Silty CLAY, moderately plastic, moist. Brown Silty fine SAND, non-plastic, saturated.	x x x x x x x x x x x x x x x x x x x
	BLAS				ND K&	LEE, I		Remarks: NA = Not Available; bgs = below ground sur	face; ND = Not Detected

Project: 366.56.004 Data File: SB-105.dat Template: J:\Rockware\LogPlot 2001\LogFiles\36656\CEDARST.ldf Date: 1/27/05

Date Start/Finish: 1/25/05 Drilling Company: BBL
Driller's Name: J. Gutkowski
Drilling Method: Push/Percussion
Sampler Size: 2" ID x 4"

Rig Type: Tractor-mounted AMS Powerprobe

Northing: NA

Easting: NA
Casing Elevation: NA

Borehole Depth: 16' below grade

Surface Elevation: NA

Descriptions By: David Cornell

Boring ID: SB-106

Client: Niagara Mohawk,

A National Grid Company

Location: Cedar Street

Oneida, NY

DEPTH ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
								-
400 -	1	0-4	2.9	ND ND ND		<u> </u>	Brown Silty fine SAND, some fine to coarse subangular Gravel, trace medium Sand, non-plastic, moist.	X X X X X X X X X X X X X X X X X X X
395 - 	2	4-8	2.8	ND ND ND ND		######################################	Wet at 6.3' bgs. Brown-gray Silty fine SAND, non-plastic, saturated.	
10 390	3	8-12	2.9	ND ND ND ND		4 4 4 4 4	Brown ORGANICS, little Silt, non-plastic, moist. [PEAT] Gray-brown SILT and fine SAND, little Organics, non-plastic, moist.	x x x x x x x x x x x x x x x x x x x
-15 -385 -	4	12-18	2.7	ND ND ND			Trace Clay and wet below 12.0° bgs.	x x x x x x x x x x
	SLAN	D, B	OUC	S	EE, I	NC.	Remarks: NA = Not Available; bgs = below ground sur	face; ND = Not Detected

Project: 366.56.004 Data File: SB-106.dat

engineers, scientists, economists

Template: J:\Rockware\LogPlot 2001\LogFiles\36656\CEDARST.ldf Date: 1/27/05

Sampler Size: 2" ID x 4'

Rig Type: Tractor-mounted AMS Powerprobe

Northing: NA Easting: NA Casing Elevation: NA

Borehole Depth: 16' below grade

Surface Elevation: NA

Descriptions By: David Comell

Boring ID: SB-107

Client: Niagara Mohawk, A National Grid Company

Location: Cedar Street

Oneida, NY

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
-	-								-
-	-	1	0-4	3.4	ND ND ND ND		<u> </u>	Brown Silty fine SAND, some fine to coarse subangular Gravel, Organics at the surface, non-plastic, moist.	x x x x x Borehole backfilled with native material. x x x x x x x x x x x x x
-5	-5 -	2	4-8	3.0	ND ND 2.1		-	Slight gray coloration, very faint MGP odor, becoming wet at 6.0' bgs. Dark brown ORGANICS, little Silt, non-plastic, moist. [PEAT]	* * * * * * * * * * * * * * * * * * *
- 10-	10 -	3	8-12	3.2	54.1 63.0 16.4		4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	PEAT, non-plastic, faint MGP odor, moist. Brown-gray Sitly fine SAND, trace to medium fine subangular Gravel, slight staining, moderate MGP odor, non-plastic, trace sheen, wet. PEAT, faint to moderate odor, non-plastic, moist. Gray-brown Sitly fine SAND, little fine to medium Gravel, trace staining, moderate MGP odor, non-plastic, wet. PEAT, non-plastic, faint odor, moist.	*
- - - 15-	- - 15 -	4	12-16	3.0	ND ND ND		111111111	No odor below 12' bgs. Brown-pink Silty fine SAND, non-plastic, saturated. Trace Clay above 13.7' bgs.	x x x x x x x x x x x x x x x x x x x
3	BLAS	SLAN	D, B	OUC	K &	LEE, I	NC.	Remarks: NA = Not Available; bgs = below ground surf	ace; ND = Not Detected

