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engineers, scientists, economists

Transmitted Via Federal Express

April 17, 2006

Mr. Bert W. Finch
New York State Electric & Gas Corporation
Corporate Drive, Kirkwood Industrial Park
P.O. Box 5227
Binghamton, New York 13902-5227

Re: Oneonta Former MGP Site
Pre-Design Investigation Summary Report
BBL Project #: 0130.13042 #5

Dear Mr. Finch:

This letter report summarizes the work conducted and presents the data collected during the Pre-Design Investigation (PDI) conducted at the Western Plant Area of the former Manufactured Gas Plant (MGP) site located in Oneonta, New York. The PDI was conducted from November 9 to December 23, 2005 in accordance with the New York State Department of Environmental Conservation- (NYSDEC-) approved PDI Work Plan dated October 20, 2005. The purpose of the PDI was to obtain additional information required for design of the NYSDEC-selected remedy as presented in the March 2005 Record of Decision (ROD) for the site. The PDI activities were conducted in the Mill Race Creek and Western Plant Area (i.e., portion of former MGP property located west of James Georgeson Avenue), and included the following tasks:

1. Geotechnical Investigation;
2. Nonaqueous Phase Liquid (NAPL) Investigation Beneath Mill Race Creek;
3. Groundwater Vertical Gradient Evaluation Beneath Mill Race Creek;
4. Subsurface Soil Investigation near the Existing 30-inch Diameter Sanitary Sewer; and
5. Management of Investigation-Derived Wastes (IDW).

Tasks 1 through 5 are described below.

Task 1 - Geotechnical Investigation

Field activities associated with the geotechnical investigation were conducted from November 9 through December 7, 2005 and consisted of drilling 12 geotechnical borings. The borings were drilled and sampled in accordance with the PDI Work Plan. Eleven of the geotechnical soil borings (BH-1 through BH-9, BH-11, and BH-12) were drilled along the perimeter of the Western Plant excavation area, and one boring (BH-13) was drilled in the central portion of the excavation area, as shown on Figure 1 (Boring Location Plan). Geotechnical boring BH-10 was originally proposed to be drilled behind the former Air

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Sparge/Soil Vapor Extraction (SVE) Treatment Building located on the western portion of the parcel; however, due to the steep slope of the bank behind the building, this boring could not be drilled. BBL's geotechnical engineer evaluated the need for this boring and, based on conditions encountered in completed borings (including those from nearby boring SB-305), determined that BH-10 could be eliminated from the program. At the request of New York State Electric & Gas Corporation (NYSEG), BBL field personnel used NYSEG's Global Positioning System (GPS) equipment to horizontally locate the new borings. Ground surface elevations at each of the borings were not determined. Boring locations and ground surface elevations should be determined by a surveyor prior to design of the excavation support system that will be needed to implement the selected remedy. According to NYSEG, the horizontal accuracy of the GPS equipment could be expected to be between 1 to 3 meters. The approximate locations of the borings are shown on Figure 1.

SJB Services, Inc. (SJB) was subcontracted by BBL to perform the drilling associated with the PDI. The borings were drilled using 4.25-inch I.D. hollow-stem augers (HSAs) to an average depth of approximately 45 feet below ground surface (bgs). Standard penetration tests (SPTs) were performed in each boring according to ASTM Method 1586. SPTs were conducted at standard (i.e., nominal 5-foot) intervals from 0 to approximately 15 feet below ground surface (bgs), and then continuously from approximately 15 feet bgs to the bottom of the boring. SPT samples were collected and visually classified for engineering purposes by BBL.

A total of 38 soil samples were selected for shipment to Parratt Wolff, Inc. (Parratt Wolff) for analysis of the geotechnical parameters specified in the PDI Work Plan. Based on the soil types encountered, BBL's geotechnical engineer determined that Shelby Tube samples were not necessary. The geotechnical laboratory test data are provided in Attachment A. Upon receipt from the laboratory, the geotechnical test data were used to adjust and refine the visual soil classifications contained on the boring logs, which are provided in Attachment B.

BBL prepared two geologic cross-sections through the Western Plant excavation area. Figure 2 depicts the cross-section transects, while Figures 3 and 4 present the cross-sections.

Task 2 – Nonaqueous Phase Liquid (NAPL) Investigation Beneath Mill Race Creek

From December 7 through 23, 2005, a total of seven borings were drilled to better delineate the vertical and horizontal extent of NAPL beneath Mill Race Creek. As previously described in Task 1, BBL field personal used NYSEG's GPS to locate the new borings. Five of the borings (SB-301, SB-302, SB-303, SB-304, and SB-305) were drilled to the top of the silt-and-fine-sand confining layer (ranging from 10 to 14 feet below the creek bed). Based on the observed presence of NAPL in borings SB-301, SB-303, and SB-304, two additional delineation borings (SB-310 and SB-311) were drilled. Boring SB-310 was drilled to a depth of 27 feet below the creek bed to investigate the presence/absence of NAPL, as well as to characterize geological conditions at deeper intervals beneath the creek. Boring SB-310 was selected as the deeper creek boring due to the access to the shoreline at that location. NAPL was not observed at these two borings. The locations of the creek borings and the locations of observed NAPL are shown on Figure 5. NAPL was observed in borings SB-301 (at 6 to 8 feet bgs), SB-303 (at 4 to 8 feet bgs), and SB-304 (at 8 to 10 feet bgs).

The borings were drilled using a tripod-mounted drilling rig using the "drive-and-wash" method. Due to the amount of water in Mill Race Creek during drilling, the tripod-mounted drill rig was mounted on a floating barge. Continuous split spoon sampling was conducted Borings were drilled and sampled in

accordance with the Field Sampling Plan (FSP) and Quality Assurance/Sampling and Analysis Project Plan (QA/SAPP). Each soil sample was visually characterized for soil type, grain size, moisture, and for evidence of NAPL. A portion of each sample was placed in a container for headspace screening using a field photoionization detector (PID). One sample was collected from each soil boring (from the interval that contained the highest headspace screening result), submitted to Severn Trent Laboratories (STL), located in Amherst, New York, and analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX) and polycyclic aromatic hydrocarbons (PAHs). The analytical results are summarized in Table 1.

Task 3 - Groundwater Vertical Gradient Investigation Beneath Mill Race Creek

In accordance with the PDI Work Plan, three piezometers (PZ-1-05, PZ-2-05, and PZ-3-05) were installed into the Mill Race Creek bed to evaluate the vertical gradient of groundwater beneath the creek. The piezometers were installed at the locations of soil borings SB-305, SB-303, and SB-310, respectively, as shown on Figure 1.

Each of the 2-inch diameter piezometers was constructed with a black steel pipe, a stainless steel well point, and a screen approximately 1.2 feet in length. The bottom of each screen is 0.5-foot above the bottom of the well point. The screen in PZ-2-05 (6.8 to 8.0 feet bgs) was placed at a depth just above the surface of the silt-and-fine-sand confining layer. The screen in PZ-3-05 (8.8 to 10.0 feet bgs) was placed just below the surface of this layer. The screen in PZ-1-05 (5.8 to 7.0 feet bgs) was placed at a depth approximately half the distance from the surface water to the confining layer. The construction details of the piezometers are presented on the boring logs (Attachment B).

After installation, water levels were collected from the three piezometers on December 23, 2005. Collection of water levels from the piezometers will continue during three additional site visits that will be conducted every other month (February, April, and June 2006). A summary of the groundwater vertical gradient data will be submitted under separate cover as an addendum to this letter report.

Task 4 - Subsurface Soil Investigation Near the Existing 30-inch Diameter Sanitary Sewer

On December 7 and 8, 2005, BBL drilled three soil borings (SB-306, SB-307, and SB-308) near the 30-inch diameter subsurface sanitary sewer that crosses the creek near the southwest portion of the Western Plant Area. Before drilling the borings, NYSEG's excavation contractor, Sevenson Environmental Services, Inc., confirmed the location of the 30-inch sanitary sewer pipe using an excavator. The objective of this task was to assess whether NAPL existed near the sewer pipe and if the presence of the pipe will affect the location/design of the sheetpile.

Based on the location of the sanitary sewer, the locations for the soil borings were selected. Each of the soil borings was located approximately three to five feet from the eastern edge of the sanitary sewer, as shown on Figure 1. The attached figures have been modified to indicate that sheetpile will not be installed on the northwestern side of the sanitary sewer. Soil boring SB-309, as shown in the PDI Work Plan, could not be drilled because of lack of access to the proposed location. The NYSDEC onsite representative concurred that soil borings SB-306, SB-307, and SB-308 provided sufficient information regarding the extent of NAPL in the area proximate to the 30-inch diameter sanitary sewer pipeline, and that SB-309 was not required. Based on the boring data and observations made during the investigation, the onsite NYSDEC representative concluded that, in terms of the remedial design, excavation would not be required on the northwestern side of the sanitary sewer (i.e., the side of the pipe opposite the site).

Each of the soil borings was drilled to the top of the silt-and-fine-sand confining layer. The borings were drilled using 4.25-inch I.D. HSAs. The borings were drilled and sampled in accordance with the FSP and QA/SAPP. Soil samples were collected continuously at 2-foot intervals. Each soil sample was visually characterized for soil type, grain size, moisture, and for evidence of NAPL. A portion of each sample was placed in a container for headspace screening using a field PID. The soil sample with the highest headspace reading from each boring was analyzed for BTEX and PAHs. The analytical data are summarized in Table 1. The boring logs are provided in Attachment B. As previously discussed, BBL field personal used NYSEG's GPS to locate the new borings.

Task 5 - Management of Investigation-Derived Wastes (IDW)

IDW were managed by containing them and staging them in the Western Plant Area. IDW consisted of drill cuttings, drilling fluids (water pumped from "drive-and-wash" borings), and decontamination water. The drilling fluids and decontamination water were contained in 55-gallon drums. Drill cuttings were contained in a polyethylene-lined storage area located in the Western Plant Area and covered with polyethylene sheeting. NYSEG disposed of the IDW along with the soils and fluids generated during the Eastern Plant Area remedial activities, which were occurring during the PDI. Those remedial activities are described in the *Remedial Design Work Plan For Removal and Off-Site Disposal of Coal Tar Impacted Soil On the Eastern Plant Area*, prepared by NYSEG and dated May 2005.

Please feel free to contact me at (585) 385-0090, extension 34 with any questions or comments that you may have.

Sincerely,

BLASLAND, BOUCK & LEE, INC.

Bruce W. Ahrens/jlc

Bruce W. Ahrens
Associate, Senior Project Manager

JLW/ams
Attachments

cc: Mr. Frederick J. Kirschenheiter, P.E., Blasland, Bouck & Lee, Inc.
Ms. Margaret A. Carrillo-Sheridan, P.E., Blasland, Bouck & Lee, Inc.
Mr. Keith A. White, Blasland, Bouck & Lee, Inc.
Mr. Douglas L. Musser, P.G., Blasland, Bouck & Lee, Inc.
Mr. Douglas Cowin, Blasland, Bouck & Lee, Inc.

Table

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TABLE 1
ONEONTA FORMER MGP SITE
ONEONTA, NEW YORK

PRE-DESIGN INVESTIGATION ANALYTICAL RESULTS

Sample ID:		OGBOBM68301	OGBOBM68302	OGBOBM68303	OGBOBM810304	OGBOBM810305	OGBOBM810306	OGBOBM810307	OGBOBM810308	OGBOBM68310	OGBOBM810311
Location ID:		SB-301	SB-302	SB-303	SB-304	SB-305	SB-306	SB-307	SB-308	SB-310	SB-311
Sample Depth(Feet):		6 - 8	6 - 8	6 - 8	8 - 10	8 - 10	8 - 10	8 - 10	8 - 10	6 - 8	8 - 10
Date Collected:	Units	12/15/05	12/14/05	12/21/05	12/22/05	12/22/05	12/07/05	12/08/05	12/08/05	12/19/05	12/23/05
BTEX by EPA Method 8260											
Benzene	mg/kg	0.044	0.002 J	0.004 J	0.44 DJ	0.005 U	0.005 UJ	0.23 EJ	0.11	0.002 J	0.003 J
Ethylbenzene	mg/kg	0.34 D	0.006	0.087	1.9 D	0.005 U	2.1 D	12 DJ	0.16	0.007	0.008
Toluene	mg/kg	0.002 J	0.006 U	0.002 J	0.014	0.005 U	0.004 J	0.031 J	0.006	0.005 U	0.002 J
Total Xylenes	mg/kg	0.16	0.004 J	0.092	0.54	0.016 U	4.2 D	5.1 DJ	0.29	0.003 J	0.005 J
Total BTEX	mg/kg	0.546 J	0.012 J	0.185 J	2.89 J	ND	6.3 J	17 J	0.566	0.012 J	0.018 J
PAHs by EPA Method 8270											
2-Methylnaphthalene	mg/kg	0.55 J	0.12 J	1	1.5	0.36 U	3.4	5.9 J	6 J	0.36 U	0.032 J
Acenaphthene	mg/kg	0.99 J	0.078 J	0.83	0.46	0.36 U	4.1 J	29	38	0.025 J	0.057 J
Acenaphthylene	mg/kg	0.84 J	0.075 J	0.37 J	0.63	0.36 U	1.1	6.8 J	4.3 J	0.36 U	0.36 U
Anthracene	mg/kg	0.61 J	0.1 J	1.1	0.65	0.034 J	3	14	17	0.022 J	0.36 U
Benzo(a)anthracene	mg/kg	3.1	0.075 J	1.4	0.35 J	0.11 J	1.9	10	12	0.036 J	0.36 U
Benzo(a)pyrene	mg/kg	2.2	0.078 J	0.88	0.28 J	0.1 J	1.7	9	9	0.023 J	0.36 U
Benzo(b)fluoranthene	mg/kg	1.6 J	0.055 J	0.94	0.26 J	0.17 J	1.7	9.6	9.8	0.031 J	0.36 U
Benzo(ghi)perylene	mg/kg	1 J	0.028 J	0.44	0.12 J	0.068 J	0.65	4.8 J	4.5 J	0.36 U	0.36 U
Benzo(k)fluoranthene	mg/kg	0.64 J	0.35 U	0.96	0.076 J	0.17 J	1.7	9.9	10	0.36 U	0.36 U
Chrysene	mg/kg	2.7	0.059 J	1.4	0.27 J	0.11 J	1.6	9	8.8	0.035 J	0.36 U
Dibenzo(a,h)anthracene	mg/kg	0.25 J	0.35 U	0.13 J	0.041 J	0.02 J	0.16 J	0.93 J	1.1 J	0.36 U	0.36 U
Dibenzofuran	mg/kg	0.11 J	0.023 J	0.068 J	0.12 J	0.36 U	0.25 J	1.8 J	2.3 J	0.36 U	0.36 U
Fluoranthene	mg/kg	2.4	0.16 J	2	0.78	0.29 J	4.8	24	25	0.098 J	0.36 U
Fluorene	mg/kg	0.66 J	0.1 J	0.45	0.63	0.022 J	2.9	16	19	0.028 J	0.031 J
Indeno(1,2,3-cd)pyrene	mg/kg	0.71 J	0.025 J	0.32 J	0.098 J	0.058 J	0.53	3.5 J	3.4 J	0.36 U	0.36 U
Naphthalene	mg/kg	4.2	0.21 J	2.7	2.6	0.027 J	7 D	51 J	2.3 J	0.22 J	0.17 J
Phenanthrene	mg/kg	1.2 J	0.38	2.6	1.9	0.13 J	12 D	53	60	0.072 J	0.026 J
Pyrene	mg/kg	3.5	0.19 J	2.4	0.86	0.22 J	8 DJ	36	36	0.078 J	0.36 U
Total PAHs	mg/kg	27.3 J	1.76 J	20 J	11.6 J	1.53 J	56.5 J	294 J	269 J	0.668 J	0.316 J

Notes:

1. Samples collected by Blasland, Bouck & Lee, Inc.
2. BTEX = benzene, toluene, ethylbenzene, and xylene compounds.
3. PAHs = Polycyclic aromatic hydrocarbons.
4. ND = Not detected.
5. U indicates the compound was analyzed for but not detected at concentrations greater than the associated laboratory detection limit
6. J indicates an estimated value.
7. D indicates compound identified in an analysis at the secondary dilution factor.
8. E indicates compound quantified above the calibration range.
9. Laboratory analysis conducted by Severn Trent Laboratories located in Amherst, New York.
10. mg/kg = milligrams per kilograms

Figures

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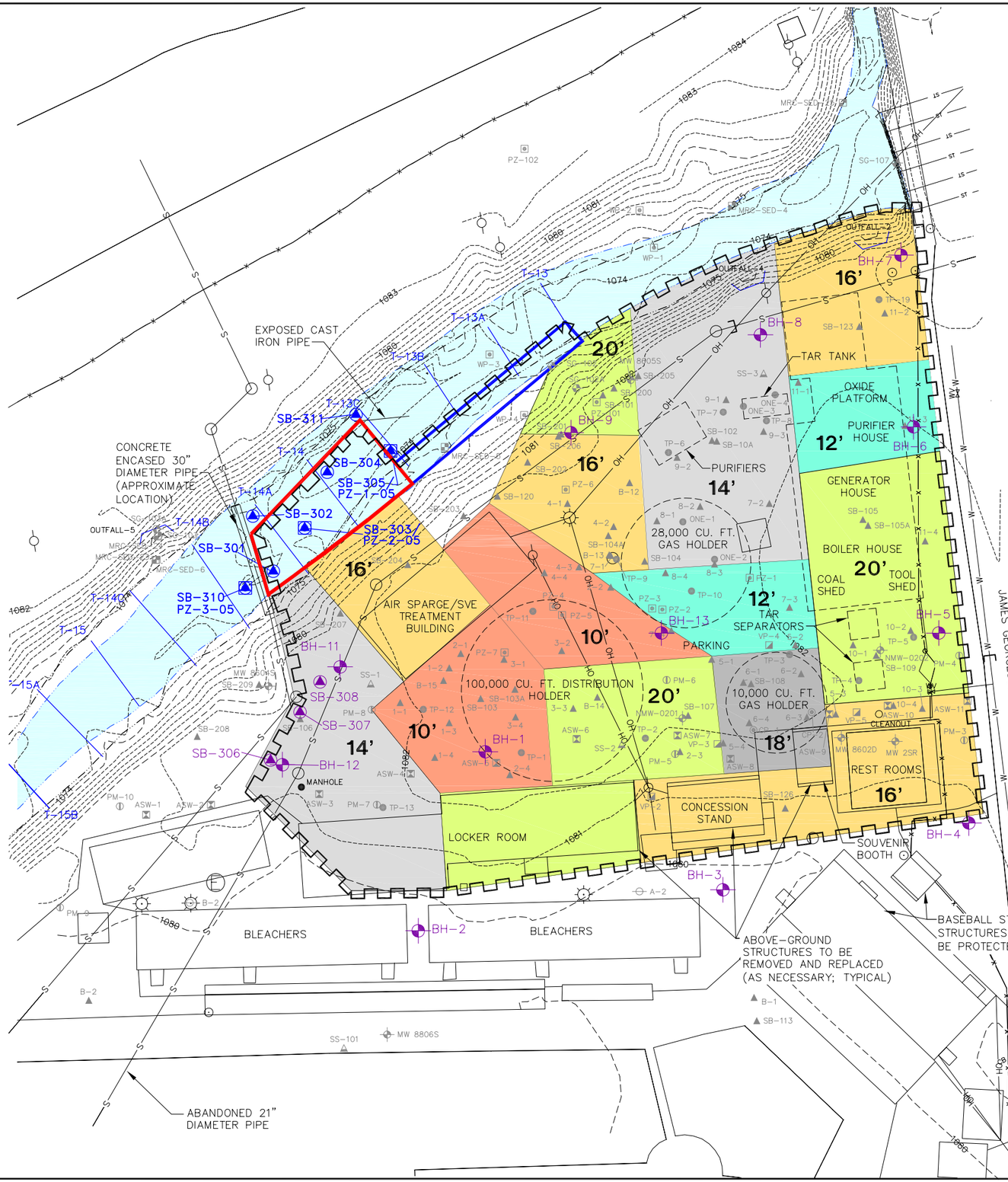

LEGEND:

- SOIL BORING AND PIEZOMETER LOCATION (2005)
- BH-1 — GEOTECHNICAL SOIL BORING (2005)
- SB-305 — ENVIRONMENTAL SOIL BORING (2005)
- MW 95101S — MONITORING WELL
- PM-6 — PERFORMANCE MONITORING WELL
- PZ-3 — PIEZOMETER
- B-5 — SOIL BORING
- A-1 — UTILITY POLE BORING
- SS-101 — SURFACE SOIL SAMPLE
- TEST PIT
- MRC-SED-5 — SEDIMENT SAMPLE
- CP-1 — COMBINATION POINT
- VP-4 — VAPOR POINT
- ASW-13 — AIR SPARGE WELL
- SG-109 — STAFF GAUGE
- FORMER MGP STRUCTURE
- LIMITS OF SUBSURFACE SOURCE MATERIAL
- APPROXIMATE LIMITS OF FORMER MGP PROPERTY BOUNDARY
- 10 FOOT EXCAVATION DEPTH
- 12 FOOT EXCAVATION DEPTH
- 14 FOOT EXCAVATION DEPTH
- 16 FOOT EXCAVATION DEPTH
- 18 FOOT EXCAVATION DEPTH
- 20 FOOT EXCAVATION DEPTH
- APPROXIMATE LOCATION OF TEMPORARY SHEETPILE (PERIMETER ONLY)
- REMOVAL AREA
- T-13 — TRANSECT
- 8.5' REMOVAL/ENGINEERED BACKFILL AREA
- 2.5' REMOVAL/ENGINEERED BACKFILL AREA

NOTES:

1. BASE MAP PROVIDED IN ELECTRONIC FORMAT FROM NYSEG, DRAWING TITLE "MONITORING WELL LOCATIONS ONEONTA FORMER MGP SITE AND SURROUNDING AREA", OTSEGO COUNTY, NEW YORK", AT A SCALE OF 1"=60', DATED 2/18/02.
2. BASE MAP POSITIONED IN STATE PLANE: NEW YORK CENTRAL 3102, HORIZONTAL DATUM: NAD 83 BY NYSEG.
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5. THE LOCATION OF THE TEMPORARY SHEETPILE IS CONCEPTUAL IN NATURE. THE ACTUAL SHEETPILE LIMITS WILL BE DETERMINED BASED ON DESIGN ACTIVITIES.

0 20' 40'
GRAPHIC SCALE

NYSEG
ONEONTA MGP SITE
ONEONTA, NEW YORK

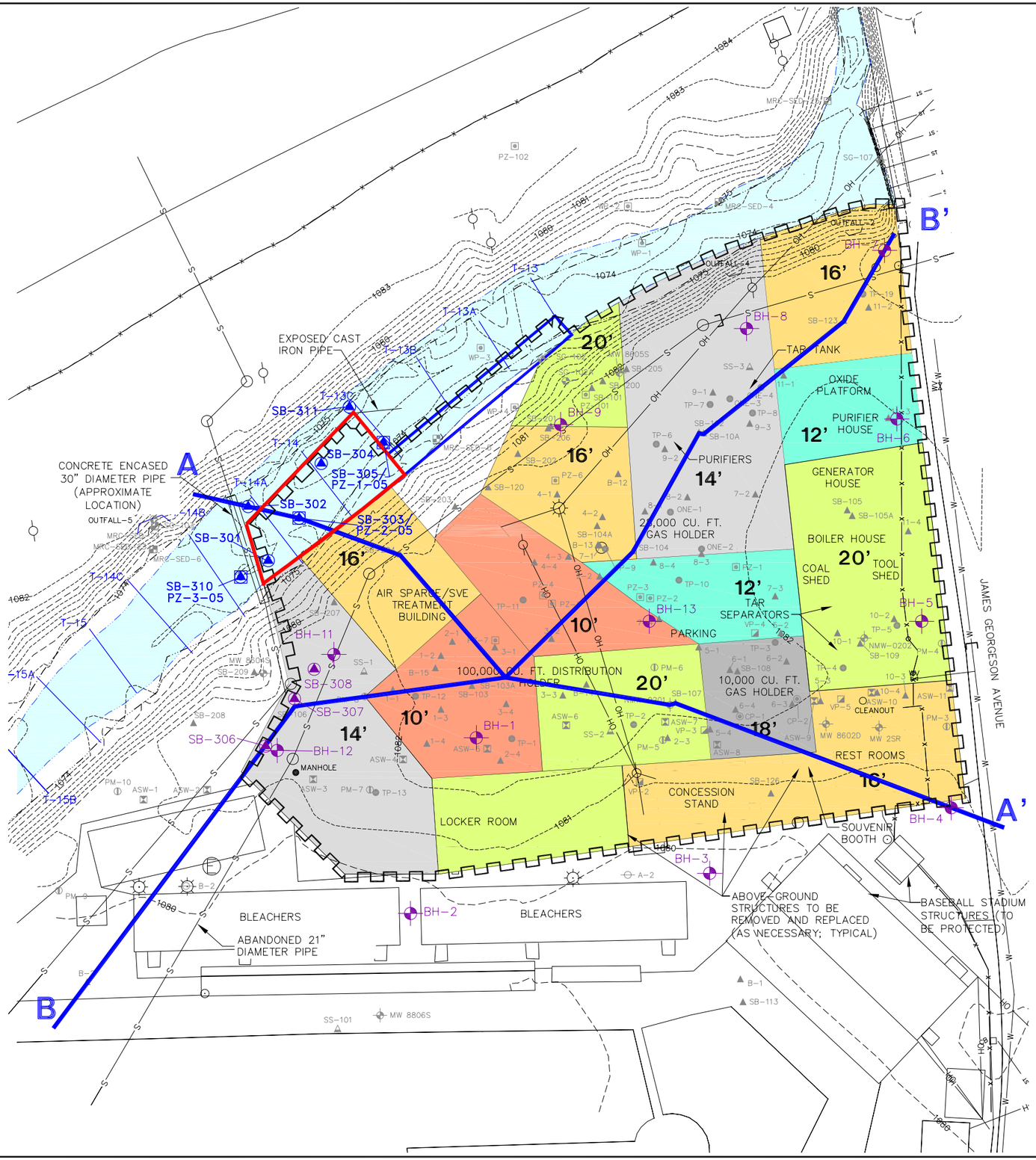
PRE-DESIGN INVESTIGATION REPORT

BORING LOCATION PLAN

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

FIGURE 1

X: 13042X01, X03, X04.DWG
L: ON=*, OFF=REF*
P: PAGESET/PLT-DL
4/17/06 SYR-85-KLS AMS PRO
13042016/13042B01.DWG



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GRAPHIC SCALE

X: 13042X01, X03, X04.DWG
L: ON=*, OFF=REF*
P: PAGESET/PLT-DL
4/17/06 SYR-85-KLS AMS PRO
13042016/13042B03.DWG

NYSEG
ONEONTA MGP SITE
ONEONTA, NEW YORK
PRE–DESIGN INVESTIGATION REPORT

GEOLOGIC CROSS SECTIONS-TRANSECT LOCATIONS

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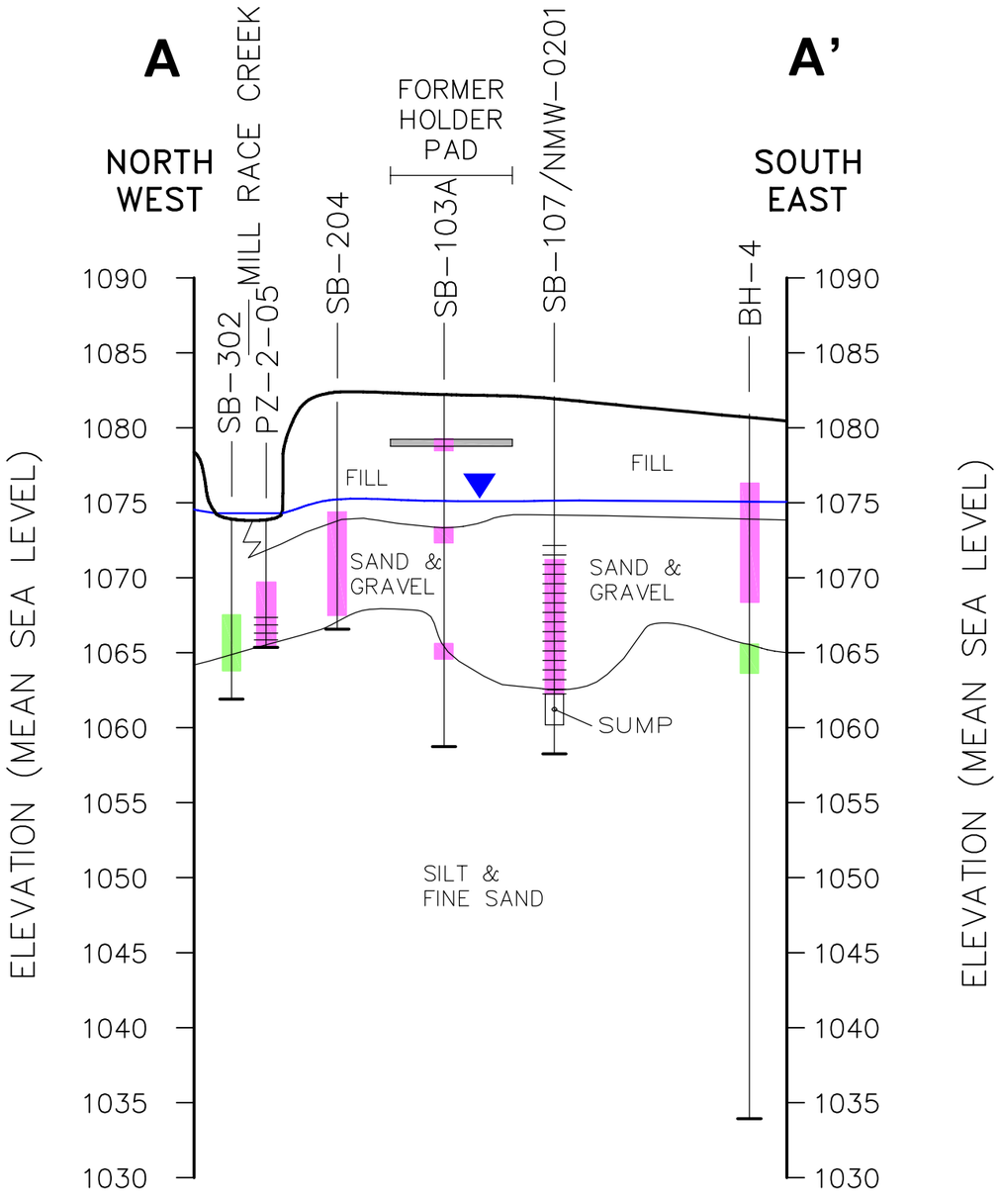
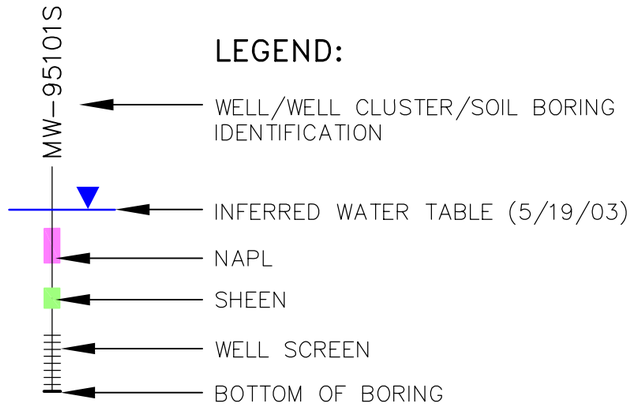
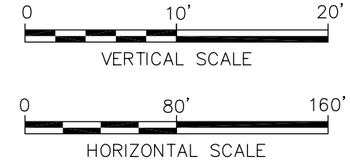
FIGURE 2





NOTE:

1. STRATIGRAPHIC CONTACTS INFERRED FROM AVAILABLE SUBSURFACE LOGS AND THE SILT AND FINE SAND ELEVATION CONTOUR MAP PRESENTED AS FIGURE 4 OF THE SUPPLEMENTAL REMEDIAL INVESTIGATION REPORT (MAY 2004) PREPARED BY BBL.
2. GROUNDWATER ELEVATION DATA COLLECTED ON MAY 19, 2003.
3. VERTICAL DATUM = NGVD 1929; HORIZONTAL DATUM = NAD 1983.



NYSEG
ONEONTA MGP SITE
ONEONTA, NEW YORK
PRE-DESIGN INVESTIGATION REPORT

GEOLOGIC CROSS SECTION A-A'

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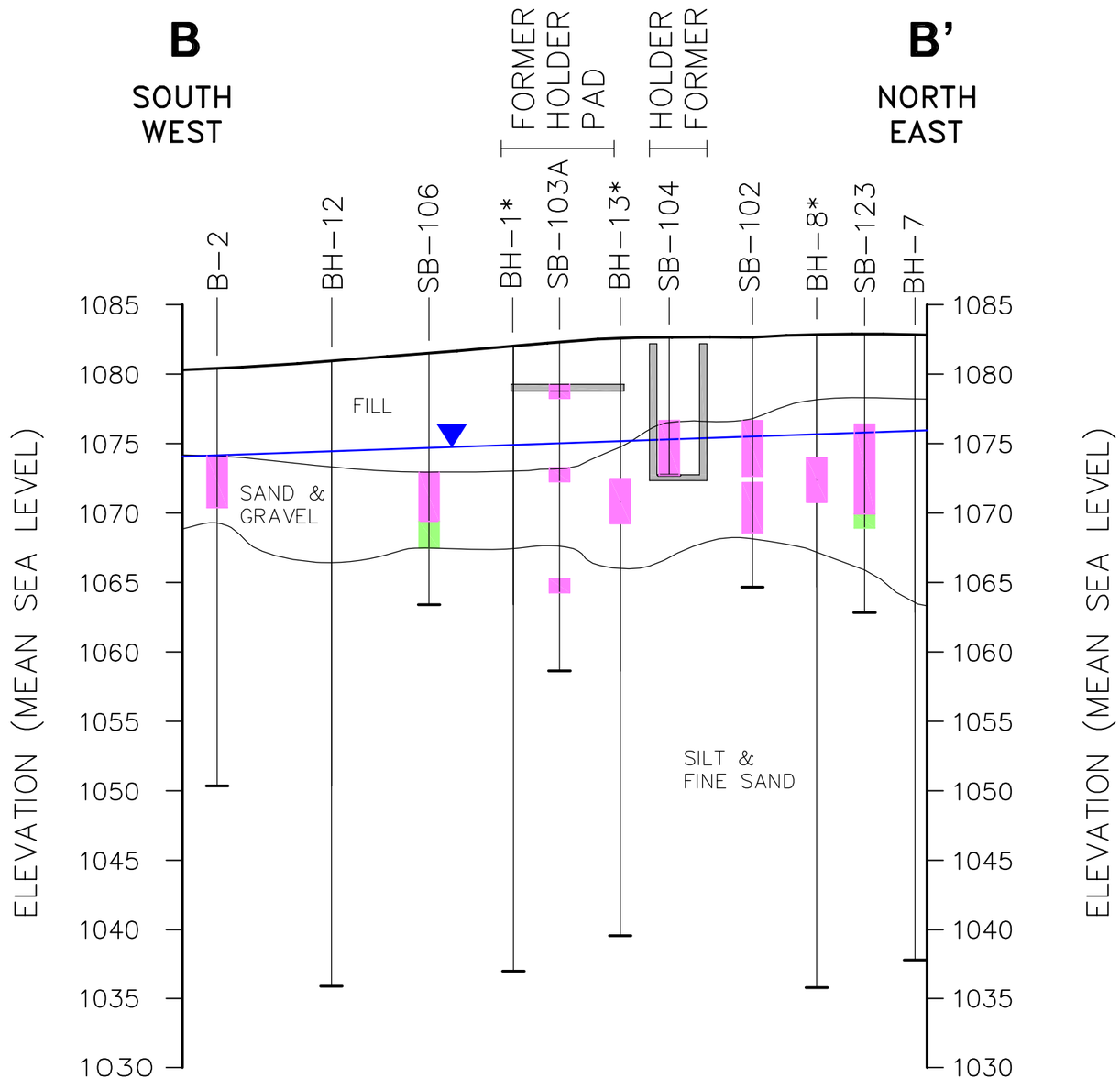
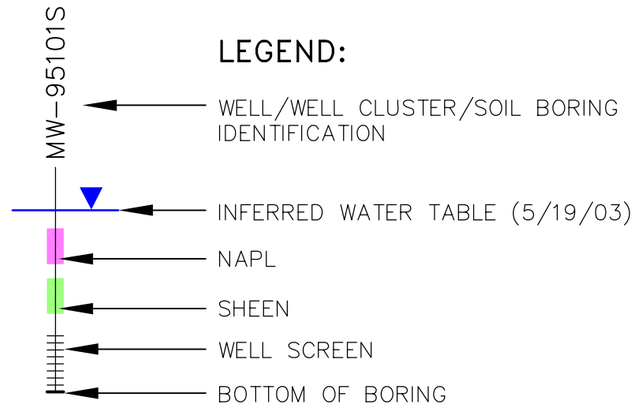
FIGURE 3

L: ON= * OFF= REF*
P: PAGESET/PLT-BL
4/17/06 SYR-85-RCA AMS PRO
13042016/13042V02.DWG





NOTES:

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2. GROUNDWATER ELEVATION DATA COLLECTED ON MAY 19, 2003.
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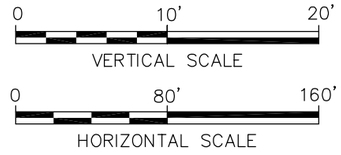
4. *BORING BH-1 PROJECTED 20' NORTHWESTWARD
   *BORING BH-13 PROJECTED 25' NORTHWESTWARD
   *BORING BH-8 PROJECTED 20' SOUTHEASTWARD



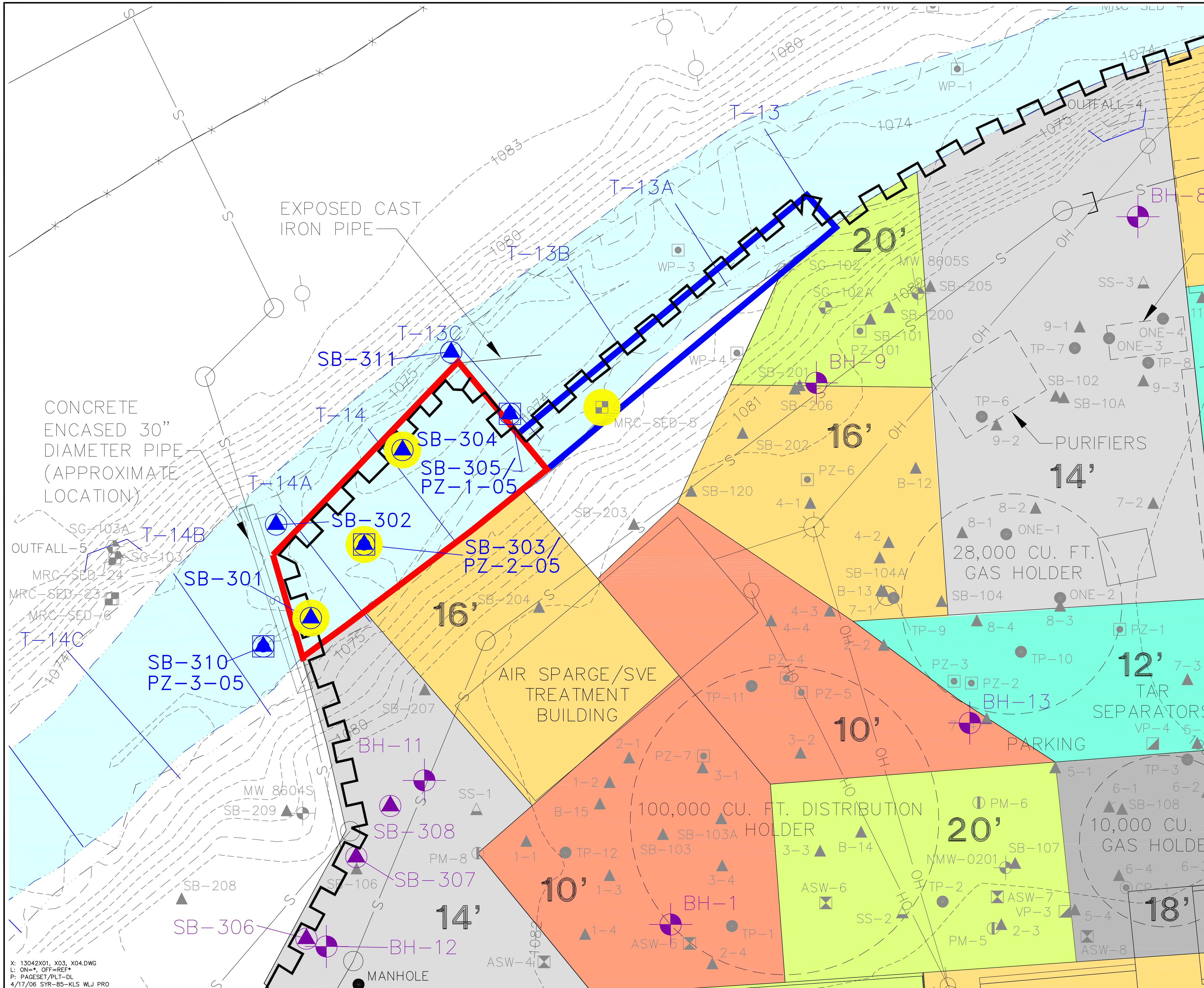
NYSEG
ONEONTA MGP SITE
ONEONTA, NEW YORK
PRE-DESIGN INVESTIGATION REPORT

GEOLOGIC CROSS SECTIONS B-B'

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

FIGURE 4

L: ON= * OFF= REF*
P: PAGESET/PLT-BL
4/17/06 SYR-85-RCA AMS PRO
13042016/13042V03.DWG



X: 13042X01, X03, X04.DWG
L: ON=*, OFF=REF*
P: PAGESET/PLT-DL
4/17/06 SYR-85-KLS WLJ PRO
13042016/13042C01.DWG

LEGEND:

- LOCATION OF OBSERVED NAPL
- SOIL BORING AND PIEZOMETER LOCATION (2005)
- BH-1 GEOTECHNICAL SOIL BORING (2005)
- SB-305 ENVIRONMENTAL SOIL BORING (2005)
- MW 95101S MONITORING WELL
- PM-6 PERFORMANCE MONITORING WELL
- PZ-3 PIEZOMETER
- B-5 SOIL BORING
- A-1 UTILITY POLE BORING
- SS-101 SURFACE SOIL SAMPLE
- TEST PIT
- MRC-SED-5 SEDIMENT SAMPLE
- CP-1 COMBINATION POINT
- VP-4 VAPOR POINT
- ASW-13 AIR SPARGE WELL
- SG-109 STAFF GAUGE
- FORMER MGP STRUCTURE
- LIMITS OF SUBSURFACE SOURCE MATERIAL
- APPROXIMATE LIMITS OF FORMER MGP PROPERTY BOUNDARY
- 10 FOOT EXCAVATION DEPTH
- 12 FOOT EXCAVATION DEPTH
- 14 FOOT EXCAVATION DEPTH
- 16 FOOT EXCAVATION DEPTH
- 18 FOOT EXCAVATION DEPTH
- 20 FOOT EXCAVATION DEPTH
- APPROXIMATE LOCATION OF TEMPORARY SHEETPILE (PERIMETER ONLY)
- REMOVAL AREA
- T-13 TRANSECT
- 8.5' REMOVAL/ENGINEERED BACKFILL AREA
- 2.5' REMOVAL/ENGINEERED BACKFILL AREA

NOTES:

1. BASE MAP PROVIDED IN ELECTRONIC FORMAT FROM NYSEG, DRAWING TITLE "MONITORING WELL LOCATIONS ONEONTA FORMER MGP SITE AND SURROUNDING AREA", OTSEGO COUNTY, NEW YORK", AT A SCALE OF 1"=60', DATED 2/18/02.
2. BASE MAP POSITIONED IN STATE PLANE: NEW YORK CENTRAL 3102, HORIZONTAL DATUM: NAD 83 BY NYSEG.
3. LOCATIONS OF BORINGS AND PIEZOMETERS INSTALLED IN 2005 WERE LOCATED USING GPS. THE HORIZONTAL ACCURACY OF THE GPS EQUIPMENT COULD BE EXPECTED TO BE 1 TO 3 METERS.
4. THE VERTICAL AND HORIZONTAL EXCAVATION LIMITS SHOWN ARE CONCEPTUAL IN NATURE, AND ARE FOR COMPARITIVE PURPOSES ONLY. THE ACTUAL ACHIEVABLE EXCAVATION LIMITS WILL BE DETERMINED BASED ON DESIGN ACTIVITIES.
5. THE LOCATION OF THE TEMPORARY SHEETPILE IS CONCEPTUAL IN NATURE. THE ACTUAL SHEETPILE LIMITS WILL BE DETERMINED BASED ON DESIGN ACTIVITIES.

0 10' 20'
GRAPHIC SCALE

NYSEG
ONEONTA MGP SITE
ONEONTA, NEW YORK
PRE-DESIGN INVESTIGATION REPORT

LOCATION OF OBSERVED NAPL BENEATH MILL RACE CREEK

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

FIGURE
5

Attachment A

Geotechnical Laboratory Data

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

p-w labs

PW LABORATORIES,INC.
P.O. BOX 56, 5879 FISHER ROAD, EAST SYRACUSE, NY 13057
315-437-1420 • 866-7PW-LABS • Fax 315-437-1752

January 30, 2006

Mr. Phil Bergmeier
Blasland Bouck & Lee, Inc.
6723 Towpath Road
P.O. Box 66
Syracuse, New York 13214-0066

Re: L-06003
Laboratory Testing
NYSEG
Oneonta Former MGP Site
Oneonta, New York
File #0130.13042 #1

Dear Mr. Bergmeier:

Enclosed are the results of laboratory testing performed at your request on thirty-eight jar soil samples delivered to our laboratory on January 6, 2006 for the above referenced project. Results include:

1.	Natural Moisture Content ASTM D2216 Laboratory I.D. #19880- 19890, 19892-19901, 19903-19917	32 each
2.	Sieve Analysis ASTM D422 & D1140 Laboratory I.D. #19880- 19896, Composite 19897-19899, 19900-19903, 19906-19914	31 each
3.	Hydrometer Anaylsis ASTM D422 Laboratory I.D. #19882, 19883, 19885, 19886, 19888, 19889, 19891, 19893, 19895, Composite 19897-19899, 19900, 19902, 19903, 19906, 19907, 19910, 19912, 19913, 19914	19 each
4.	Atterberg Limits ASTM D4318 Laboratory I.D. #19882, 19883, 19891, 19902, 19906, 19914	6 each
5.	Specific Gravity ASTM D854 Laboratory I.D. #19882, 19889, 19892, Composite 19897-19899, Composite 19904-19905, 19910, Composite 19915-19917	7 each
6.	Hydraulic Conductivity- Flexible Wall ASTM D5084 Laboratory I.D. #19893, Composite 19904-19905, 19907	3 each

January 30, 2006
Blasland Bouck & Lee, Inc.

Re: L-06003
Laboratory Testing
NYSEG
Oneonta Former MGP Site
Oneonta, New York
File #0130.13042 #1

7.	Direct Shear Test ASTM D3080 Laboratory I.D. #Composite 19897-19899, Composite 19915-19917	2 each

All requested tests have been completed on the previously received sample(s) for the above project. All sample remains are scheduled to be disposed of on March 1, 2006. Please notify PW Laboratories, Inc. by letter or telephone prior to March 1, 2006 if you would prefer to pick up the sample(s) or that the sample(s) be retained by PW Laboratories, Inc. for an additional period of time.

Thank you for this opportunity to work with you.

Very truly yours,

PW LABORATORIES, INC.

Virginia J. Thoma
Manager - Laboratory Services
VJT/klw
encs:

PW LABORATORIES,INC.
P.O. BOX 56, 5879 FISHER ROAD, EAST SYRACUSE, NY 13057
315-437-1420 • 866-7PW-LABS • Fax 315-437-1752

January 30, 2006

L-06003
Laboratory Testing
NYSEG
Oneonta Former MGP Site
Oneonta, New York
File #0130.13042 #1

NATURAL MOISTURE CONTENT
ASTM D2216

Lab I.D. #	Boring #	Depth (feet)	Moisture Content as a Percent of Dry Weight
19880	BH-1	10.0-12.0	9.6
19881	BH-1	15.0-17.0	23.6
19884	BH-2	16.0-18.0	17.4
19885	BH-2	35.0-37.0	24.4
19886	BH-2	45.0-47.0	24.0
19888	BH-3	21.0-23.0	27.8
19889	BH-3	39.0-41.0	29.2
19890	BH-4	15.0-17.0	26.5
19892	BH-4	40.0-42.0	26.9
19893	BH-5	21.0-23.0	26.5
19894	BH-6	15.0-17.0	21.8
19895	BH-6	35.0-37.0	24.5
19896	BH-7	17.0-19.0	13.2
19897	BH-7	19.0-21.0	27.4
19898	BH-7	21.0-23.0	27.7
19899	BH-7	23.0-25.0	21.9
19900	BH-7	31.0-33.0	27.1
19901	BH-8	10.0-12.0	8.8
19903	BH-8	45.0-47.0	26.6
19904	BH-9	15.0-17.0	11.5
19905	BH-9	17.0-19.0	18.2
19907	BH-9	37.0-39.0	22.7
19908	BH-11	15.0-17.0	23.1
19909	BH-11	20.0-22.0	26.8
19910	BH-11	30.0-32.0	30.0

PW LABORATORIES,INC.
P.O. BOX 56, 5879 FISHER ROAD, EAST SYRACUSE, NY 13057
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January 30, 2006

L-06003
Laboratory Testing
NYSEG
Oneonta Former MGP Site
Oneonta, New York
File #0130.13042 #1

NATURAL MOISTURE CONTENT
ASTM D2216

Lab I.D. #	Boring #	Depth (feet)	Moisture Content as a Percent of Dry Weight
19911	BH-12	15.0-17.0	24.9
19912	BH-12	27.0-29.0	25.3
19913	BH-12	41.0-43.0	24.6
19914	BH-13	21.0-23.0	27.9
19915	BH-13	31.0-33.0	25.0
19916	BH-13	33.0-35.0	24.9
19917	BH-13	35.0-37.0	26.5

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SIEVE ANALYSIS OF SOIL / AGGREGATE

PROJECT TITLE Laboratory Testing
NYSEG
Oneonta Former MGP Site
Oneonta, New York
File #0130.13042 #1

PROJECT # L-06003
TEST METHOD ASTM D422 & D1140

REPORT # 1
REPORT DATE January 30, 2006

			Sieve Size - Percent Passing Sieve															
Lab I.D. #	Boring #	Depth (feet)	1 ½"	1"	¾"	½"	3/8"	1/4"	#4	#10	#30	#40	#60	#100	#200			
19880	BH-1	10.0-12.0	--	--	100	87.4	82.3	66.4	59.8	45.5	33.5	30.7	28.8	23.2	17.9			
19881	BH-1	15.0-17.0	--	--	--	--	--	--	--	100	99.9	99.9	99.9	99.1	87.9			
19882	BH-1	29.0-31.0	--	--	--	--	--	--	--	--	100	99.8	99.6	98.7	83.4			
19883	BH-1	43.0-45.0	--	--	--	--	--	--	--	--	--	--	100	94.3	57.2			
19884	BH-2	16.0-18.0	--	--	--	--	100	96.7	90.1	57.3	35.1	29.7	24.8	20.5	15.5			
19885	BH-2	35.0-37.0	--	--	--	--	--	--	--	--	--	100	99.9	94.2	57.5			
19886	BH-2	45.0-47.0	--	--	--	--	--	--	--	--	--	--	100	98.1	63.9			

Sample mass, as received, meets minimum mass requirements of test method: Yes ____ No X

Prewashed: Yes X No ____

Remarks:

Performed By: SC, AM

Checked By: V.J. Thoma

PW LABORATORIES INC.
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SIEVE ANALYSIS OF SOIL / AGGREGATE

PROJECT TITLE Laboratory Testing
NYSEG
Oneonta Former MGP Site
Oneonta, New York
File #0130.13042 #1