Project: 366.56.004 Data File: SB-107.dat Template: J:\Rockware\LogPlot 2001\LogFiles\36656\CEDARST.Idf Date: 1/27/05

Date Start/Finish: 1/25/05 Drilling Company: BBL
Driller's Name: J. Gutkowski
Drilling Method: Push/Percussion
Sampler Size: 2" ID x 4'

Rig Type: Tractor-mounted AMS Powerprobe

Northing: NA Easting: NA

Casing Elevation: NA

Borehole Depth: 16' below grade

Surface Elevation: NA

Descriptions By: David Cornell

Boring ID: SB-108

Client Niagara Mohawk, A National Grid Company

Location: Cedar Street

Oneida, NY

		ь			(mc				
DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
	-								
	_								_
					ND		44444 44444	Brown Silty fine SAND, some fine to coarse subrounded Gravel, little medium Sand, non-plastic, moist.	×××
	_	1	0-4	3.8	ND		7-1-1		× × × Borehole backfilled _ × with native
	_	'	-	3.6	ND				× material.
-	+				DM			Trace Brick fragments.	× × ×
-5	-5-				ND		노푸		
-	-	2	4-8	3.7	ND			Brown SILT and fine SAND, trace medium Sand, non-plastic, wet.	x x x x
	-				ND		444	Dark brown-gray ORGANICS, little Slit, non-plastic, moist. [PEAT]	x^1 x -
	-				ND				×× ××
-	-				ND		* 4 4		x x x
- 10-	10 -	3	8-12	2.4	ND ND		444		
	-				ND		444		x x x x
-	1				ND		1 4 4 4		× × ×
					ND			Brown-pink Silty CLAY, moderately plastic, moist. Brown SILT and fine SAND, non-plastic, saturated.	x x x
_ 15-	15	4	12-16	2.5	ND	 			x x x x x
					ND				×
'						T	0	Remarks: NA = Not Available; bgs = below ground sur	ace; ND = Not Detected
;	01 45	9 44				L .			
	engl	neer	S, SC	ientis	its, ec	LEE, I	nists		

Sampler Size: 2" ID x 4'

Rig Type: Tractor-mounted AMS Powerprobe

Northing: NA Easting: NA Casing Elevation: NA

Borehole Depth: 10.0' below grade

Surface Elevation: NA

Descriptions By: David Comell

Boring ID: SB-109

Client: Niagara Mohawk,

A National Grid Company

Location: Cedar Street

Oneida, NY

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
-	1								
-	-	1	0-4	3.3	ND ND ND		HARARARA HARARAR	Brown fine to medium SAND, trace Organics, non-plastic, moist. Brown Silty fine SAND, some fine to coarse subangular Gravel, trace medium Sand, non-plastic, moist.	X X X X X X With native X X X X X X X X X X X X X X X X X X X
-5	-5 -	2	4-8	3.1	ND ND ND			Brown Silty fine SAND, trace medium Sand and fine Gravel, non-plastic, saturated. Dark gray-brown ORGANICS and SILT, non-plastic, moist. [PEAT]	*
10	10	3	8-10	2.0	ND ND			Refusal at 10.0' bgs. (Possible Wood)	× × × × × ×
- 15-,	15 -								-
6	BLAS	I.AN	D, B	OUC	3 K & ts, ec	EE, II	€ NC.	Remarks: NA = Not Available; bgs = below ground surf	ace; ND = Not Detected

Sampler Size: 2" ID x 4'