PROJECT # L-06003
TEST METHOD ASTM D422 & D1140

REPORT # 1
REPORT DATE January 30, 2006

			Sieve Size - Percent Passing Sieve															
Lab I.D. #	Boring #	Depth (feet)	1 ½"	1"	¾"	½"	3/8"	1/4"	#4	#10	#30	#40	#60	#100	#200				
19887	BH-3	10.0-12.0	--	100	91.5	78.8	65.9	53.6	47.0	33.3	24.2	20.9	19.1	14.4	10.6				
19888	BH-3	21.0-23.0	--	--	--	--	--	--	--	--	--	--	100	99.5	77.1				
19889	BH-3	39.0-41.0	--	--	--	--	--	--	--	100	99.8	99.7	99.6	98.1	78.0				
19890	BH-4	15.0-17.0	--	--	--	--	--	--	--	--	--	--	100	99.2	84.4				
19891	BH-4	30.0-32.0	--	--	--	--	--	--	--	--	--	--	100	96.9	71.3				
19892	BH-4	40.0-42.0	--	--	--	--	--	--	--	--	--	100	99.8	96.4	68.6				
19893	BH-5	21.0-23.0	--	--	--	--	--	--	--	--	--	--	100	99.1	84.2				

Sample mass, as received, meets minimum mass requirements of test method: Yes ____ No X

Prewashed: Yes X No ____

Remarks:

Performed By: SC, AM

Checked By: V.J. Thoma

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SIEVE ANALYSIS OF SOIL / AGGREGATE

PROJECT TITLE Laboratory Testing
NYSEG
Oneonta Former MGP Site
Oneonta, New York
File #0130.13042 #1

PROJECT # L-06003
TEST METHOD ASTM D422 & D1140

REPORT # 1
REPORT DATE January 30, 2006

			Sieve Size - Percent Passing Sieve															
Lab I.D. #	Boring #	Depth (feet)	1 ½"	1"	¾"	½"	3/8"	1/4"	#4	#10	#30	#40	#60	#100	#200				
19894	BH-6	15.0-17.0	--	100	96.7	92.8	91.6	91.1	90.4	87.0	78.1	72.1	59.9	39.0	20.8				
19895	BH-6	35.0-37.0	--	--	--	--	100	99.9	99.8	99.7	99.6	99.6	99.5	93.8	61.4				
19896	BH-7	17.0-19.0	--	100	78.0	63.2	57.1	49.9	44.7	34.1	26.6	22.7	22.5	16.9	12.3				
19897-19899	BH-7	Composite 19.0-25.0	--	--	100	95.8	95.3	95.3	95.3	95.1	94.6	94.4	94.3	93.2	80.1				
19900	BH-7	31.0-33.0	--	--	--	--	--	--	--	--	100	99.9	99.9	98.7	85.9				
19901	BH-8	10.0-12.0	100	76.9	64.7	57.2	51.4	43.5	40.8	32.7	25.8	23.9	22.9	17.8	13.0				
19902	BH-8	20.0-22.0	--	--	--	--	--	--	--	--	--	--	100	99.9	97.4				

Sample mass, as received, meets minimum mass requirements of test method: Yes ____ No X

Prewashed: Yes X No ____

Remarks:

Performed By: SC, AM

Checked By: V.J. Thoma

PW LABORATORIES INC.
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SIEVE ANALYSIS OF SOIL / AGGREGATE

PROJECT TITLE Laboratory Testing
NYSEG
Oneonta Former MGP Site
Oneonta, New York
File #0130.13042 #1

PROJECT # L-06003
TEST METHOD ASTM D422 & D1140

REPORT # 1
REPORT DATE January 30, 2006

			Sieve Size - Percent Passing Sieve																
Lab I.D. #	Boring #	Depth (feet)	1 ½"	1"	¾"	½"	3/8"	1/4"	#4	#10	#30	#40	#60	#100	#200				
19903	BH-8	45.0-47.0	--	--	--	--	--	--	100	99.8	99.7	99.7	99.6	94.0	57.4				
19906	BH-9	35.0-37.0	--	--	--	--	--	--	--	--	--	--	100	99.7	86.2				
19907	BH-9	37.0-39.0	--	--	--	--	--	--	--	--	--	100	99.9	97.6	75.5				
19908	BH-11	15.0-17.0	--	--	--	--	--	--	--	--	--	--	100	99.2	85.8				
19909	BH-11	20.0-22.0	--	--	--	--	--	--	--	--	--	--	100	94.2	64.2				
19910	BH-11	30.0-32.0	--	--	--	--	--	--	--	--	100	99.9	99.9	99.7	93.6				
19911	BH-12	15.0-17.0	--	--	--	--	--	--	--	--	--	--	100	99.7	91.9				

Sample mass, as received, meets minimum mass requirements of test method: Yes ____ No X

Prewashed: Yes X No ____

Remarks:

Performed By: SC, AM

Checked By: V.J. Thoma

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SIEVE ANALYSIS OF SOIL / AGGREGATE

PROJECT TITLE Laboratory Testing
NYSEG
Oneonta Former MGP Site
Oneonta, New York
File #0130.13042 #1

PROJECT # L-06003
TEST METHOD ASTM D422 & D1140

REPORT # 1
REPORT DATE January 30, 2006

			Sieve Size - Percent Passing Sieve															
Lab I.D. #	Boring #	Depth (feet)	1 ½"	1"	¾"	½"	3/8"	1/4"	#4	#10	#30	#40	#60	#100	#200			
19912	BH-12	27.0-29.0	--	--	--	--	--	--	--	--	--	--	100	97.4	64.9			
19913	BH-12	41.0-43.0	--	--	--	--	--	--	--	--	--	--	100	97.1	62.9			
19914	BH-13	21.0-23.0	--	--	--	--	--	--	--	--	100	99.9	99.9	99.8	96.0			

Sample mass, as received, meets minimum mass requirements of test method: Yes ____ No X

Prewashed: Yes X No ____

Remarks:

Performed By: SC, AM

Checked By: V.J. Thoma

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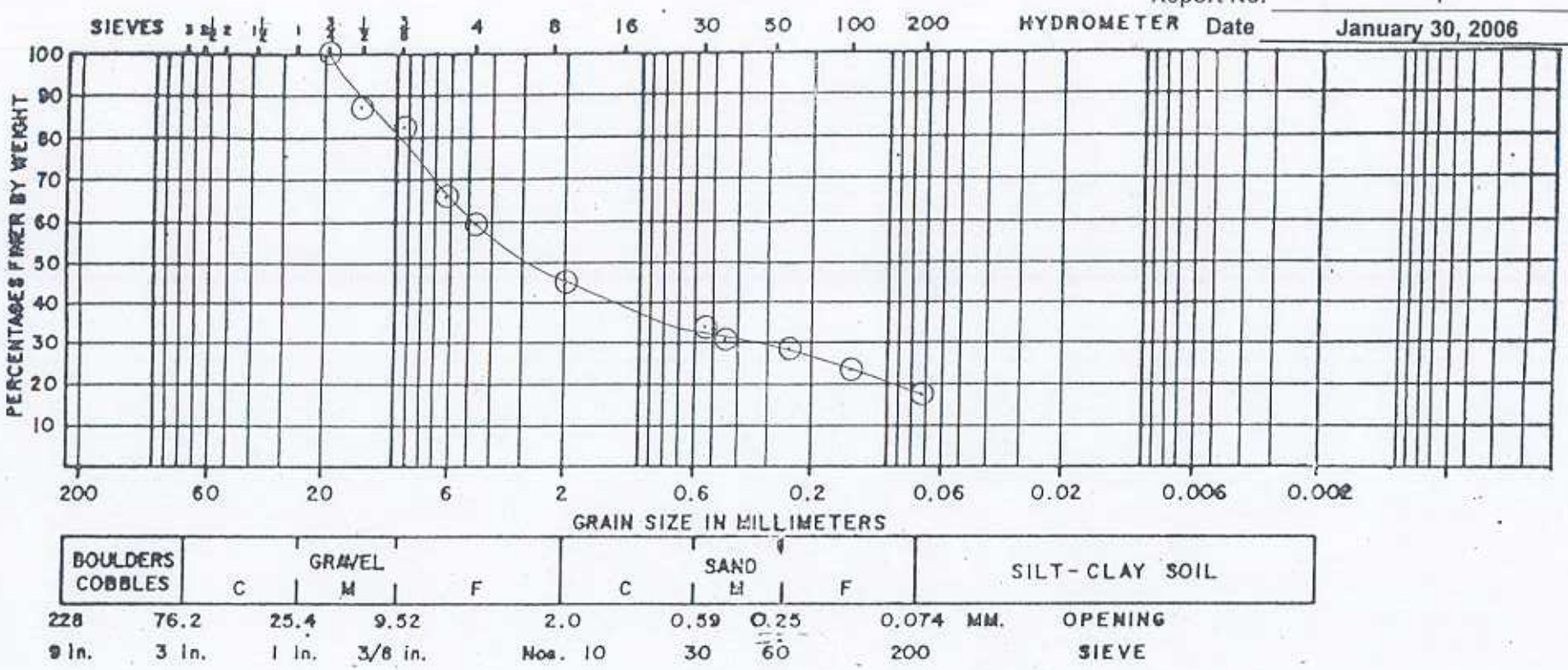
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 1
Date: January 30, 2006



L-06003	Lab I.D. # 19880
Laboratory Testing	Boring # BH-1
NYSEG	Depth (Feet): 10.0-12.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	
⊙ Sieve Analysis ASTM D422 & D1140	
⊙ Hydrometer Analysis ASTM D422	

PW LABORATORIES INC.
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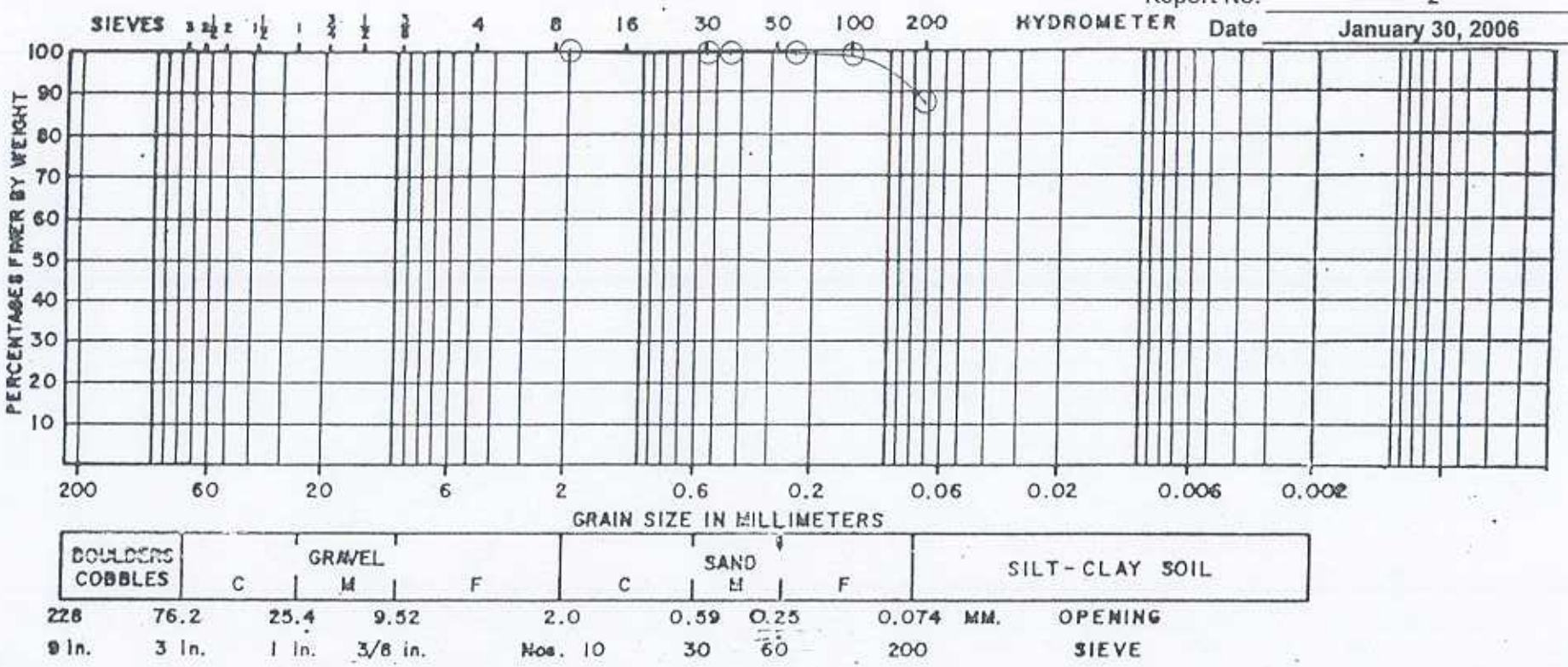
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 2
Date: January 30, 2006



L-06003	Lab I.D. # 19881
Laboratory Testing	Boring # BH-1
NYSEG	Depth (Feet): 15.0-17.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

⊙ Sieve Analysis ASTM D422 & D1140
⊙ Hydrometer Analysis ASTM D422

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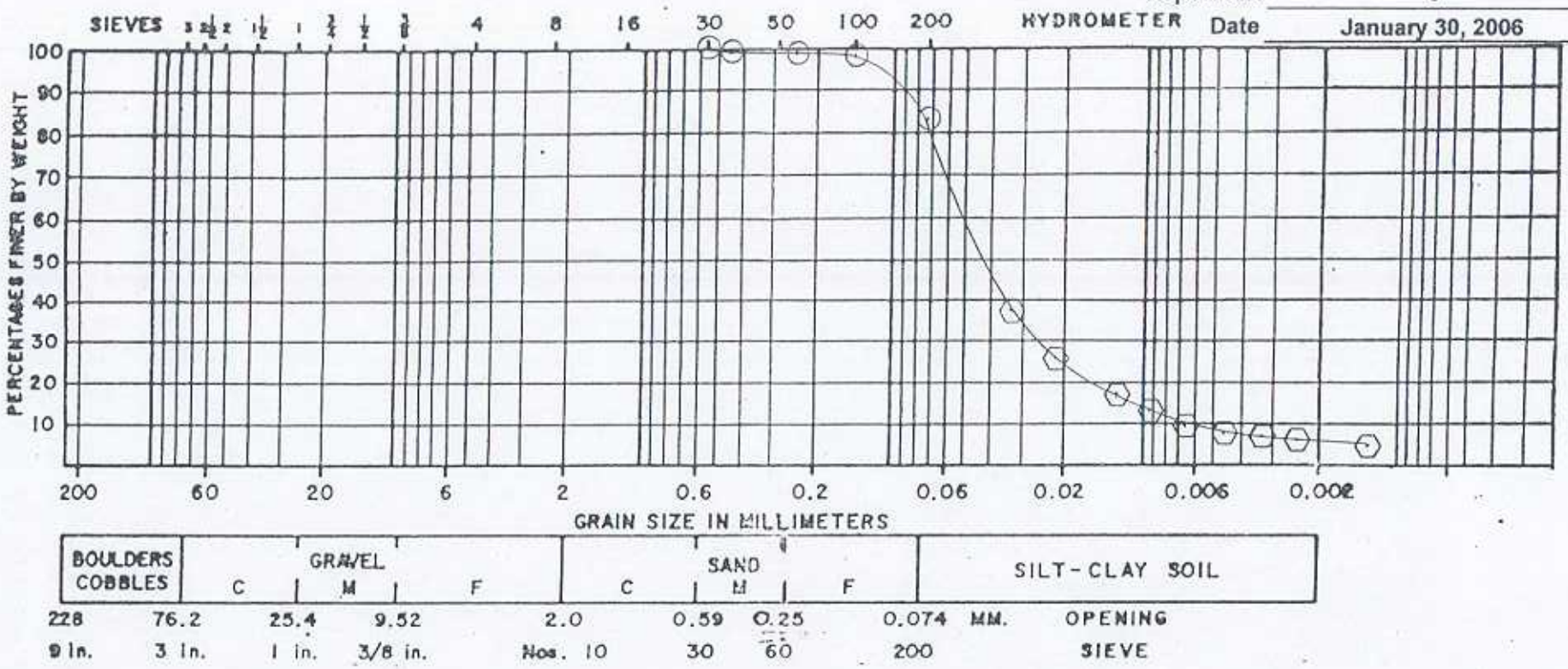
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 3
Date: January 30, 2006



L-06003	Lab I.D. # 19882
Laboratory Testing	Boring # BH-1
NYSEG	Depth (Feet): 29.0-31.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

⊙ Sieve Analysis ASTM D422 & D1140
⊙ Hydrometer Analysis ASTM D422

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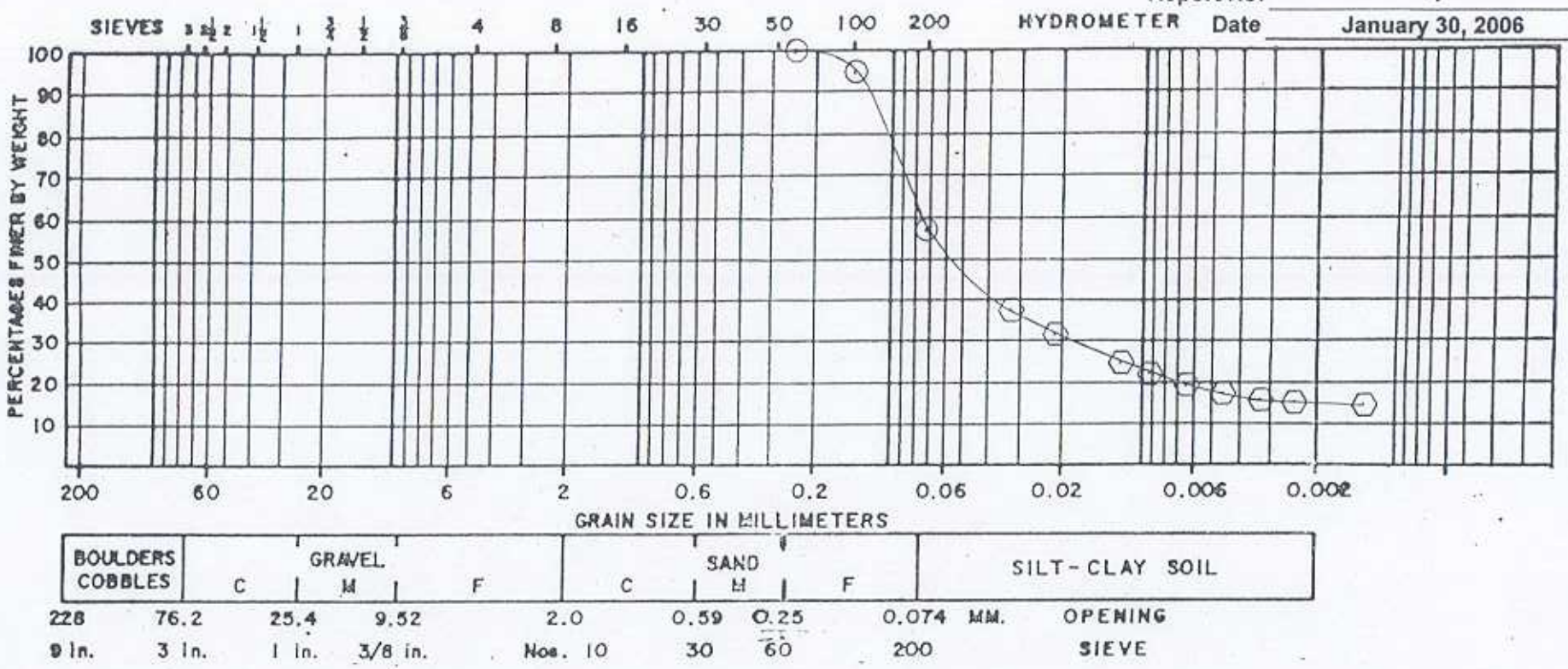
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 4
Date: January 30, 2006



L-06003	Lab I.D. # 19883
Laboratory Testing	Boring # BH-1
NYSEG	Depth (Feet): 43.0-45.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	
○ Sieve Analysis ASTM D422 & D1140	
◇ Hydrometer Analysis ASTM D422	

PW LABORATORIES INC.
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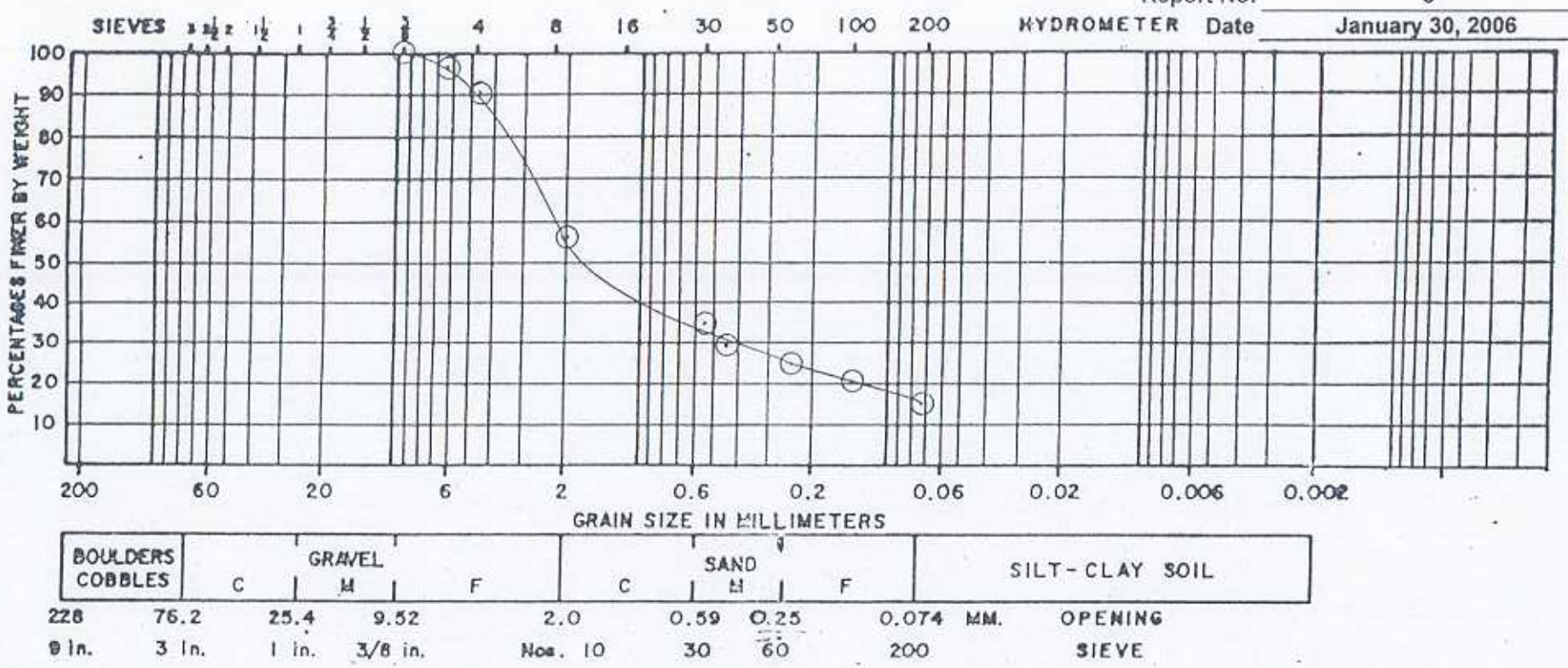
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 5
Date: January 30, 2006



228	76.2	25.4	9.52	2.0	0.59	0.25	0.074	MM.	OPENING
9 in.	3 in.	1 in.	3/8 in.	Nos. 10	30	60	200		SIEVE

L-06003	Lab I.D. # 19884
Laboratory Testing	Boring # BH-2
NYSEG	Depth (Feet): 16.0-18.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	
⊙ Sieve Analysis ASTM D422 & D1140	
⊙ Hydrometer Analysis ASTM D422	

PW LABORATORIES INC.
P.O. BOX 56, 5879 FISHER ROAD, EAST SYRACUSE, NY 13057
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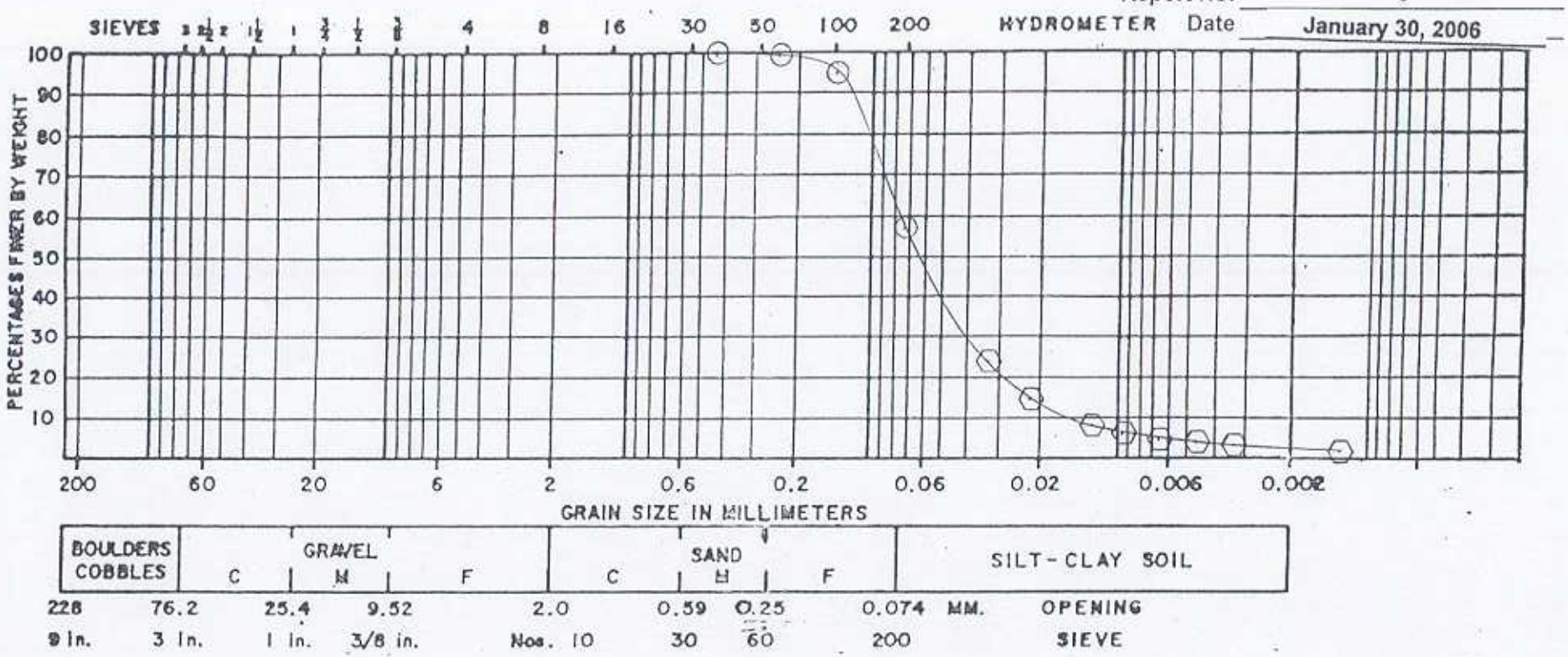
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 6
Date: January 30, 2006