Rig Type: Tractor-mounted AMS Powerprobe

Northing: NA

Easting: NA
Casing Elevation: NA

Borehole Depth: 16' below grade

Surface Elevation: NA

Descriptions By: David Cornell

Boring ID: SB-110

Client: Niagara Mohawk,

A National Grid Company

Location: Cedar Street

Oneida, NY

DЕРТН	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
	-	1	0-4	3.2	ND ND			Brown fine to medium SAND, little Organics at surface, non-plastic, moist.	X X X X X X X Borehole backfilled X With native X Material.
<u> </u> -	+	_			ND				x x x x x x
-5 -: -	5 -	2	4-8	3.5	ND ND ND)	k	Dark brown-gray Silty fine SAND and CINDERS, little to trace Stag and Brick fragments, non-plastic, saturated. Dark brown-gray SILT and ORGANICS, non-plastic, moist. [PEAT]	x x x x x x x x x x
-	+			_	ND ND		7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		x x x x x
10- <i>10</i>	0	3	8-12	2.2	DN D		4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		x x x x x x
- L					ДИ		<i>*</i>	No recovery. Wood Stuck in shoe.	X X X X X X X X X X
15- <i>15</i>	5 -	4	12-16	NA	NA 	l I			
	I	7	7		3		6	Remarks: NA = Not Available; bgs = below ground sur	

BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

Sampler Size: 2" ID x 4'

Rig Type: Tractor-mounted AMS Powerprobe

Northing: NA

Easting: NA
Casing Elevation: NA

Borehole Depth: 16' below grade

Surface Elevation: NA

Descriptions By: David Cornell

Boring ID: SB-111

Client: Niagara Mohawk,

A National Grid Company

Location: Cedar Street

Oneida, NY

DEPTH ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
-	1	0-4	3.3	ND ND ND ND		44444444444 444444444	Brown Silty fine SAND, trace Organics, non-plastic, moist. Brown-gray Silty medium to fine SAND, little Brick and Cinders, trace coarse to fine Gravel, Coal and Ash, non-plastic, moist.	X X X X X X X X X X X With native material. X X X X X X
-5 -5 - -	2	4-8	2.4	ND ND ND ND		<u> 1997</u> 19971999999	Little Ash and Cinders, non-plastic, moist below 5.0' bgs.	x x x x x x x x x x x x x x x x x x x
- 10- <i>10</i> -	3	8-12	2.9	ND ND		- F F F F F F F F F F F F F F F F F F F	Dark brown ORGANICS and SILT, non-plastic, moist. [PEAT]	× × × × × × × × × × × × × × × × × × ×
- - - 15- <i>15</i> -	4	12-16	3.3	ND ND ND			Brown-pink SILT and CLAY, moderately plastic, moist. Decreased Clay content with depth.	x x x x x x x x x x x x x x x x x x x

BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

Sampler Size: 2" ID x 4'

Rig Type: Tractor-mounted AMS Powerprobe

Northing: NA Easting: NA

Casing Elevation: NA

Borehole Depth: 15.1' below grade

Surface Elevation: NA

Descriptions By: David Cornell

Boring ID: SB-112

Client: Niagara Mohawk,

A National Grid Company

Location: Cedar Street

Oneida, NY

=									
рертн	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
-	-								
_	-	1	0-4	3.2	ND ND		4444444 444444	Brown Silty fine SAND, trace fine to coarse Gravel, trace Organics at surface, non-plastic, moist.	× x x x x x x x x x with native
- - -	-				ND ND	 	1344444 144444	Dark brown-gray Silty fine SAND, some Cinders and Ash, trace Brick and Coal, non-plastic, moist.	x material.
5 - -	-5-	2	4-8	3.0	ND ND ND) } }		Brown fine to medium SAND, trace fine Gravel and coarse Sand, non-plastic, saturated.	
- 10-	10 -	3	8-12	3.8	ND ND		7	Dark brown ORGANICS and SILT, non-plastic, moist. [PEAT]	
-				_	ND ND				*
-	-	4	12-16	3.1	ND		77 77 77 77 77 77	David and Cliff	
- 15-	15 -				ND			Brown-gray SILT, some Clay, little Organics, slightly plastic, moist.	
	BLAS	LAN	D. B	OUC	S K & I	LEE, II	NC.	Remarks: NA = Not Available; bgs = below ground surf	ace; ND = Not Detected