L-06003	Lab I.D. # 19885
Laboratory Testing	Boring # BH-2
NYSEG	Depth (Feet): 35.0-37.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	
⊙ Sieve Analysis ASTM D422 & D1140	
⬡ Hydrometer Analysis ASTM D422	

PW LABORATORIES INC.
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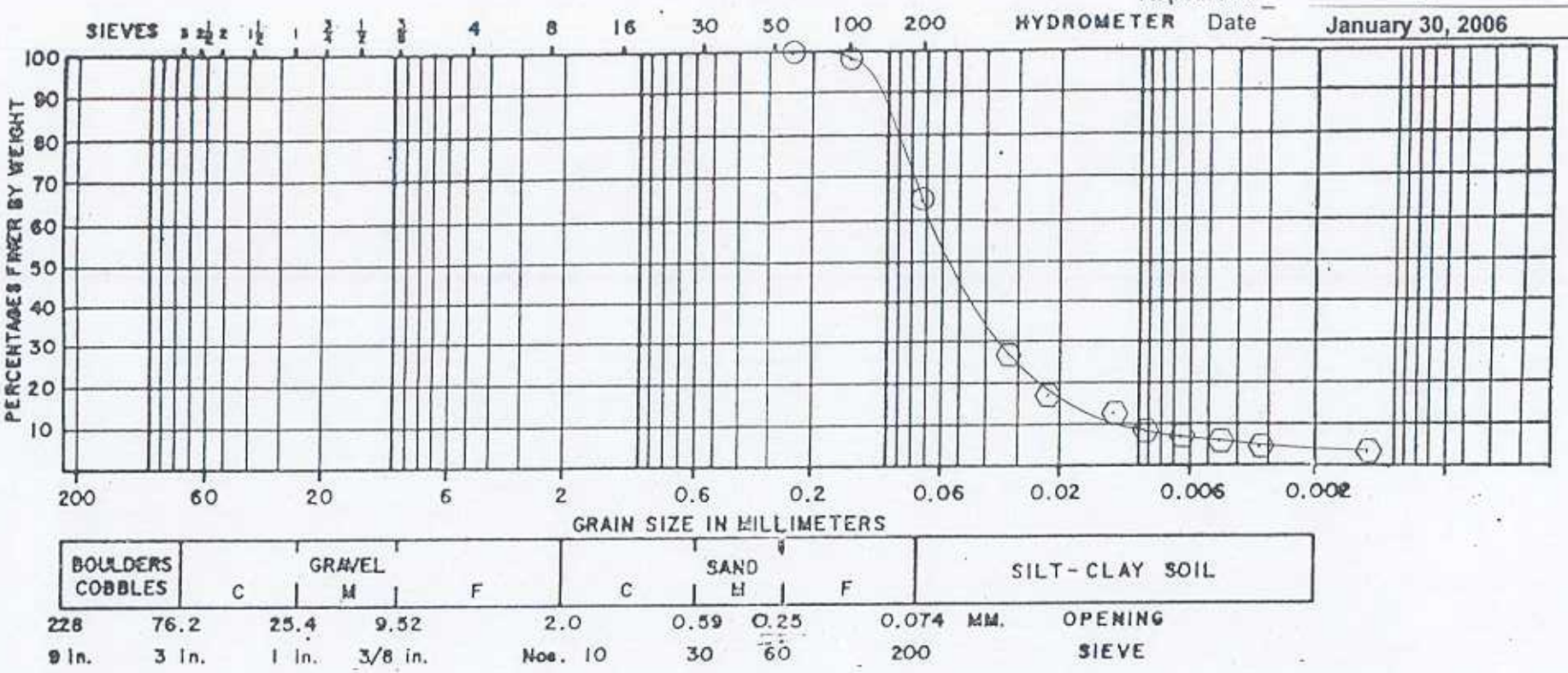
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 7
Date: January 30, 2006



L-06003	Lab I.D. # 19886
Laboratory Testing	Boring # BH-2
NYSEG	Depth (Feet): 45.0-47.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	
⊙ Sieve Analysis ASTM D422 & D1140	
◇ Hydrometer Analysis ASTM D422	

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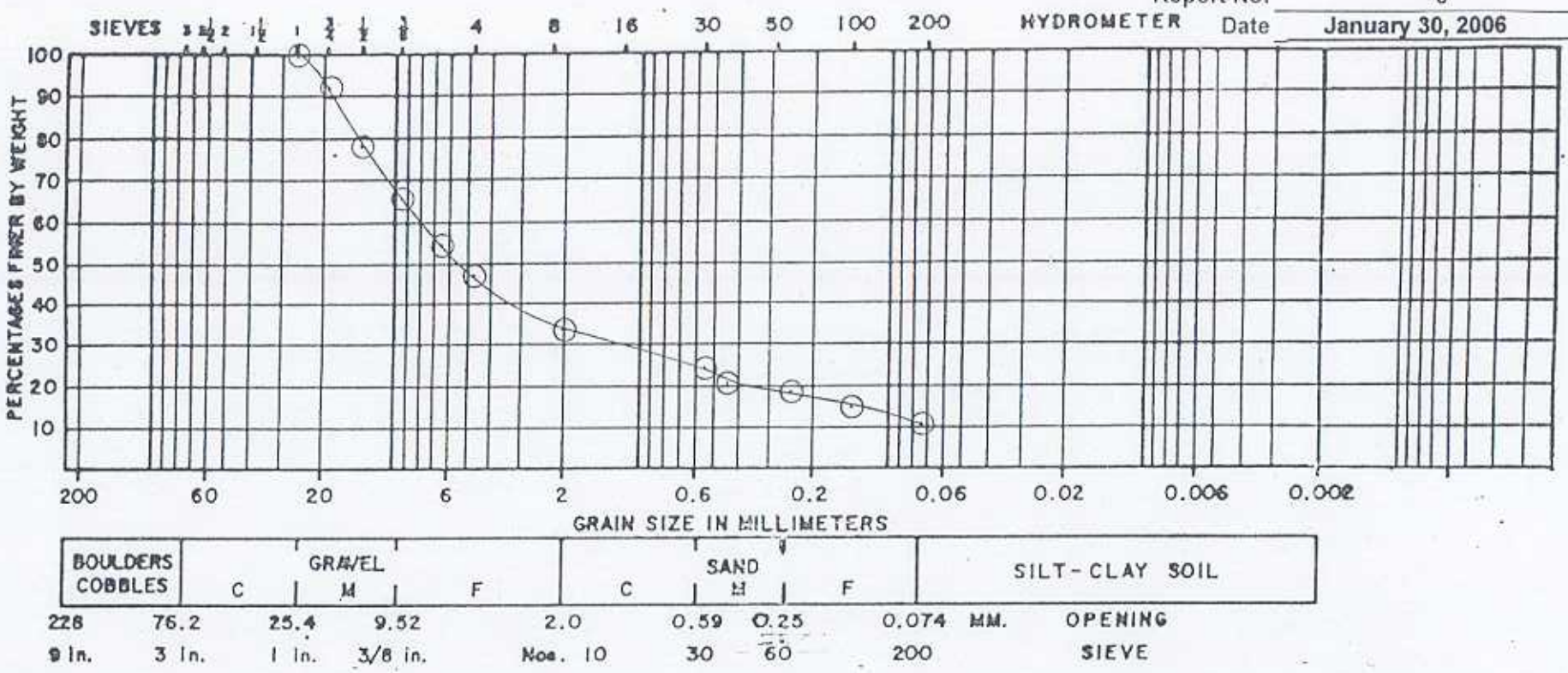
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 8
Date: January 30, 2006



L-06003	Lab I.D. # 19887
Laboratory Testing	Boring # BH-3
NYSEG	Depth (Feet): 10.0-12.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

① Sieve Analysis ASTM D422 & D1140
② Hydrometer Analysis ASTM D422

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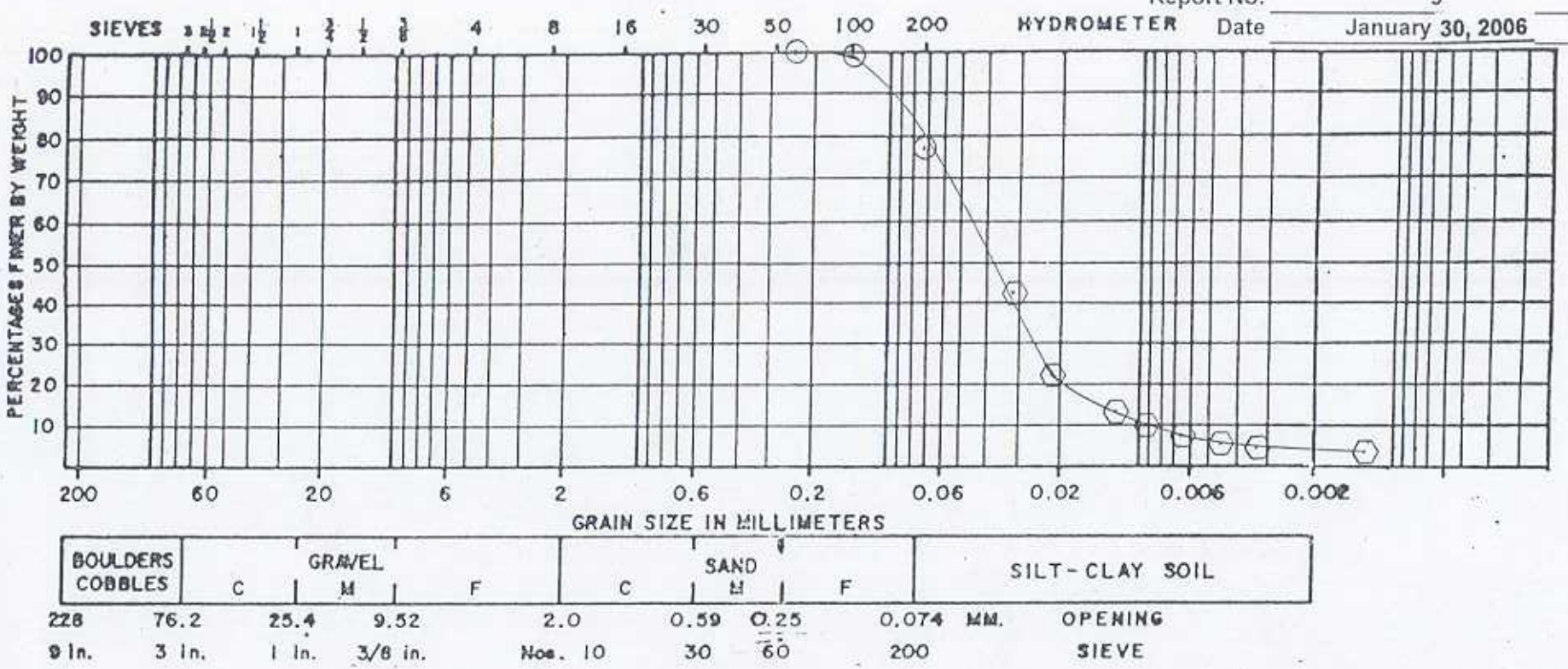
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 9
Date: January 30, 2006



L-06003	Lab I.D. # 19888
Laboratory Testing	Boring # BH-3
NYSEG	Depth (Feet): 21.0-23.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	
⊙ Sieve Analysis ASTM D422 & D1140	
⊙ Hydrometer Analysis ASTM D422	

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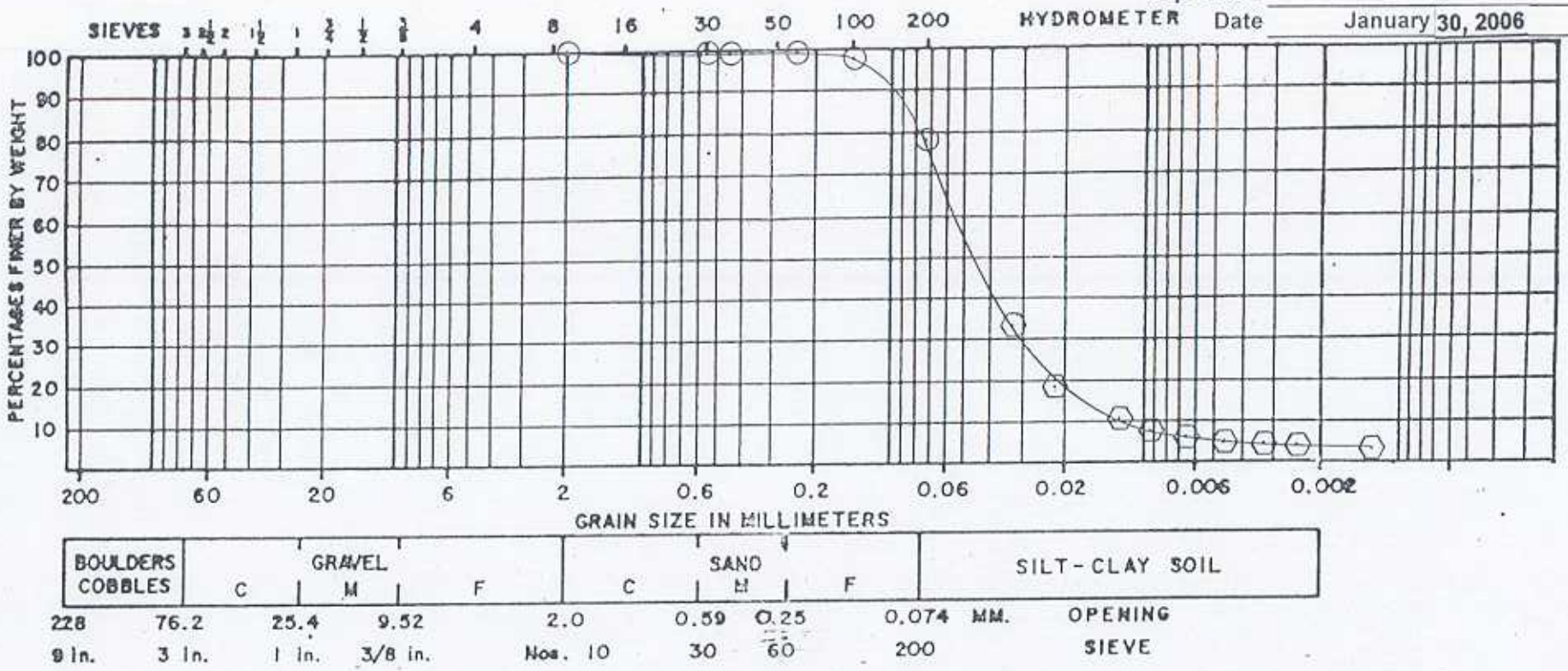
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 10
Date: January 30, 2006



L-06003	Lab I.D. # 19889
Laboratory Testing	Boring # BH-3
NYSEG	Depth (Feet): 39.0-41.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

○ Sieve Analysis ASTM D422 & D1140
◇ Hydrometer Analysis ASTM D422

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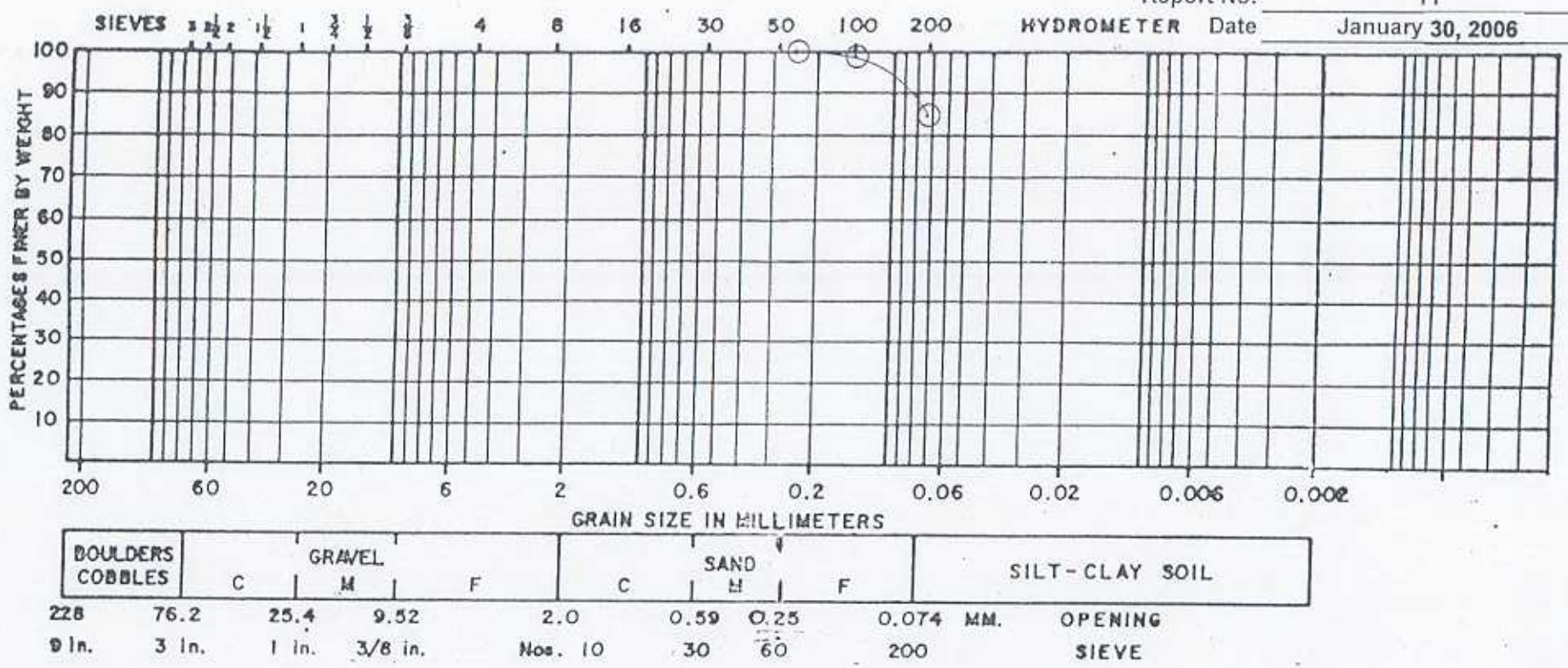
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 11
Date: January 30, 2006



L-06003	Lab I.D. # 19890
Laboratory Testing	Boring # BH-4
NYSEG	Depth (Feet): 15.0-17.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	
⊙ Sieve Analysis ASTM D422 & D1140	
⊙ Hydrometer Analysis ASTM D422	

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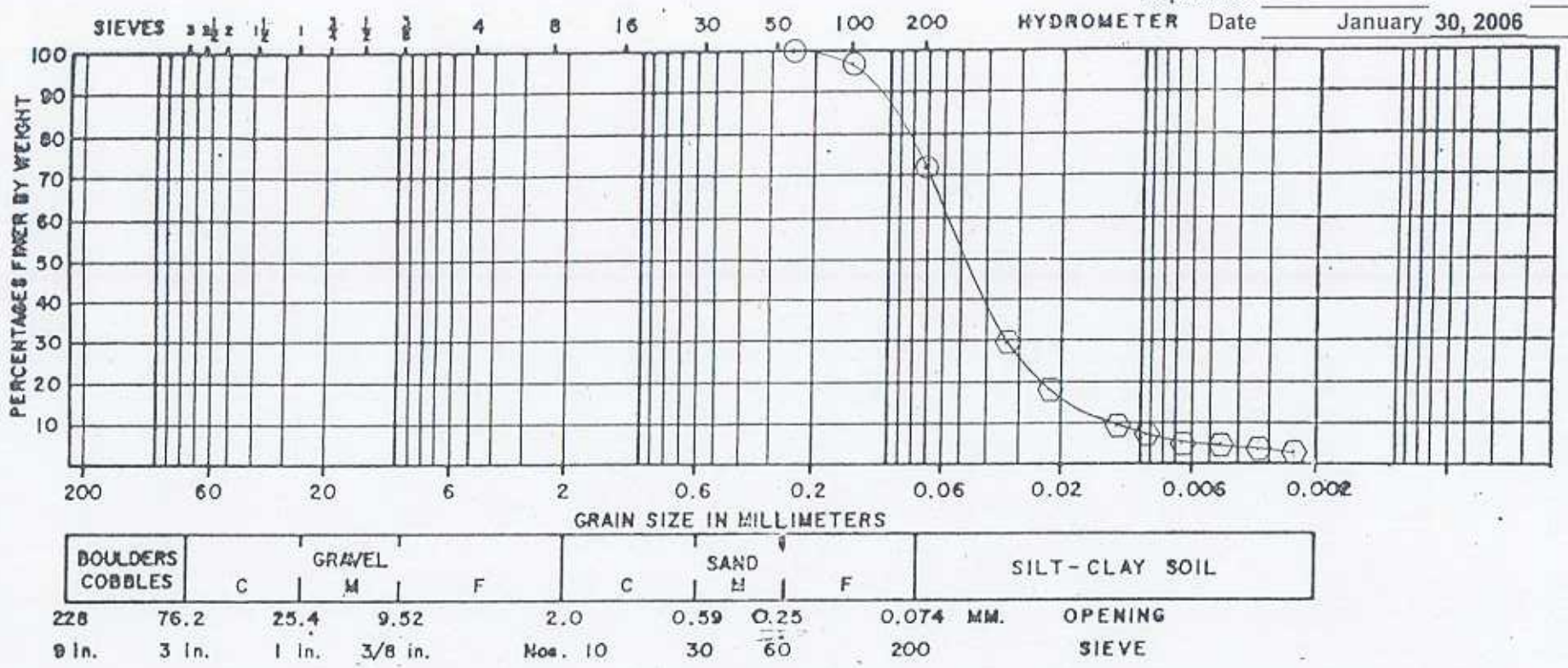
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 12
Date: January 30, 2006



L-06003	Lab I.D. # 19891
Laboratory Testing	Boring # BH-4
NYSEG	Depth (Feet): 30.0-32.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

⊙ Sieve Analysis ASTM D422 & D1140
⊙ Hydrometer Analysis ASTM D422

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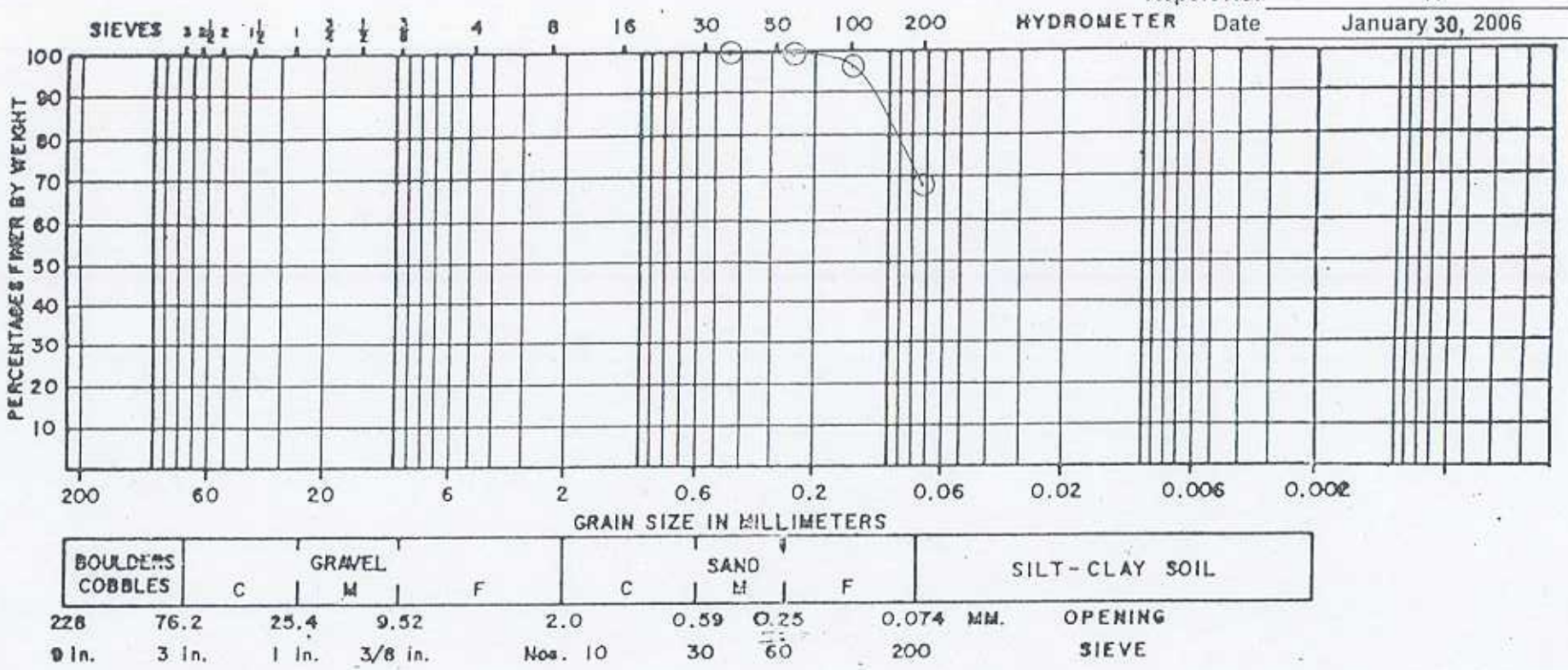
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 13
Date: January 30, 2006



L-06003	Lab I.D. # 19892
Laboratory Testing	Boring # BH-4
NYSEG	Depth (Feet): 40.0-42.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

⊙ Sieve Analysis ASTM D422 & D1140
⊙ Hydrometer Analysis ASTM D422

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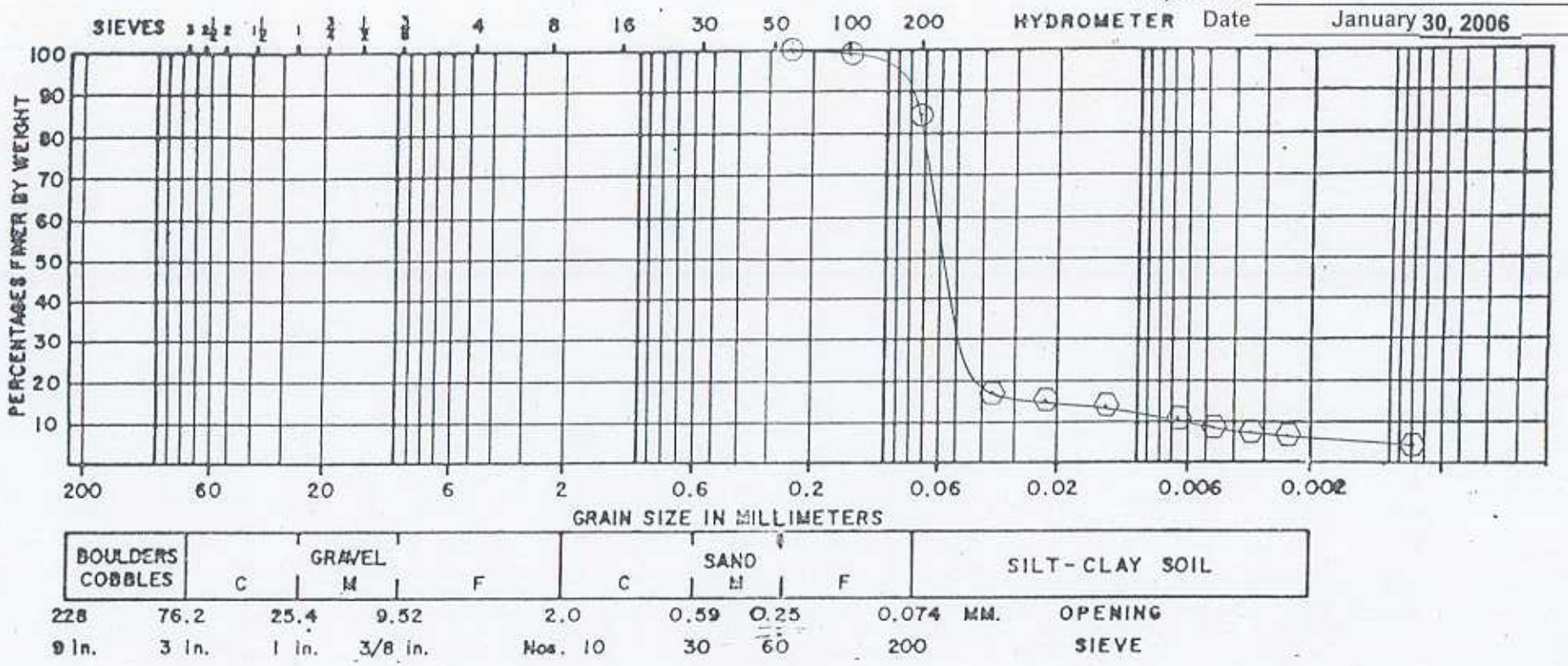
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 14
Date: January 30, 2006



228	76.2	25.4	9.52	2.0	0.59	0.25	0.074	MM.	OPENING
9 In.	3 In.	1 In.	3/8 In.	Nos. 10	30	60	200		SIEVE

L-06003
Laboratory Testing
NYSEG
Oneonta Former MGP Site
Oneonta, New York
File # 0130.13042 #1

Lab I.D. # 19893
Boring # BH-5
Depth (Feet): 21.0-23.0

⊙ Sieve Analysis ASTM D422 & D1140
⊙ Hydrometer Analysis ASTM D422

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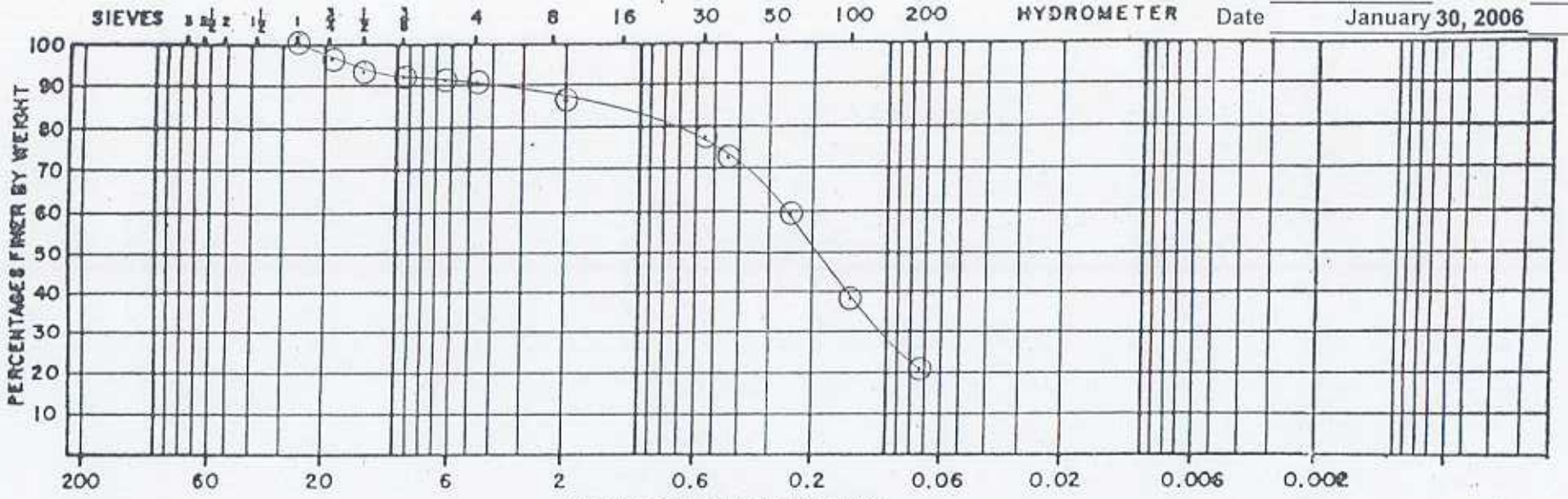
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 15
Date January 30, 2006



L-06003	Lab I.D. # 19894
Laboratory Testing	Boring # BH-6
NYSEG	Depth (Feet): 15.0-17.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

○ Sieve Analysis ASTM D422 & D1140
◇ Hydrometer Analysis ASTM D422

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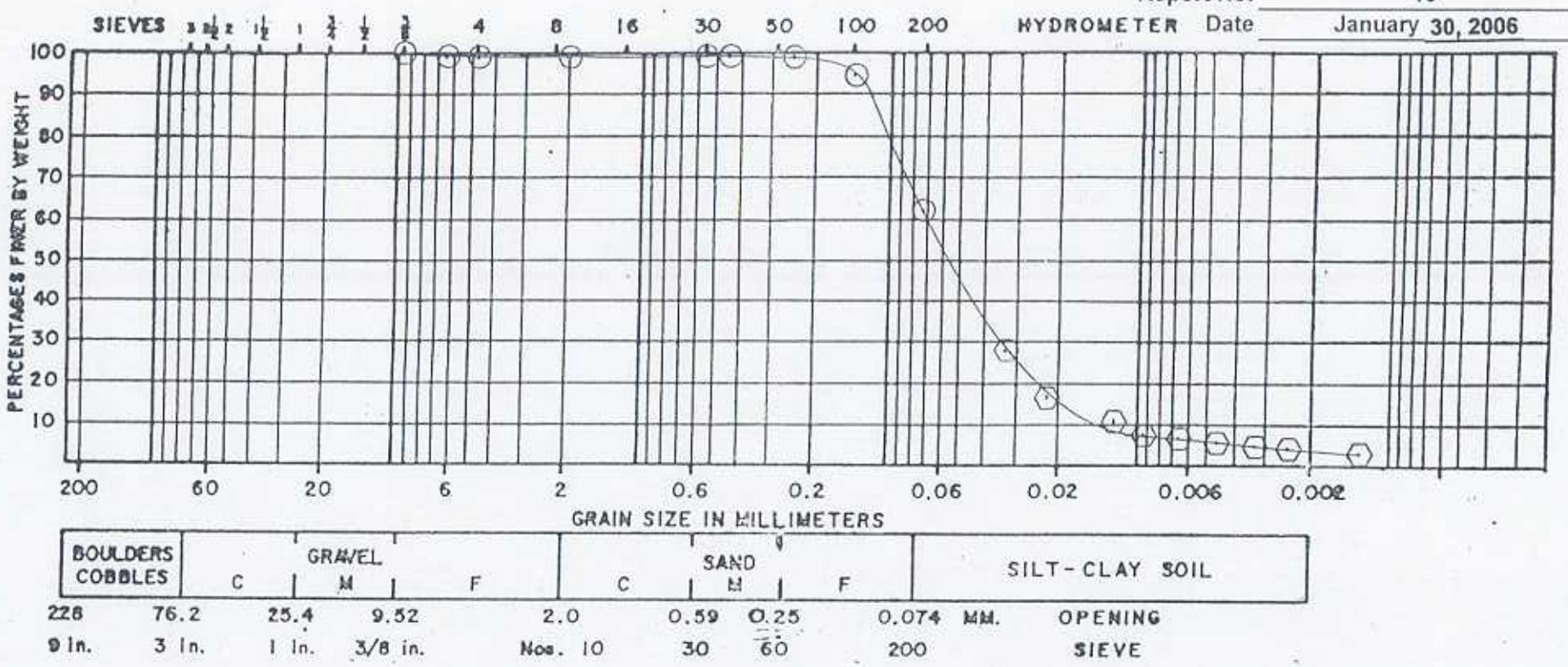
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 16
Date: January 30, 2006



L-06003	Lab I.D. # 19895
Laboratory Testing	Boring # BH-6
NYSEG	Depth (Feet): 35.0-37.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	
⊙ Sieve Analysis ASTM D422 & D1140	
⬡ Hydrometer Analysis ASTM D422	

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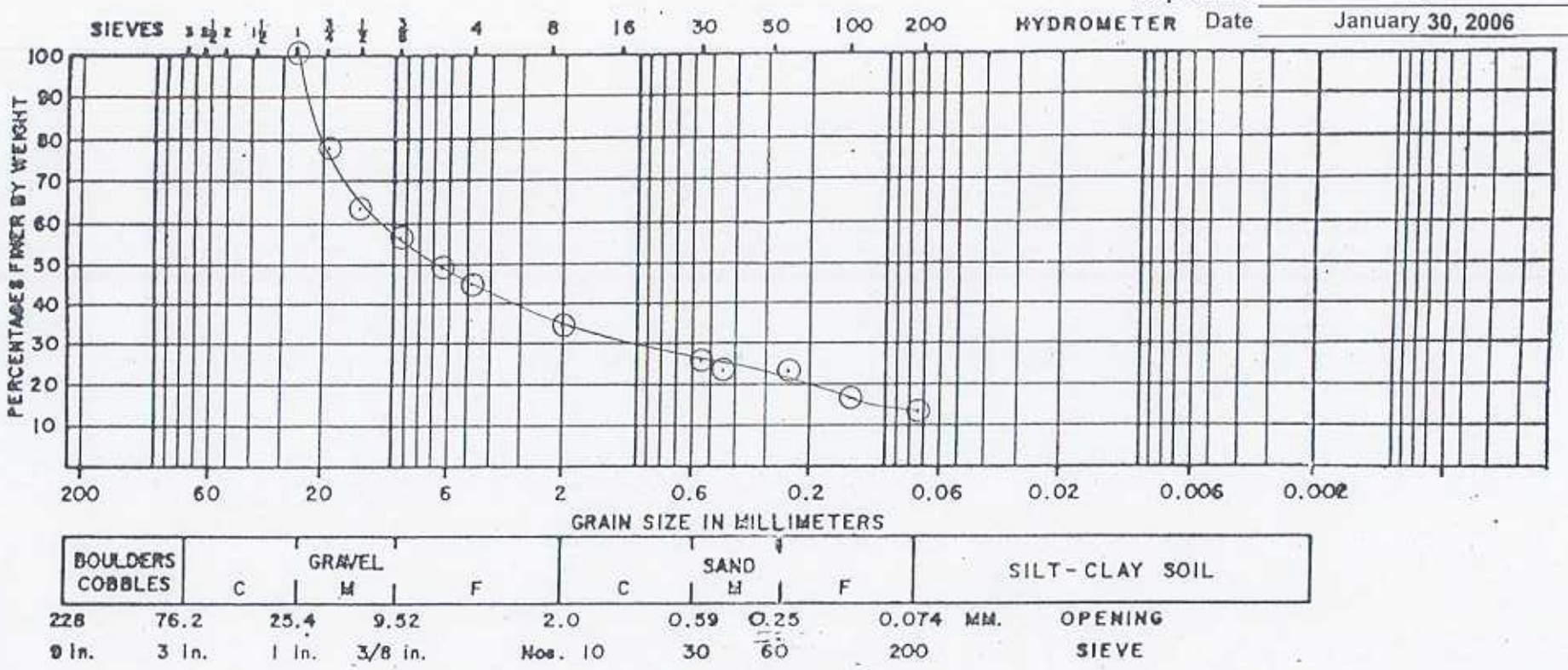
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 17
Date: January 30, 2006



L-06003	Lab I.D. # 19896
Laboratory Testing	Boring # BH-7
NYSEG	Depth (Feet): 17.0-19.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

⊙ Sieve Analysis ASTM D422 & D1140
⊙ Hydrometer Analysis ASTM D422

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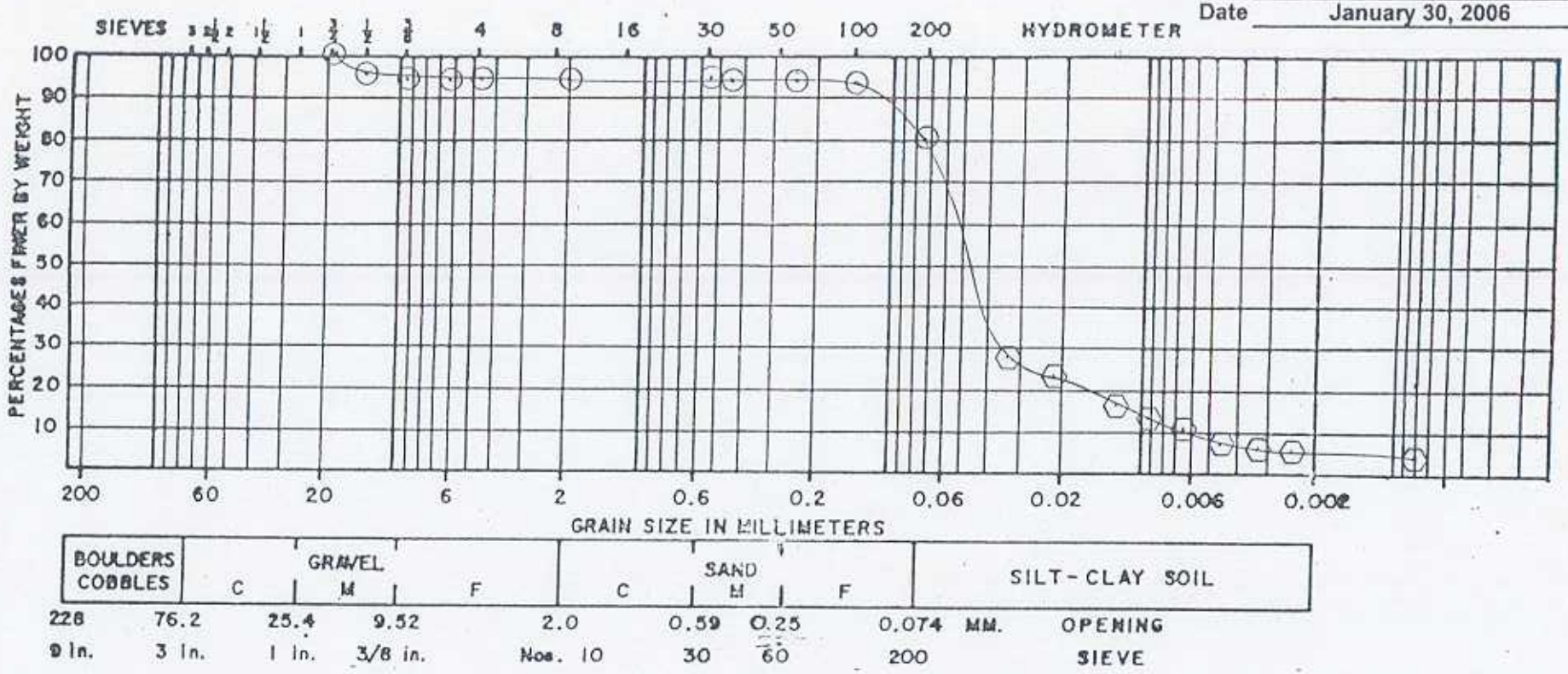
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 18
Date January 30, 2006



L-06003	Lab I.D. #	Composite 19897-19899
Laboratory Testing	Boring #	BH-7
NYSEG	Depth (Feet):	19.0' - 25.0'
Oneonta Former MGP Site		
Oneonta, New York		
File # 0130.13042 #1		
⊙ Sieve Analysis ASTM D422 & D1140		
⬡ Hydrometer Analysis ASTM D422		

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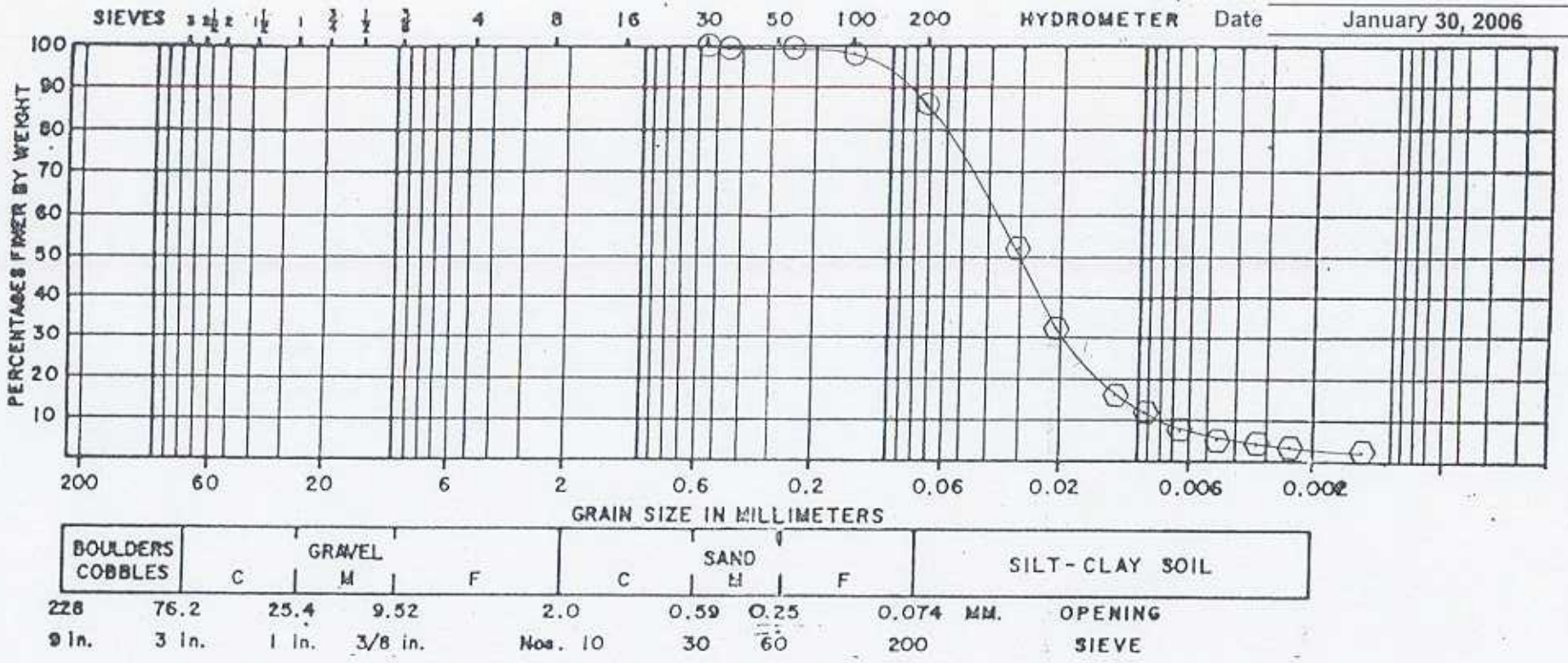
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 19
Date: January 30, 2006



L-06003	Lab I.D. # 19900
Laboratory Testing	Boring # BH-7
NYSEG	Depth (Feet): 31.0-33.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

⊙ Sieve Analysis ASTM D422 & D1140
⬡ Hydrometer Analysis ASTM D422

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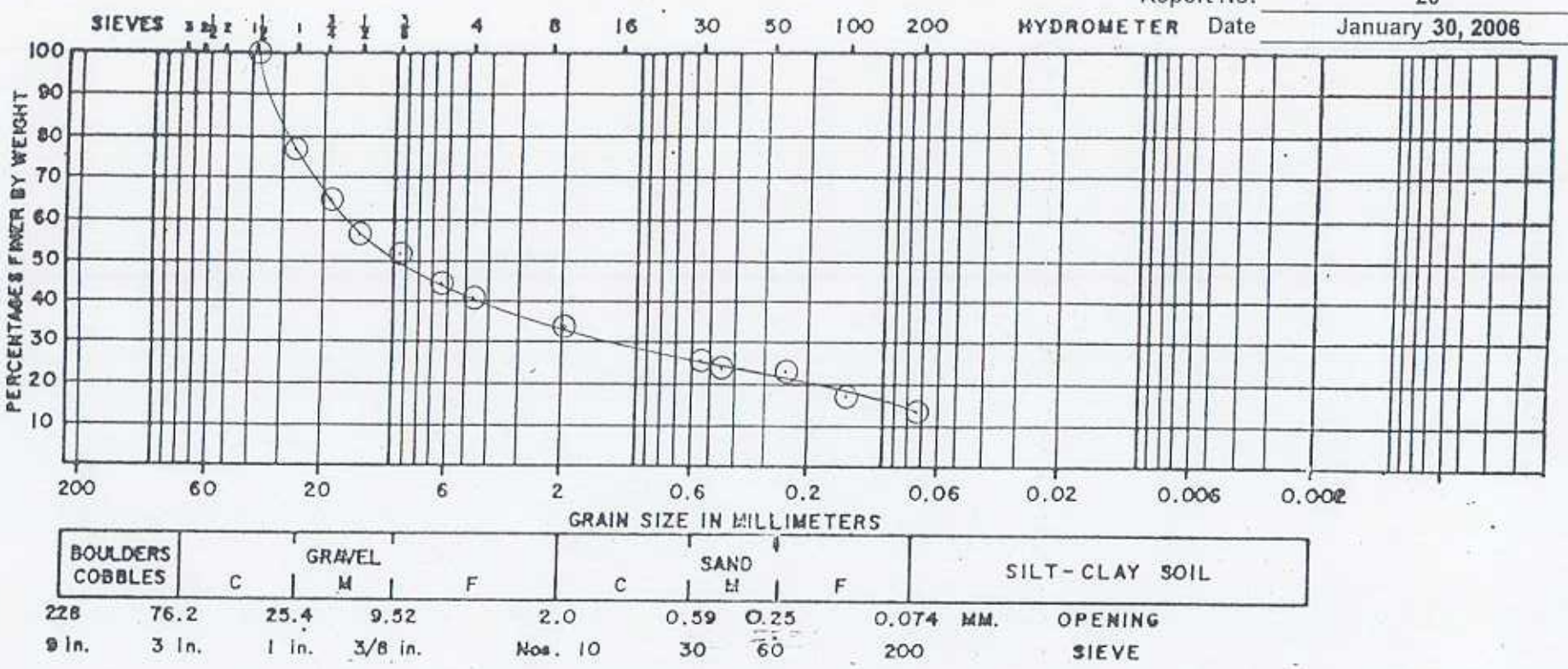
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 20
Date January 30, 2006



L-06003	Lab I.D. # 19901
Laboratory Testing	Boring # BH-8
NYSEG	Depth (Feet): 10.0-12.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

⊙ Sieve Analysis ASTM D422 & D1140
⊙ Hydrometer Analysis ASTM D422

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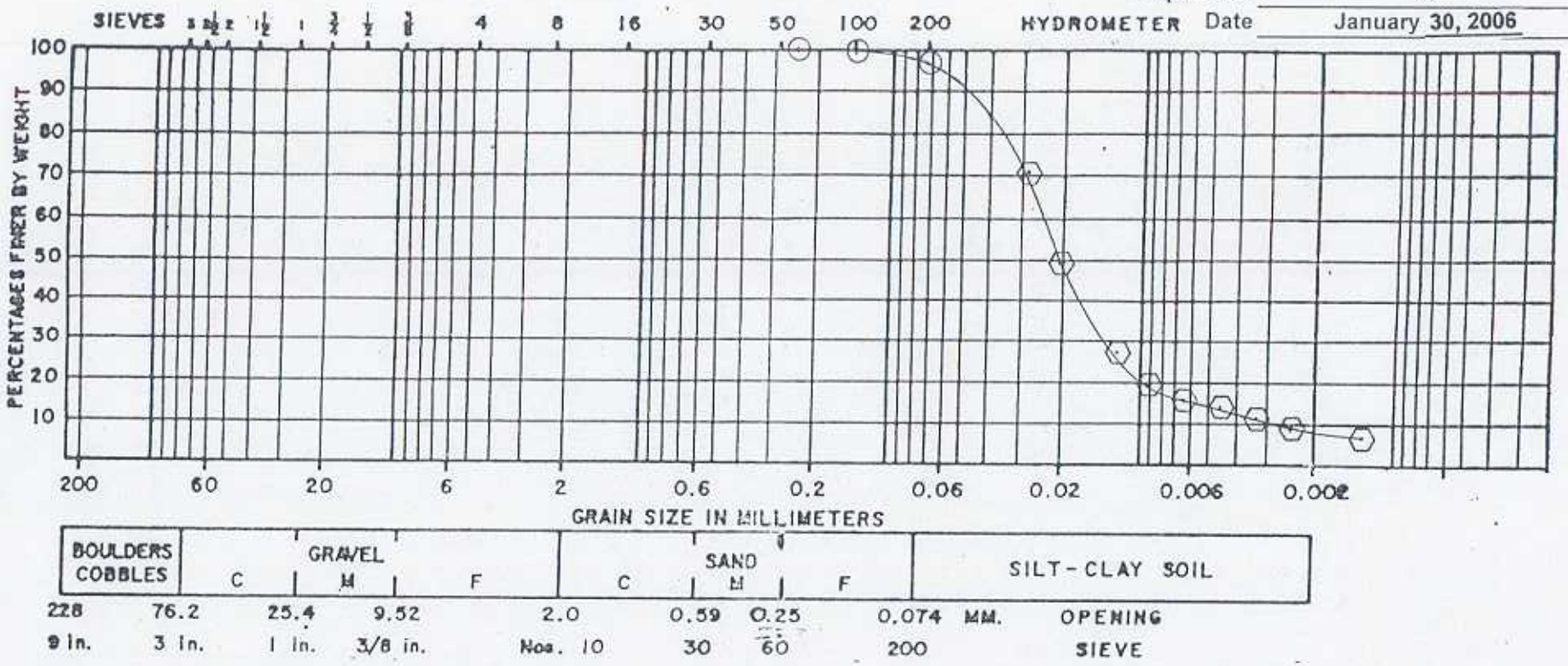
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 21
Date January 30, 2006



L-06003	Lab I.D. # 19902
Laboratory Testing	Boring # BH-8
NYSEG	Depth (Feet): 20.0-22.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	
⊙ Sieve Analysis ASTM D422 & D1140	
⊙ Hydrometer Analysis ASTM D422	

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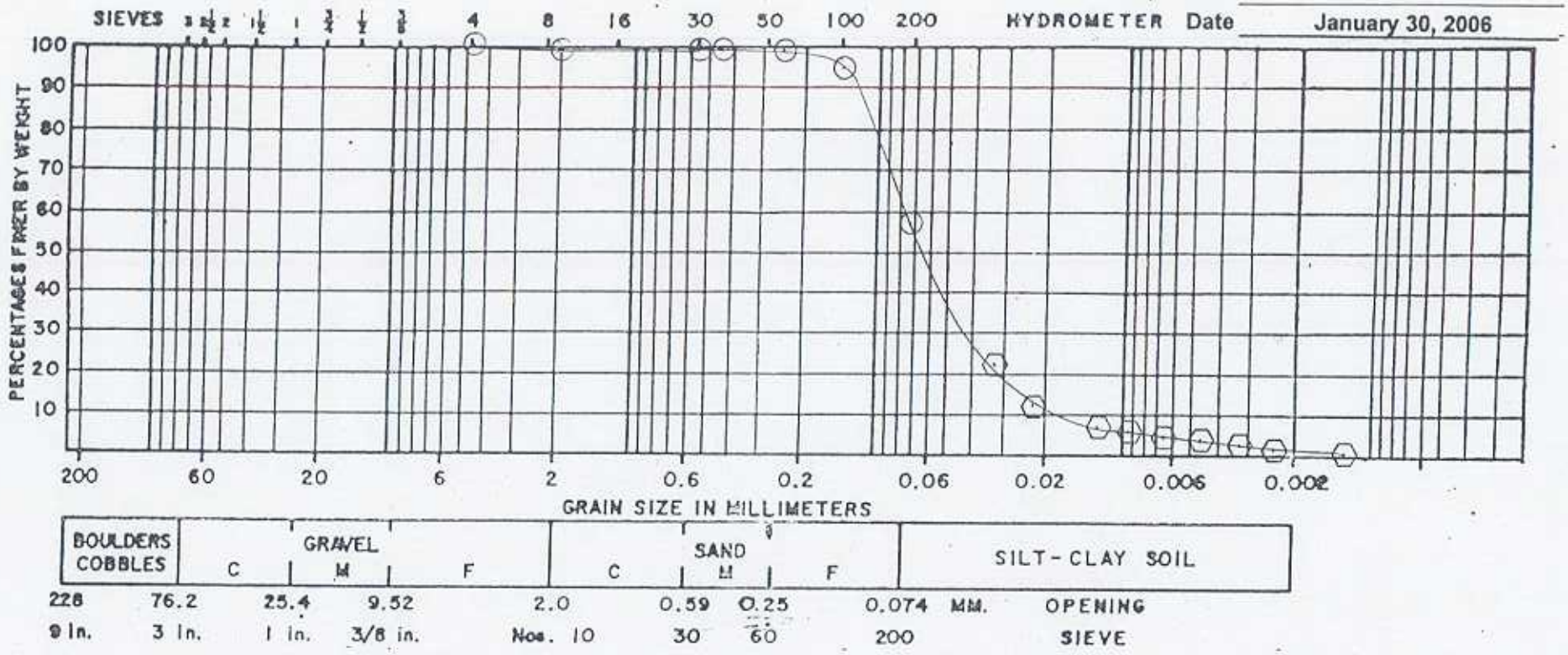
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 22
Date January 30, 2006



L-06003	Lab I.D. # 19903
Laboratory Testing	Boring # BH-8
NYSEG	Depth (Feet): 45.0-47.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

⊙ Sieve Analysis ASTM D422 & D1140
⊙ Hydrometer Analysis ASTM D422

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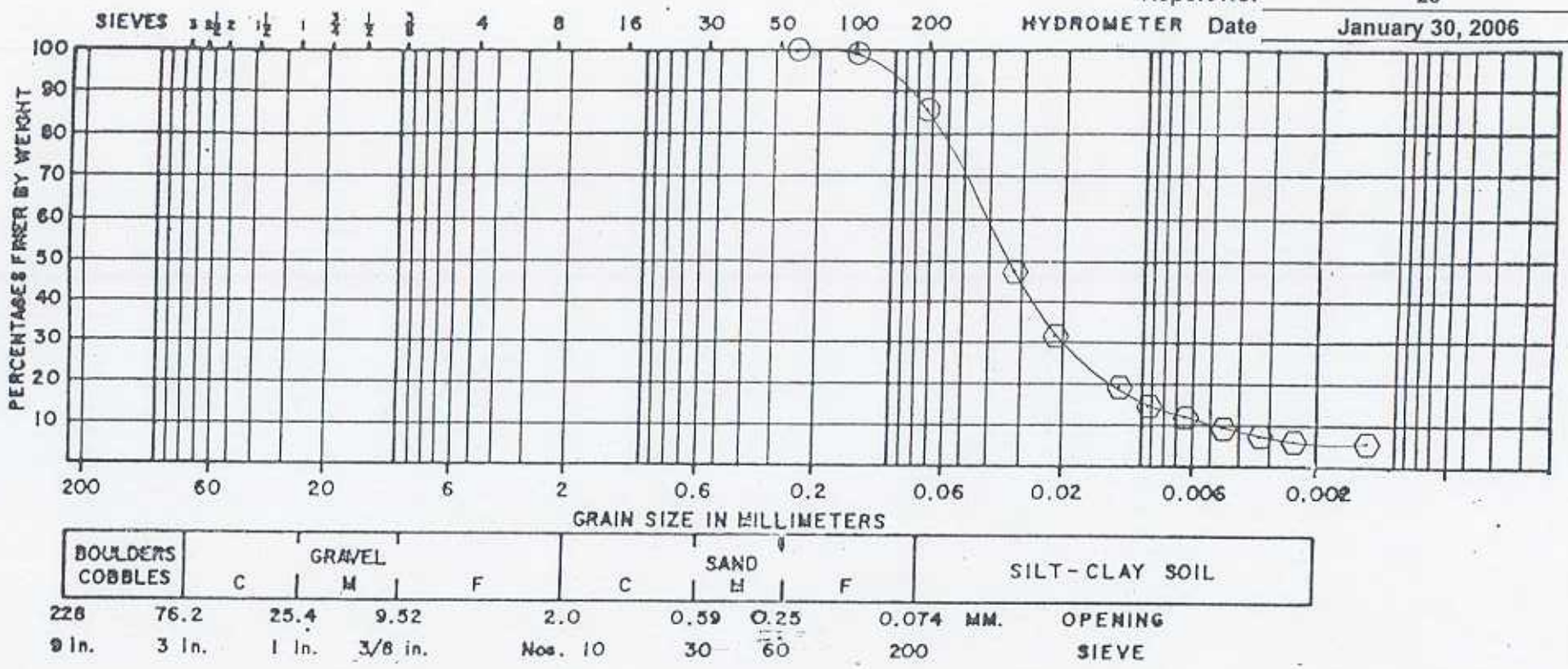
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 23
Date: January 30, 2006



L-06003	Lab I.D. # 19906
Laboratory Testing	Boring # BH-9
NYSEG	Depth (Feet): 35.0-37.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

⊙ Sieve Analysis ASTM D422 & D1140
⊙ Hydrometer Analysis ASTM D422

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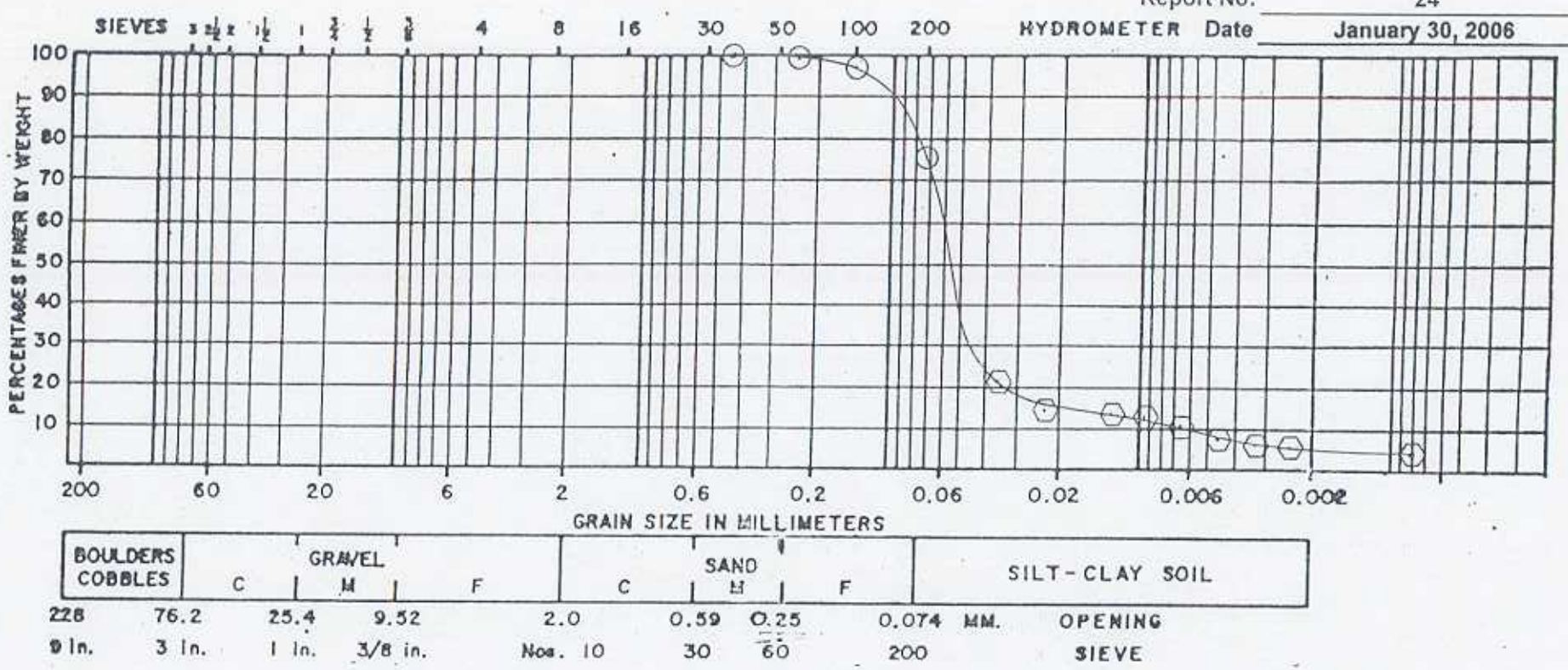
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 24
Date: January 30, 2006



L-06003	Lab I.D. # 19907
Laboratory Testing	Boring # BH-9
NYSEG	Depth (Feet): 37.0-39.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

⊙ Sieve Analysis ASTM D422 & D1140
⬡ Hydrometer Analysis ASTM D422

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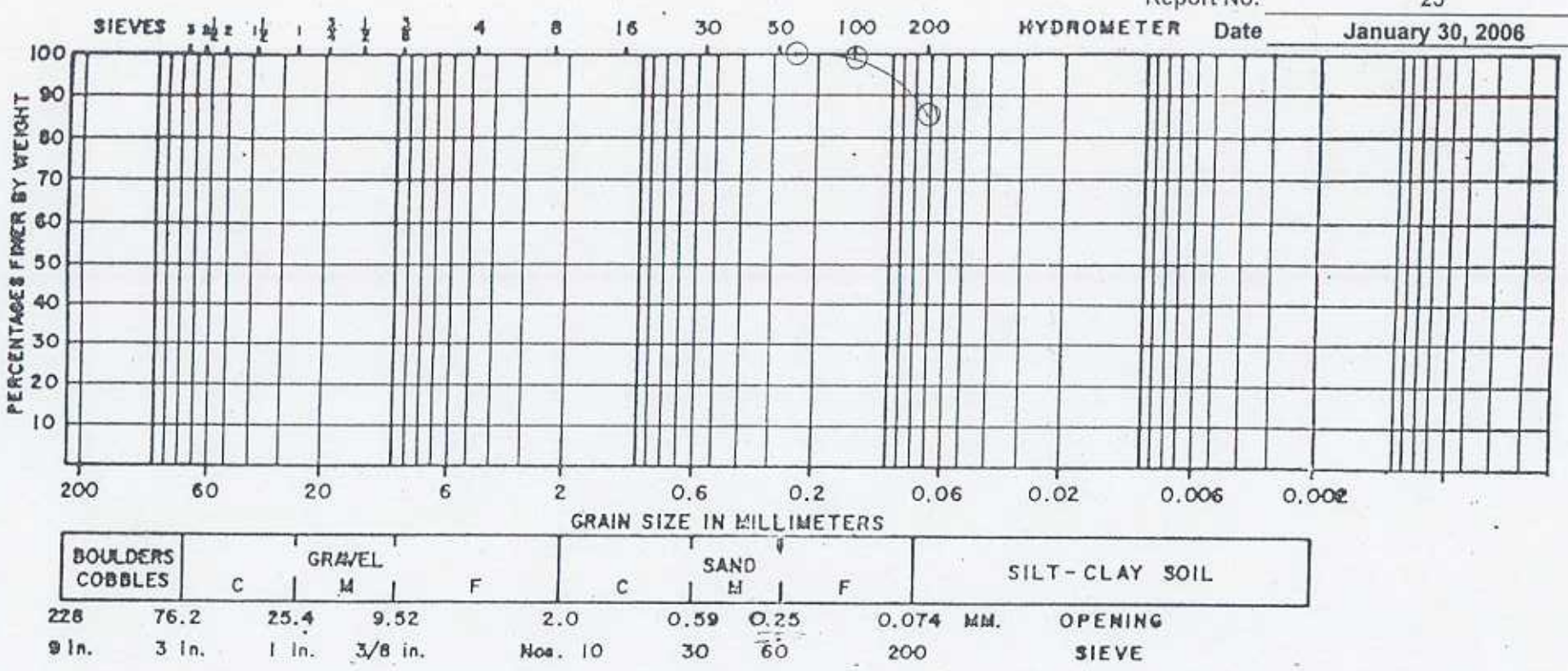
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 25
Date: January 30, 2006



L-06003	Lab I.D. # 19908
Laboratory Testing	Boring # BH-11
NYSEG	Depth (Feet): 15.0-17.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

⊙ Sieve Analysis ASTM D422 & D1140
⊙ Hydrometer Analysis ASTM D422

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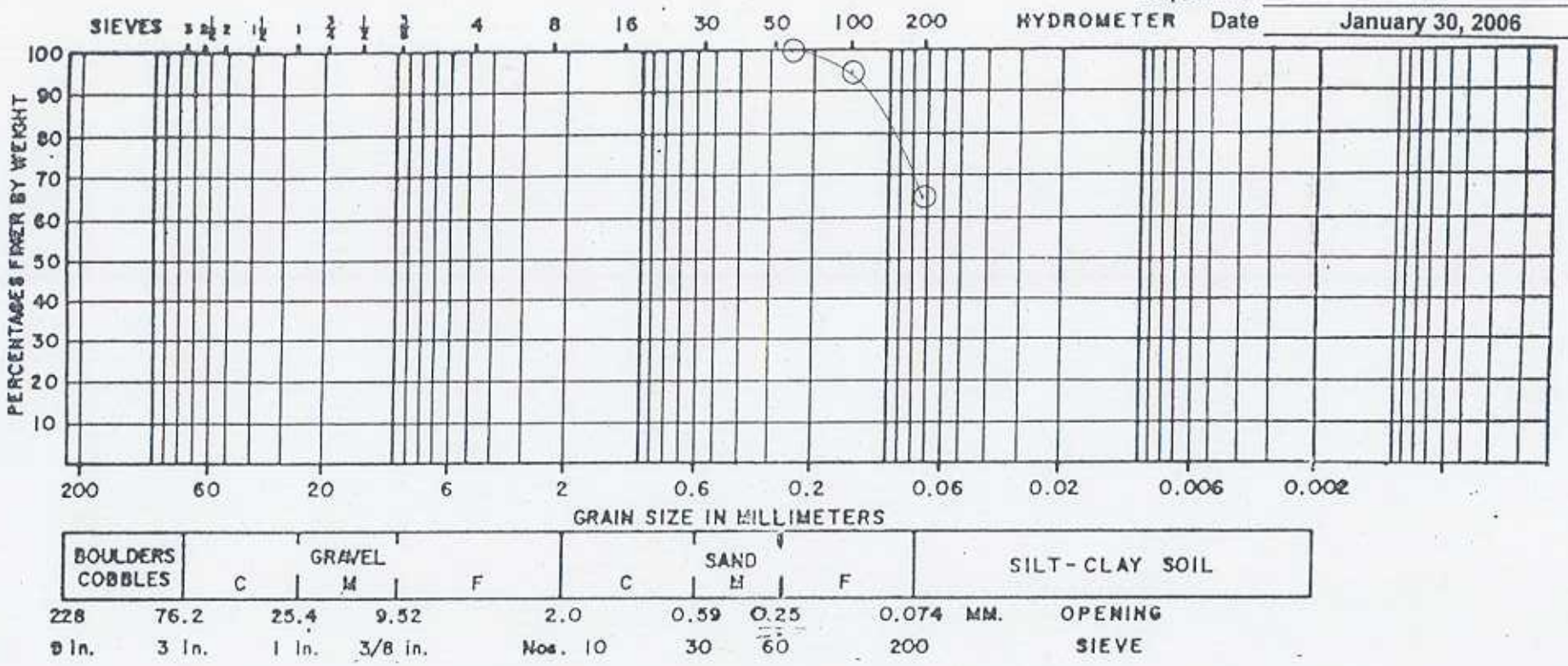
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 26
Date: January 30, 2006



L-06003	Lab I.D. # 19909
Laboratory Testing	Boring # BH-11
NYSEG	Depth (Feet): 20.0-22.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

① Sieve Analysis ASTM D422 & D1140
② Hydrometer Analysis ASTM D422

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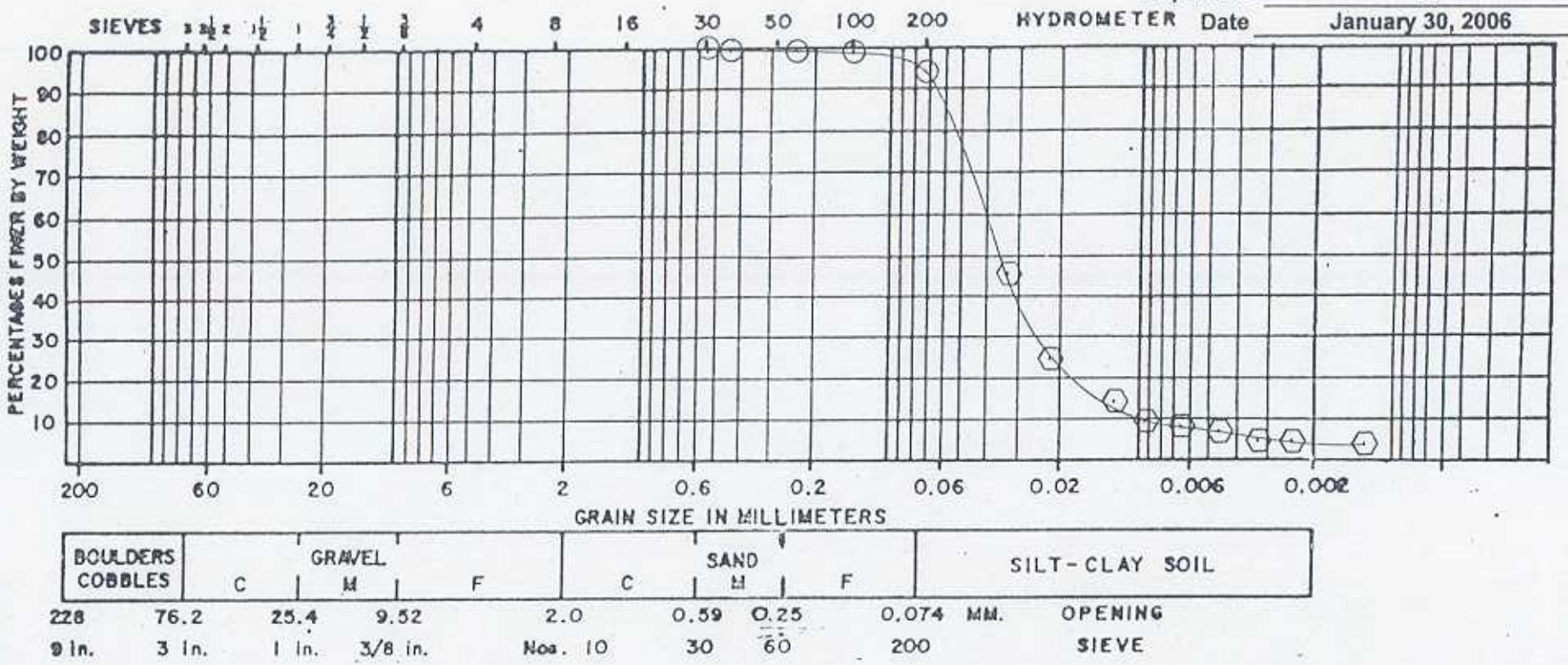
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 27
Date: January 30, 2006



L-06003	Lab I.D. # 19910
Laboratory Testing	Boring # BH-11
NYSEG	Depth (Feet): 30.0-32.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	
⊙ Sieve Analysis ASTM D422 & D1140	
⊙ Hydrometer Analysis ASTM D422	

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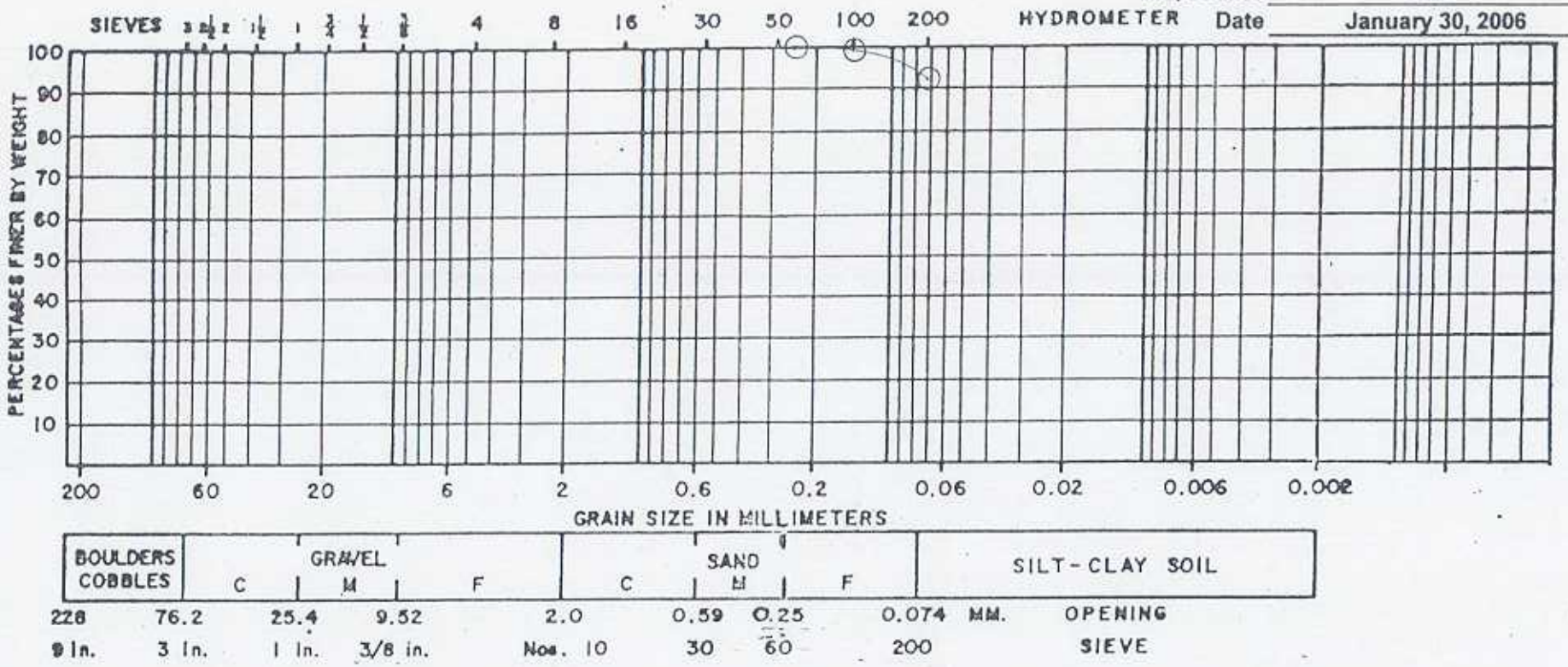
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 28
Date: January 30, 2006



L-06003	Lab I.D. # 19911
Laboratory Testing	Boring # BH-12
NYSEG	Depth (Feet): 15.0-17.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

⊙ Sieve Analysis ASTM D422 & D1140
⊙ Hydrometer Analysis ASTM D422

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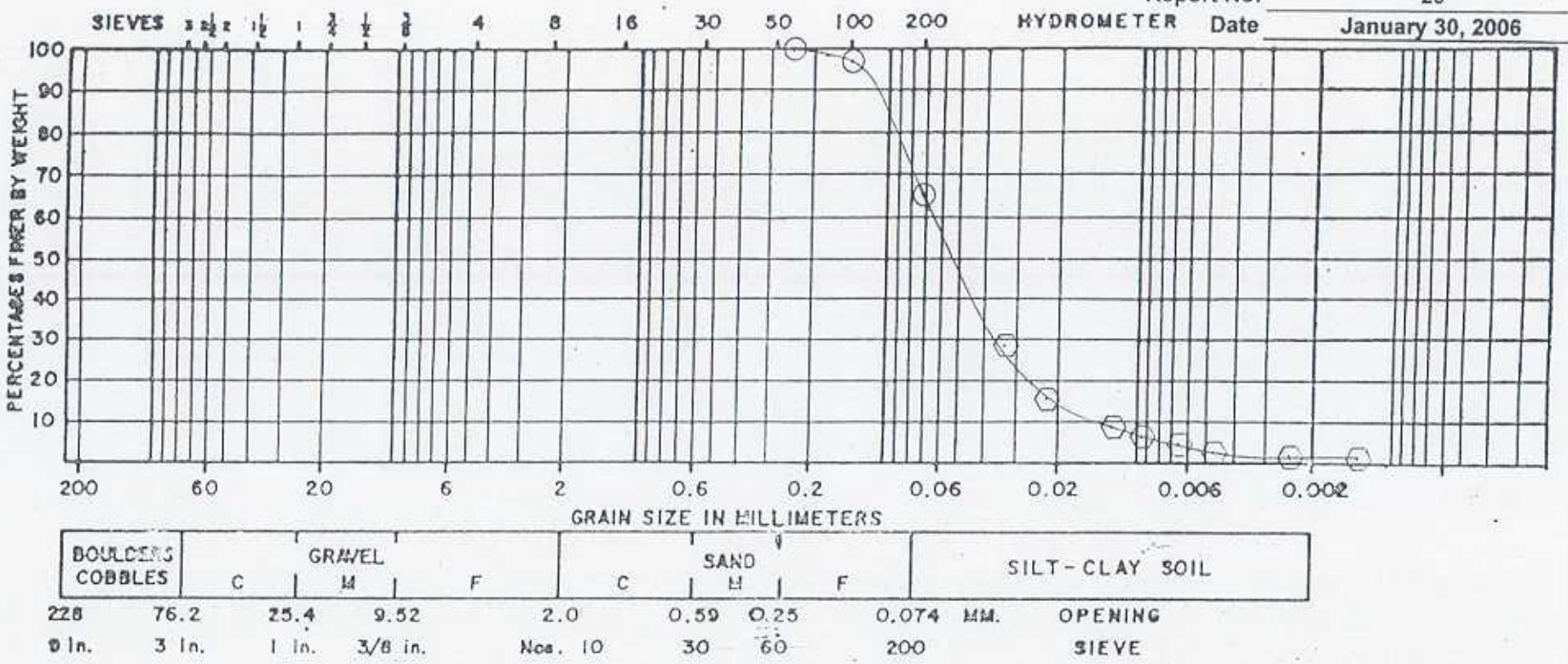
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 29
Date: January 30, 2006



L-06003	Lab I.D. # 19912
Laboratory Testing	Boring # BH-12
NYSEG	Depth (Feet): 27.0-29.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

⊙ Sieve Analysis ASTM D422 & D1140
⊙ Hydrometer Analysis ASTM D422

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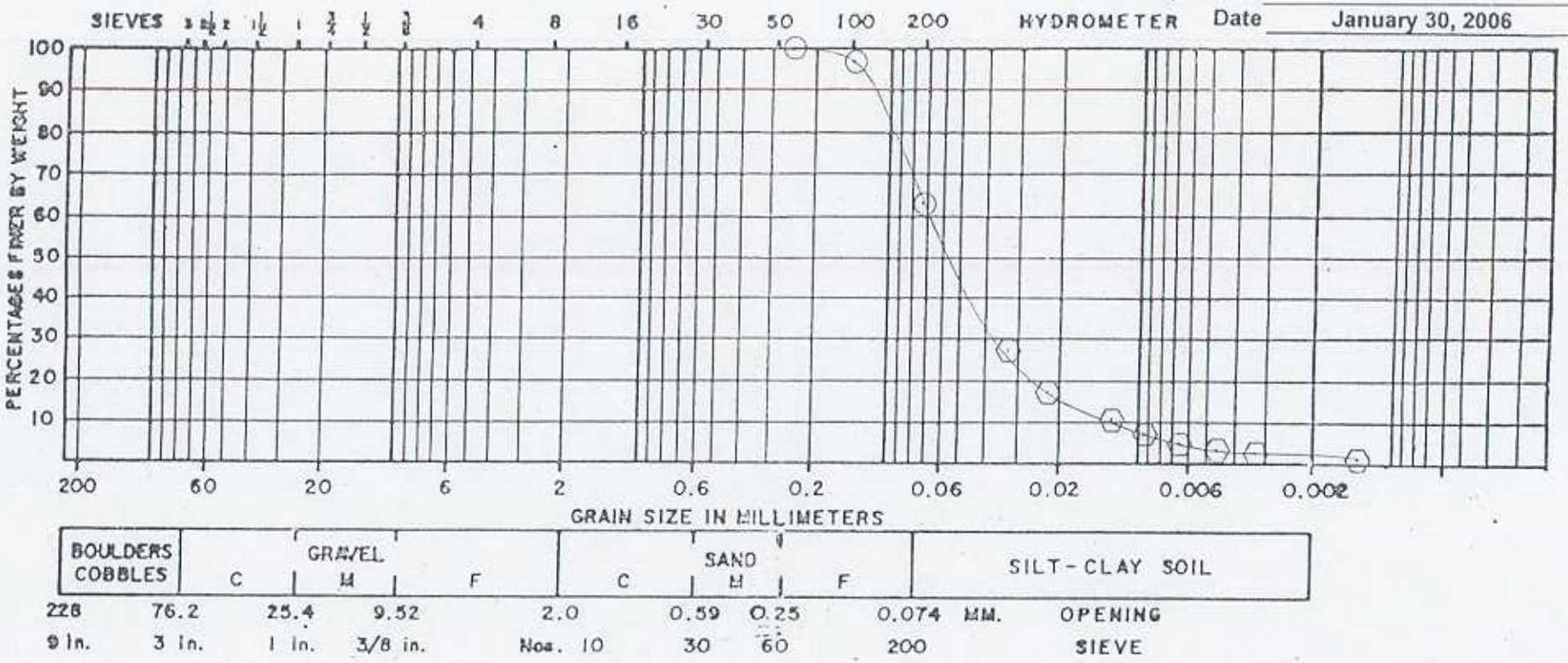
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 30
Date January 30, 2006



L-06003	Lab I.D. # 19913
Laboratory Testing	Boring # BH-12
NYSEG	Depth (Feet): 41.0-43.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	

⊙ Sieve Analysis ASTM D422 & D1140
⊙ Hydrometer Analysis ASTM D422

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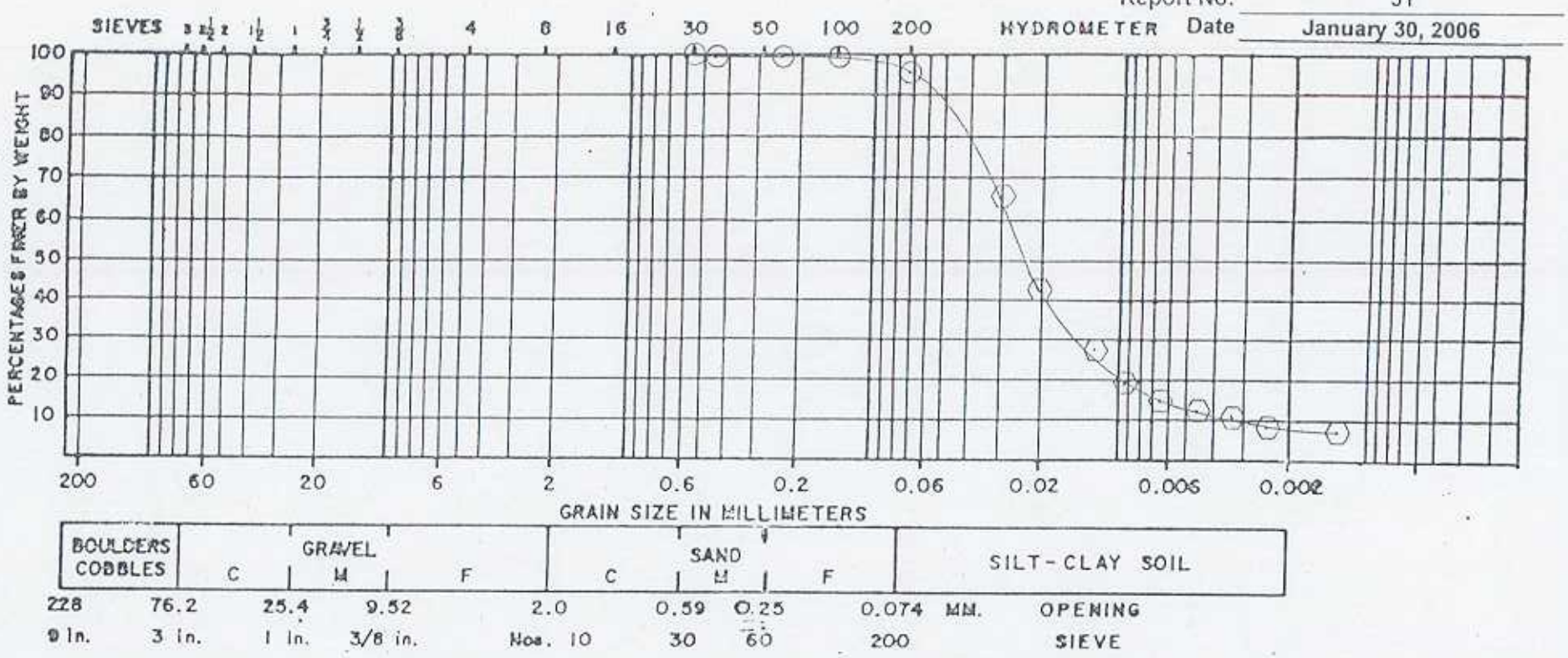
GRAIN SIZE ANALYSIS

Job No.: L-06003
Report No: 31
Date: January 30, 2006



L-06003	Lab I.D. # 19914
Laboratory Testing	Boring # BH-13
NYSEG	Depth (Feet): 21.0-23.0
Oneonta Former MGP Site	
Oneonta, New York	
File # 0130.13042 #1	
⊙ Sieve Analysis ASTM D422 & D1140	
⊘ Hydrometer Analysis ASTM D422	

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January 30, 2006

L-06003
Laboratory Testing
NYSEG
Oneonta Former MGP Site
Oneonta, New York
File #0130.13042 #1

ATTERBERG LIMITS
ASTM D4318

Lab ID #	Boring #	Depth (feet)	Plastic Limit	Liquid Limit	Plasticity Index
19882	BH-1	29.0-31.0	Non-Plastic	--	--
19883	BH-1	43.0-45.0	Non-Plastic	--	--
19891	BH-4	30.0-32.0	Non-Plastic	--	--
19902	BH-8	20.0-22.0	Non-Plastic	--	--
19906	BH-9	35.0-37.0	Non-Plastic	--	--
19914	BH-13	21.0-23.0	Non-Plastic	--	--

PW LABORATORIES,INC.
P.O. BOX 56, 5879 FISHER ROAD, EAST SYRACUSE, NY 13057
315-437-1420 • 866-7PW-LABS • Fax 315-437-1752

January 30, 2006

L-06003
Laboratory Testing
NYSEG
Oneonta Former MGP Site
Oneonta, New York
File #0130.13042 #1

SPECIFIC GRAVITY OF SOILS ASTM D854

Lab I.D. #	Boring #	Depth (feet)	Specific Gravity of Solids (G)
19882	BH-1	29.0-31.0	2.72
19889	BH-3	39.0-41.0	2.74
19892	BH-4	40.0-42.0	2.75
Composite 19897-19899	BH-7	19.0-25.0	2.73
Composite 19904-19905	BH-9	15.0-19.0	2.74
19910	BH-11	30.0-32.0	2.72
Composite 19915-19917	BH-13	31.0-37.0	2.75

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REPORT DATE: January 30, 2006

Test Start Date: January 26, 2006

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter ASTM D5084

Project No.: L-06003 / Project Title: Laboratory Testing NYSEG, Oneonta Former MGP Site, Oneonta, NY File #0130.13042 #1

ST. No: -- / Lab ID#: 19893 / Test Sample Location: BH-5

Depth/Lift/Elev.: 21.0' - 23.0' / Type of Sample: Undisturbed -- Remolded X

Method of Compaction: As necessary to acheive target density / Percent Compaction: --

Dry Unit Weight (PCF) Maximum: -- Initial: 108.3 / Moisture Content (% of Dry Weight): Optimum: -- Initial: 26.5

Initial Height (cm): 4.79 / Initial Diameter (cm): 6.05 / Initial Gradient: 58.7

Initial Degree of Saturation (B Value) (%): -- / Permeant Liquid Used: Deaired Deionized H_2O

Confining Pressure (PSI): 71.0 / Test (head) Pressure (PSI): 68.0 / Tail (back) Pressure (PSI): 64.0

Final Degree of Saturation (B Value) (%): 100 / Final Dry Unit Weight (PCF): 103.7 / Final Gradient: 58.1

Final Height (cm): 4.84 / Final Diameter (cm): 6.15 / Final Moisture Content (% of Dry Weight): 23.0

Final Four Determinations k (cm/sec)

$8.22X10^{-6}$	$8.25X10^{-6}$	$8.27X10^{-6}$	$8.25X10^{-6}$

Mean Value of Final Four Consecutive Determinations:

Coefficient of Permeability k (cm/sec): $8.25X10^{-6}$

Project Specifications: --

Notes:

PW LABORATORIES,INC.
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315-437-1420 • 866-7PW-LABS • Fax 315-437-1752

REPORT DATE: January 30, 2006

Test Start Date: January 26, 2006

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter ASTM D5084

Project No.: L-06003 / Project Title: Laboratory Testing NYSEG, Oneonta Former MGP Site, Oneonta, NY File #0130.13042 #1

ST. No: -- / Lab ID#: Composite 19904- 19905 / Test Sample Location: BH-9 (1)

Depth/Lift/Elev.: Composite 15.0' - 19.0' / Type of Sample: Undisturbed -- Remolded X

Method of Compactior: As necessary to acheive target density / Percent Compaction: --

Dry Unit Weight (PCF) Maximum: -- Initial: 125.0 / Moisture Content (% of Dry Weight): Optimum: -- Initial: 14.9

Initial Height (cm): 5.50 / Initial Diameter (cm): 7.25 / Initial Gradient: 51.2

Initial Degree of Saturation (B Value) (%): -- / Permeant Liquid Used: Deaired Deionized H_2O

Confining Pressure (PSI): 71.0 / Test (head) Pressure (PSI): 68.0 / Tail (back) Pressure (PSI): 64.0

Final Degree of Saturation (B Value) (%): 96 / Final Dry Unit Weight (PCF): 135.8 / Final Gradient: 54.8

Final Height (cm): 5.13 / Final Diameter (cm): 7.20 / Final Moisture Content (% of Dry Weight): 16.6

Final Four Determinations k (cm/sec)

$1.43X10^{-6}$ $1.42X10^{-5}$ $1.41X10^{-6}$ $1.40X10^{-6}$

Mean Value of Final Four Consecutive Determinations:

Coefficient of Permeability k (cm/sec): $1.42X10^{-6}$

Project Specifications: --

Notes: (1) Minus 1/2" material used in test sample.

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315-437-1420 • 866-7PW-LABS • Fax 315-437-1752

REPORT DATE: January 30, 2006

Test Start Date: January 26, 2006

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter ASTM D5084

Project No.: L-06003 / Project Title: Laboratory Testing NYSEG, Oneonta Former MGP Site, Oneonta, NY File #0130.13042 #1

ST. No: -- / Lab ID#: 19907 / Test Sample Location: BH-9

Depth/Lift/Elev.: 37.0' - 39.0' / Type of Sample: Undisturbed -- Remolded X

Method of Compacti -- / Percent Compaction: --

Dry Unit Weight (PCF) Maximum: -- Initial: 92.0 / Moisture Content (% of Dry Weight): Optimum: -- Initial: 22.7

Initial Height (cm): 5.45 / Initial Diameter (cm): 6.05 / Initial Gradient: 51.6

Initial Degree of Saturation (B Value) (%): -- / Permeant Liquid Used: Deaired Deionized H_2O

Confining Pressure (PSI): 71.0 / Test (head) Pressure (PSI): 68.0 / Tail (back) Pressure (PSI): 64.0

Final Degree of Saturation (B Value) (%): 100 / Final Dry Unit Weight (PCF): (1) / Final Gradient: 51.6

Final Height (cm) (1) / Final Diameter (cm): (1) / Final Moisture Content (% of Dry Weight): 25.3

Final Four Determinations k (cm/sec)

$5.08X10^{-5}$	$5.08X10^{-5}$	$5.08X10^{-5}$	$5.17X10^{-5}$

Mean Value of Final Four Consecutive Determinations:

Coefficient of Permeability k (cm/sec): $5.10X10^{-5}$

Project Specifications: --

Notes: (1)Due to significant deformation in the after test sample, original sample height and diameter were used in the calculation

JLT LABORATORIES, INC.

GEOTECHNICAL, GEOSYNTHETIC AND MATERIALS TESTING AND RESEARCH

January 17, 2006
06LS763.01

PW Laboratories, Inc.
5879 Fisher Road
PO Box 56
East Syracuse, NY 13057

Attn: Virginia Thoma

RE: DIRECT SHEAR TEST RESULTS
NYSEG PROJECT (L-06003)
ONEONTA FORMER MGP SITE

Dear Ms. Thoma:

JLT Laboratories, Inc. (JLT) is pleased to submit the results of direct shear testing performed on two (2) samples identified as BH-7 (19-25) and BH-13 (31-37) for the above referenced project. A third test, sample BH-9 (15-19), could not be performed due to sample quality (rock).

All testing was performed in accordance with ASTM D-3080 and subject to JLT's internal QA/QC and data validation procedures.

We appreciate the opportunity to provide our services and look forward to working with you again. Should you have any questions, comments or require additional information, please do not hesitate to call. Thank you.

Sincerely,

JLT LABORATORIES, INC.

John Boschuk, Jr., P.E.
President

Enclosures
JB/rdo
wp10\letter\061

938 South Central Avenue • Canonsburg, Pennsylvania 15317 Tel: (724) 746-4441 Fax: (724) 745-4261

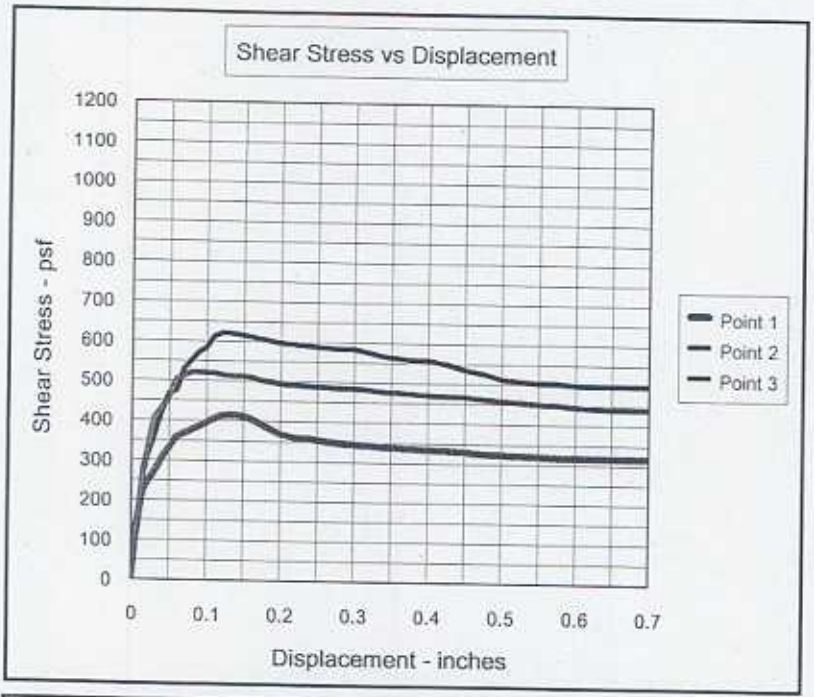
DIRECT SHEAR TEST RESULTS

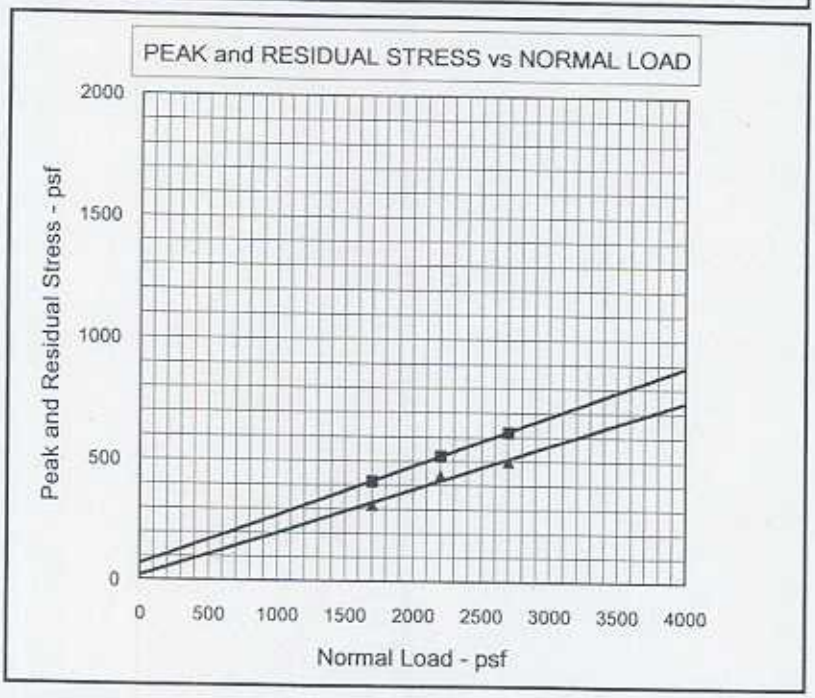
ASTM D-3080 2.5-inch Diameter Wykham Farrence Shear Box

JLT

Client: PW Laboratories, Inc.
Project: NYSEG (L-06003)
Oneonta Former MGP Site
Sample ID: BH-7 (19 - 25)

Date: 01/17/06
Project No.: 06LS763.01
Perf'd By: AG
Chk'd By: JB





COMPACTION PROPERTIES

Initial	Point 1	Point 2	Point 3
Moisture Cnt, %	25.70	25.70	25.70
Dry Density, pcf	92.0	92.0	92.0
Saturation , %	85.4	85.4	85.4
Void Ratio	0.797	0.797	0.797

At Test	Point 1	Point 2	Point 3
Moisture Cnt, %	29.37	28.99	28.60
Dry Density, pcf	92.9	93.4	93.9
Saturation , %	99.8	99.7	99.6
Void Ratio	0.780	0.770	0.761

Other Information:

Specified Soil Properties	Density	Moisture
Compacted as Specified	pcf	%
on test request form	92.0	25.7

CURVE DATA

Point	Normal Load psf	Peak Strength psf	Residual Strength psf
1	1700	416	318
2	2200	522	441
3	2700	621	500
4			
5			
6			

Displacement Rate: 0.005 in/min
Saturation: Yes

STRENGTH PROPERTIES
Best Fit Linear Regression

		Peak	Residual
Cohesion	psf	38	19
Friction	Degrees	11.6	10.3

Comments:

JLT Laboratories, Inc.

FIGURE - NYSEG BH-7

INPUT DATA FOR

JLT

PW Laboratories, Inc.
NYSEG (L-06003)
Oneonta Former MGP Site

BH-7 (19 - 25)

Date: 01/17/06
Project No.: 06LS763.01
Perf'd By: AG
Chk'd By: JB

UPPER GRAPH

Displacement inches	Point 1 Load lbs	Point 2 Load lbs	Point 3 Load lbs	Point 1 Stress psf	Point 2 Stress psf	Point 3 Stress psf
0.000	0.0	0.0	0.0	0.00	0.00	0.00
0.005	11.0	14.0	13.0	99.00	126.00	117.00
0.010	19.0	20.0	20.0	171.00	180.00	180.00
0.015	25.0	30.0	29.0	225.00	270.00	261.00
0.020	27.0	35.0	34.0	243.00	315.00	306.00
0.030	30.0	45.0	40.0	270.00	405.00	360.00
0.040	34.0	48.0	47.0	306.00	432.00	423.00
0.050	37.0	51.0	52.0	333.00	459.00	468.00
0.060	40.0	56.0	53.0	360.00	504.00	477.00
0.070	41.0	57.0	59.0	369.00	513.00	531.00
0.080	42.0	58.0	61.4	378.00	522.00	552.60
0.090	43.0	58.0	63.6	387.00	522.00	572.40
0.100	44.0	57.9	65.0	396.00	521.10	585.00
0.110	45.0	57.8	68.0	405.00	520.20	612.00
0.120	46.0	57.4	69.0	414.00	516.60	621.00
0.130	46.2	57.1	69.0	415.80	513.90	621.00
0.140	46.1	57.0	68.7	414.90	513.00	618.30
0.150	45.7	57.0	68.4	411.30	513.00	615.60
0.160	45.0	56.7	68.0	405.00	510.30	612.00
0.170	44.0	56.0	67.5	396.00	504.00	607.50
0.180	43.0	55.7	67.2	387.00	501.30	604.80
0.190	42.0	55.4	66.8	378.00	498.60	601.20
0.200	41.0	55.0	66.4	369.00	495.00	597.60
0.220	40.0	54.8	66.0	360.00	493.20	594.00
0.240	39.8	54.4	65.6	358.20	489.60	590.40
0.260	39.2	54.3	65.2	352.80	488.70	586.80
0.280	38.7	54.1	65.0	348.30	486.90	585.00
0.300	38.4	54.0	64.9	345.60	486.00	584.10
0.320	38.1	53.7	64.0	342.90	483.30	576.00
0.340	37.8	53.2	63.0	340.20	478.80	567.00
0.360	37.6	53.0	62.5	338.40	477.00	562.50
0.380	37.4	52.7	62.1	336.60	474.30	558.90
0.400	37.2	52.4	62.0	334.80	471.60	558.00
0.425	37.0	52.1	61.0	333.00	468.90	549.00
0.450	36.7	52.0	59.5	330.30	468.00	535.50
0.475	36.2	51.5	58.5	325.80	463.50	526.50
0.500	36.0	51.0	57.0	324.00	459.00	513.00
0.525	35.8	50.7	56.5	322.20	456.30	508.50
0.550	35.6	50.2	56.0	320.40	451.80	504.00
0.575	35.4	50.0	56.0	318.60	450.00	504.00
0.600	35.3	49.5	55.6	317.70	445.50	500.40
0.650	35.3	49.0	55.5	317.70	441.00	499.50
0.700	35.3	49.0	55.5	317.70	441.00	499.50

LOWER GRAPH

Pn	Peak	Residual
1700	415.8	317.7
2200	522.0	441.0
2700	621.0	499.5

Engineering Properties
Best Fit Linear Regression

	Peak	Residual
Slope, m	0.205	0.182
Cohesion	38.200	19.400
Phi, degrees	11.585	10.315

JLT *Laboratories, Inc.*

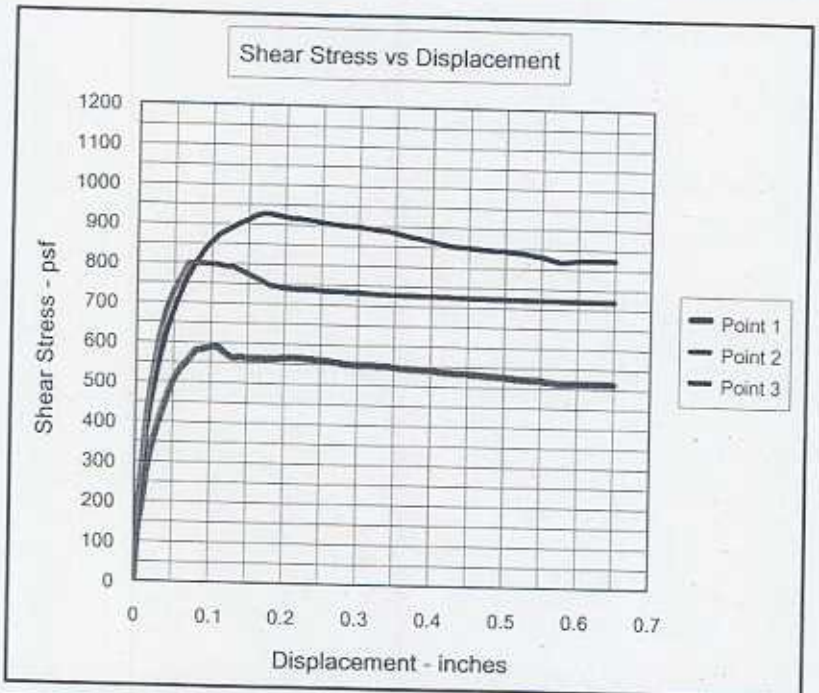
Data Record for
FIGURE - NYSEG BH-7

DIRECT SHEAR TEST RESULTS

ASTM D-3080 2.5 - inch Diameter Wykham Farrence Shear Box

Client: PW Laboratories, Inc.
Project: NYSEG (L-06003)
Oneonta Former MGP Site
Sample ID: BH-13 (31 - 37)

Date: 01/17/06
Project No.: 06LS763.01
Perf'd By: AG
Chk'd By: JB

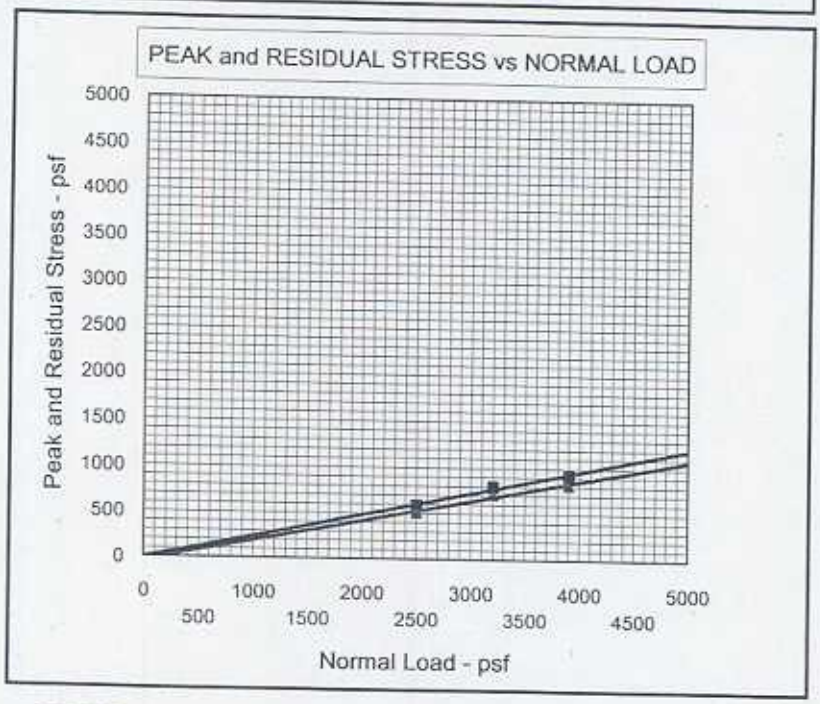


Compaction Properties

Initial	Point 1	Point 2	Point 3
Moisture Cnt, %	25.50	25.50	25.50
Dry Density, pcf	92.0	92.0	92.0
Saturation , %	84.7	84.7	84.7
Void Ratio	0.797	0.797	0.797

At Test	Point 1	Point 2	Point 3
Moisture Cnt, %	29.17	28.90	28.38
Dry Density, pcf	93.1	93.4	94.1
Saturation , %	99.6	99.4	99.3
Void Ratio	0.776	0.770	0.757

Other Information:



Specified Soil Properties	Density	Moisture
Compacted as Specified	pcf	%
on test request form	92.0	25.5

CURVE DATA

Point	Normal Load	Peak Strength	Residual Strength
	psf	psf	psf
1	2500	590	513
2	3200	800	720
3	3900	927	824
4			
5			
6			

Displacement Rate: 0.005 in/min
Saturation: Yes

STRENGTH PROPERTIES
Best Fit Linear Regression

		Peak	Residual
Cohesion	psf	1	0
Friction	Degrees	13.5	12.5

Comments:

JLT Laboratories, Inc.

FIGURE - NYSEG BH-13

INPUT DATA FOR

PW Laboratories, Inc.
NYSEG (L-06003)
Oneonta Former MGP Site

BH-13 (31 - 37)

Date: 01/17/06
Project No.: 06LS763.01
Perf'd By: AG
Chk'd By: JB

UPPER GRAPH

Displacement inches	Point 1 Load lbs	Point 2 Load lbs	Point 3 Load lbs	Point 1 Stress psf	Point 2 Stress psf	Point 3 Stress psf
0.000	0.0	0.0	0.0	0.00	0.00	0.00
0.005	15.0	21.0	18.0	135.00	189.00	162.00
0.010	22.0	33.5	29.5	198.00	301.50	265.50
0.015	30.0	45.9	41.5	270.00	413.10	373.50
0.020	36.0	55.0	49.5	324.00	495.00	445.50
0.030	44.0	67.0	60.2	396.00	603.00	541.80
0.040	50.5	75.5	68.9	454.50	679.50	620.10
0.050	56.1	81.1	75.5	504.90	729.90	679.50
0.060	59.5	85.0	81.0	535.50	765.00	729.00
0.070	61.7	88.9	85.5	555.30	800.10	769.50
0.080	64.5	88.9	89.3	580.50	800.10	803.70
0.090	65.0	88.8	92.5	585.00	799.20	832.50
0.100	65.5	88.7	95.0	589.50	798.30	855.00
0.110	65.5	88.6	96.9	589.50	797.40	872.10
0.120	63.7	88.1	98.1	573.30	792.90	882.90
0.130	62.5	88.0	99.3	562.50	792.00	893.70
0.140	62.9	87.0	100.4	566.10	783.00	903.60
0.150	62.5	86.0	101.3	562.50	774.00	911.70
0.160	62.5	85.0	102.5	562.50	765.00	922.50
0.170	62.5	84.0	103.0	562.50	756.00	927.00
0.180	62.4	83.0	102.9	561.60	747.00	926.10
0.190	62.5	82.7	102.6	562.50	744.30	923.40
0.200	62.9	82.3	102.1	566.10	740.70	918.90
0.220	62.8	82.0	101.8	565.20	738.00	916.20
0.240	62.5	82.0	101.2	562.50	738.00	910.80
0.260	62.2	81.7	100.5	559.80	735.30	904.50
0.280	61.5	81.6	100.1	553.50	734.40	900.90
0.300	61.2	81.4	99.8	550.80	732.60	898.20
0.320	61.1	81.2	99.2	549.90	730.80	892.80
0.340	60.9	81.0	98.7	548.10	729.00	888.30
0.360	60.5	80.9	97.7	544.50	728.10	879.30
0.380	60.2	80.8	96.9	541.80	727.20	872.10
0.400	60	80.7	96	540.00	726.30	864.00
0.425	59.5	80.6	94.9	535.50	725.40	854.10
0.450	59.2	80.5	94.5	532.80	724.50	850.50
0.475	58.9	80.4	94.0	530.10	723.60	846.00
0.500	58.5	80.3	93.8	526.50	722.70	844.20
0.525	58.0	80.2	93.3	522.00	721.80	839.70
0.550	57.8	80.1	92.4	520.20	720.90	831.60
0.575	57.0	80.1	90.9	513.00	720.90	818.10
0.600	57.0	80.0	91.5	513.00	720.00	823.50
0.650	57.0	80.0	91.5	513.00	720.00	823.50
0.700						

LOWER GRAPH

Pn	Peak	Residual
2500	589.5	513.0
3200	800.1	720.0
3900	927.0	823.5

Engineering Properties
Best Fit Linear Regression

	Peak	Residual
Slope, m	0.24	0.22
Cohesion	0.77	0.00
Phi, degrees	13.55	12.52

Data Record for
FIGURE - NYSEG BH-13

JLT Laboratories, Inc.

Attachment B

Boring Logs

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

Date Start/Finish: 11/18/05 - 11/21/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: HSA
Bit Size: NA
Auger Size: 4 1/4"
Rig Type: CME-75 Truck Mount
Sampling Method: SPT (2" Split Spoon)

Northing: 897106.32
Easting: 1231707.47
Casing Elevation: NA

Borehole Depth: 45.0' bgs
Surface Elevation: NA

Field Engineer Adam Chwalibog

Well/Boring ID: BH-1

Client: New York State Electric & Gas
Energy East Corporation

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
0 0	S-1	0-2	1.5	0.2	9 12 11 8	23		Brown fine to medium GRAVEL, some fine to medium Sand, little silt, occasional red brick. (Fill) (Medium Dense, Moist)	
								Augered through obstruction at 3' bgs.	
5 -5	S-2	5-7	0.5	120	3 1 2 2	3		Brown/gray Clayey SILT and fine SAND, little fine gravel, trace organics (roots). (Fill) (Soft, Moist) 5-7' bgs: Moderate MGP-like odor. Isolated zones of black stained soil.	Borehole tremied with cement-bentonite grout to grade Water measured inside augers at 7.7' bgs with bottom of auger at 10' bgs.
10 -10	S-3	10-12	0.9	6.4	2 17 20 22	37		Brown/black fine to medium SAND and GRAVEL, little silt. (Dense, Wet) Drillers noted cobbles @ 10' bgs. 12' bgs: Black stained gravel.	
15 -15	S-4	15-17	1.5	9.5	3 3	8		Brown SILT, little fine sand. (Loose, Wet)	

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

Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-1

Borehole Depth: 45.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-4	15-17	1.5	9.5	5 6	8		End 11/18/05 Start 11/21/05	
	S-5	17-19	1.6	0.8	3 3 3 3	6		SAA (Loose, Wet)	
20-*20*	S-6	19-21	2.0	0.4	4 2 2 3	4		Brown SILT, some fine Sand. (Loose, Wet)	Borehole tremied with cement-bentonite grout to grade
	S-7	21-23	2.0	0.1	4 4 3 6	7		Brown SILT and fine SAND. (Loose, Wet)	
	S-8	23-25	1.4	0.0	2 2 3 4	5		SAA (Loose, Wet)	
25-*25*	S-9	25-27	1.1	0.0	woh woh 1 1	1		SAA (Very Loose, Wet)	
	S-10	27-29	1.1	2.4	1 1 3 5	4		SAA (Loose, Wet)	
30-*30*	S-11	29-31	2.0	1.0	2 3 3 4	6		SAA, except occasional 1/4" Clayey SILT laminations. (Loose, Wet)	
	S-12	31-33	1.8	0.0	3 4 5 6	9		Brown SILT and fine SAND. (Loose, Wet)	
	S-13	33-35	1.5	0.0	3 3 5 6	8		Brown SILT and fine SAND, 1/2" red Silty CLAY varve @34.5' bgs. (Loose, Wet)	
35-*35*	S-14	35-37	1.2	0.0	2 4	8		Brown SILT and fine SAND. (Loose, Wet)	

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Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-1

Borehole Depth: 45.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-14	35-37	1.2	0.0	4 4	8			
	S-15	37-39	1.5	0.0	4 4 5 7	9		SAA (Loose, Wet)	
40-40	S-16	39-41	0.9	0.0	2 1 2 2	3		SAA (Very Loose, Wet)	Borehole tremied with cement-bentonite grout to grade
	S-17	41-43	1.2	0.0	3 3 4 7	7		SAA (Loose, Wet)	
	S-18	43-45	1.5	0.0	3 3 4 6	7		SAA, except 1/2" red Silty CLAY varve @44.7' bgs. (Loose, Wet)	
45-45								Boring terminated at 45' bgs.	
50-50									
55-55									

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Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Date Start/Finish: 11/29/05 - 12/1/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: Drive and Wash Casing
Bit Size: NA
Auger Size: 3" Casing
Rig Type: Tripod
Sampling Method: SPT (2" Split Spoon)

Northing: 897044.28
Easting: 1231690.64
Casing Elevation:

Borehole Depth: 47.0' bgs
Surface Elevation: N/A

Field Engineer Adam Chwalibog

Well/Boring ID: BH-2

Client: New York State Electric & Gas
Energy East Corporation

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
0 / 0	S-1	0-2	0.7	0.0	3 4 4 5	8		Brown fine to coarse SAND, some Silt, occasional concrete. (Fill) (Loose, Moist)	
5 / -5	S-2	5-6.5	1.4	0.0	11 12 47 50/ 0.0	59		Brown fine SAND, some Silt, little fine to medium gravel. (Fill) (Very Dense, Wet) End 11/29/05 Start 11/30/05 Drill casing refusal at 8' bgs. Moved 7' south and drilled casing to 10' bgs.	Borehole tremied with cement-bentonite grout to grade
10 / -10	S-3	11-11.8	0.5	0.7	55 50/ 0.3	50/ 0.3		Brown/black fine to medium GRAVEL and SAND, little silt. (Very Dense, Wet)	Water measured inside casing at 12.0' bgs with bottom of casing at 15' bgs.
15 / -15									

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Remarks:
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Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-2

Borehole Depth: 47.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-4	16-18	0.5	0.0	22 28 26 11	54		Brown fine to coarse SAND, little silt, trace fine gravel. (Very Dense, Wet)	
								End 11/30/05 Start 12/1/05	
20-*20*									Borehole tremied with cement-bentonite grout to grade
	S-5	21-23	0.6	0.0	13 16 14 14	30		Brown fine SAND and SILT. (Medium Dense, Wet)	
25-*25*									
	S-6	26-28	1.2	0.0	6 8 7 9	15		Brown SILT and fine SAND. (Medium Dense, Wet)	
30-*30*									
	S-7	30-32	1.5	0.0	5 5 5 6	10		SAA (Medium Dense, Wet)	
35-*35*									
	S-8	35-37	2.0	0.0	11 12	24		SAA (Medium Dense, Wet)	

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Remarks:
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Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-2

Borehole Depth: 47.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-8	35-37	2.0	0.0	12 15	24			
40-40	S-9	40-42	1.8	0.0	8 14 20 32	34		SAA (Dense, Wet)	Borehole tremied with cement-bentonite grout to grade
45-45	S-10	45-47	1.3	0.0	22 32 33 40	65		SAA (Very Dense, Wet) Boring terminated at 47' bgs.	
50-50									
55-55									

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Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Date Start/Finish: 11/28/05 - 11/29/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: HSA
Bit Size: NA
Auger Size: 4 1/4"
Rig Type: CME-75 Truck Mount
Sampling Method: SPT (2" Split Spoon)

Northing: 897058.47
Easting: 1231789.88
Casing Elevation:

Borehole Depth: 45.0' bgs
Surface Elevation: N/A

Field Engineer Adam Chwalibog

Well/Boring ID: BH-3

Client: New York State Electric & Gas
Energy East Corporation

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
0 / 0								Augered through 12" of Asphalt.	
	S-1	1-3	1.0	1.4	3 2 2 5	4		Light brown fine GRAVEL, little fine to coarse sand, little silt, occasional red brick, occasional black asphalt pieces. (Fill) (Loose, Moist)	
5 / -5	S-2	5-7	1.0	0.0	8 8 12 14	20		SAA (Medium Dense, Moist)	Borehole tremied with cement-bentonite grout to grade Water measured inside augers at 7.2' bgs with bottom of auger at 15' bgs.
10 / -10	S-3	10-12	1.1	5.4	5 7 7 7	14		Gray fine to medium GRAVEL and fine to coarse SAND, little silt. (Medium Dense, Wet) 10-12' bgs: Faint MGP-like odor. Sheen in groundwater.	
15 / -15	S-4	15-17	1.0	4.0	3 3	6		Brown SILT and fine SAND. (Loose, Wet)	

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Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-3

Borehole Depth: 45.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-4	15-17	1.0	4.0	3 4	6			
	S-5	17-19	1.8	1.7	5 2 1 1	3		SAA (Very Loose, Wet)	
20-20	S-6	19-21	1.5	0.0	woh woh 2 1	2		SAA, except occasional 1/4" red Silty CLAY laminations @ 21' bgs. (Very Loose, Wet) End 11/28/05 Start 11/29/05	Borehole tremied with cement-bentonite grout to grade
	S-7	21-23	1.8	0.0	2 3 3 3	6		Light brown SILT, some fine Sand. (Loose, Wet)	
	S-8	23-25	0.9	0.0	woh 1 2 2	3		Brown SILT, some fine Sand, few 1/8" red Silty CLAY laminations. (Very Loose, Wet)	
25-25	S-9	25-27	1.8	0.0	3 3 3 3	6		SAA (Loose, Wet)	
	S-10	27-29	2.0	0.0	3 4 4 3	8		Brown SILT and fine SAND. (Loose, Wet)	
30-30	S-11	29-31	1.8	0.0	4 4 3 3	7		SAA (Loose, Wet)	
	S-12	31-33	2.0	0.0	3 3 4 5	7		SAA (Loose, Wet)	
	S-13	33-35	1.9	0.0	3 3 4 3	7		SAA (Loose, Wet)	
35-35	S-14	35-37	1.0	0.0	1 1	3		SAA (Loose, Wet)	

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Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-3

Borehole Depth: 45.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-14	35-37	1.0	0.0	2 6	3		SAA (Loose, Wet)	
	S-15	37-39	2.0	0.0	2 2 3 4	5		SAA (Loose, Wet)	
40-40	S-16	39-41	1.7	0.0	3 3 4 3	7		SAA (Loose, Wet)	Borehole tremied with cement-bentonite grout to grade
	S-17	41-43	1.4	0.0	3 4 4 5	8		SAA (Loose, Wet)	
	S-18	43-45	1.0	0.0	3 3 3 3	6		Boring terminated at 45' bgs.	
45-45									
50-50									
55-55									

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Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Date Start/Finish: 11/17/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: HSA
Bit Size: NA
Auger Size: 4 1/4"
Rig Type: CME-75 Truck Mount
Sampling Method: SPT (2" Split Spoon)

Northing: 897081.62
Easting: 1231875.14
Casing Elevation:

Borehole Depth: 47.0' bgs
Surface Elevation: N/A

Field Engineer Adam Chwalibog

Well/Boring ID: BH-4

Client: New York State Electric & Gas
Energy East Corporation

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
0 / 0								Augered through 12" of Asphalt.	
	S-1	1-3	1.0	0.0	9 14 10 7	24		Black/brown fine to coarse SAND and fine GRAVEL, little silt, frequent red brick and black asphalt pieces. (Fill) (Medium Dense, Moist)	
5 / -5	S-2	5-7	2.0	158	2 2 2 2	4		Gray/brown SILT and CLAY, trace fine sand. (Fill) (Soft, Moist) 5-7' bgs: Moderate MGP-like odor. Isolated pockets of bronze stained soil.	Borehole tremied with cement-bentonite grout to grade
10 / -10	S-3	10-12	1.3	154	14 13 15 14	28		Gray/brown fine to medium GRAVEL, little fine to medium sand, little clayey silt, occasional red brick. (Fill) (Medium Dense, Wet) 10-12' bgs: Moderate MGP-like odor. Bronze stained soil in coarse material.	Water measured inside augers at 11.3' bgs with bottom of auger at 12' bgs.
15 / -15	S-4	15-17	1.4	6.7	woh woh	1		Brown SILT, little fine sand. (Very Loose, Wet) 15-17' bgs: Faint MGP-like odor. Sheen in the groundwater.	

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Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-4

Borehole Depth: 47.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-4	15-17	1.4	6.7	1 2	1			
20-*20*	S-5	20-22	1.5	1.0	woh woh 2 3	2		Light brown SILT, some fine Sand. (Very Loose, Wet)	Borehole tremied with cement-bentonite grout to grade
25-*25*	S-6	25-27	1.5	0.4	woh 1 3 2	4		SAA (Loose, Wet)	
30-*30*	S-7	30-32	1.3	0.0	woh woh 1 1	1		SAA (Very Loose, Wet)	
35-*35*	S-8	35-37	1.6	0.0	woh 1	3		Brown SILT and fine SAND. (Very Loose, Wet)	

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Remarks:
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Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-4

Borehole Depth: 47.0' bgs

DEPTH ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-8	35-37	1.6	0.0	2 2	3			
40-40	S-9	40-42	1.8	0.0	woh 2 3 4	5		SAA (Loose, Wet)	Borehole tremied with cement-bentonite grout to grade
45-45	S-10	45-47	1.0	0.0	woh woh woh woh	-		SAA (Very Loose, Wet) Boring terminated at 47' bgs.	
50-50									
55-55									

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Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Date Start/Finish: 11/22/05 - 11/23/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: HSA
Bit Size: NA
Auger Size: 4 1/4"
Rig Type: CME-75 Truck Mount
Sampling Method: SPT (2" Split Spoon)

Northing: 897147.46
Easting: 1231864.72
Casing Elevation:

Borehole Depth: 45.0' bgs
Surface Elevation: N/A

Field Engineer Adam Chwalibog

Well/Boring ID: BH-5

Client: New York State Electric & Gas
Energy East Corporation

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
0 / 0								Augered through 12" of Asphalt.	
	S-1	1-3	2.0	0.9	16 13 16 9	29		Black-brown fine GRAVEL and fine to coarse SAND, frequent black asphalt. (Fill) (Medium Dense, Moist)	
5 / -5	S-2	5-7	2.0	9.7	1 1 1 1	2		Black/green Organic SILT, little fine to medium gravel, occasional cinders, occasional metal pieces. (Fill) (Very Soft, Moist) 5-7' bgs: Strong MGP-like odor. Black tar-like material from 6-7' bgs occupying 50% pore space.	Borehole tremied with cement-bentonite grout to grade Water measured inside augers at 7.3' bgs with bottom of auger at 15' bgs.
10 / -10	S-3	10-12	2.0	51.0	1 2 16 9	18		SAA, except at 11' bgs gray fine to medium GRAVEL, little fine to medium sand, little silt, occasional black cinders, occasional red brick. (Fill) (Medium Dense, Wet) 10-12' bgs: Moderate MGP-like odor. Sheen in groundwater. Isolated zones of bronze oil-like material near 11' bgs occupying 20% pore space.	
15 / -15	S-4	15-17	0.7	553	5 3	5		Brown fine to coarse SAND, little fine to medium gravel, trace silt. (Loose, Wet)	

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Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-5

Borehole Depth: 45.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-4	15-17	0.7	553	2 2	5		15-17' bgs: Strong MGP-like odor. Sheen in groundwater. Bronze oil-like material in coarse soil occupying 80% pore space.	
	S-5	17-19	2.0	6.4	2 2 3 3	5		Gray-brown fine SILT and fine SAND. (Loose, Wet) 17-19' bgs: Moderate MGP-like odor. Sheen in groundwater. Bronze oil-like material near 17' bgs occupying 15% pore space	
20-*20*	S-6	19-21	2.0	7.0	7 5 5 7	10		SAA (Medium Dense, Wet) At 19' bgs switched to double casing. 3" casing inside 4 1/4" Hollow Stem Augers. 19-21' bgs: Faint MGP-like odor. Sheen on outside of split-spoon.	Borehole tremied with cement-bentonite grout to grade
	S-7	21-23	2.0	4.1	4 4 4 6	8		SAA, except light brown. (Loose, Wet)	
25-*25*	S-8	23-25	1.2	2.0	3 3 4 4	7		Brown fine SAND and SILT. At 24' bgs brown SILT, some fine Sand, occasional 1/4" red Silty CLAY laminations. (Loose, Wet)	
	S-9	25-27	0.0	4.4	2 3 3 2	6		Brown SILT and fine SAND, occasional 1/4" red Silty CLAY lamination near 27' bgs. (Loose, Wet)	
	S-10	27-29	1.8	0.7	11 10 8 13	18		Brown SILT and fine SAND. (Medium Dense, Wet)	
30-*30*									
	S-11	33-35	1.3	0.0	4 8 8 12	16		SAA (Medium Dense, Wet)	
35-*35*									

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Remarks:
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Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-5

Borehole Depth: 45.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-12	38-40	1.7	0.0	5 6 8 9	14		SAA (Medium Dense, Wet)	
40-40									Borehole tremied with cement-bentonite grout to grade
	S-13	43-45	2.0	0.0	3 5 8 11	13		SAA (Medium Dense, Wet)	
45-45								Boring terminated at 45' bgs.	
50-50									
55-55									

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Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Date Start/Finish: 11/16/05-11/17/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: HSA
Bit Size: NA
Auger Size: 4 1/4"
Rig Type: CME-75 Truck Mount
Sampling Method: SPT (2" Split Spoon)

Northing: 897218.92
Easting: 1231855.96
Casing Elevation:

Borehole Depth: 47.0' bgs
Surface Elevation: N/A

Field Engineer Adam Chwalibog

Well/Boring ID: BH-6

Client: New York State Electric & Gas
Energy East Corporation

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
0 / 0	S-1	0-2	0.5	N/A	8 5 5 2	10		Gray / brown fine to medium GRAVEL, little fine to coarse sand, trace silt, occasional red brick piece. (Fill) (Medium Dense, Moist)	
5 / -5	S-2	5-7	1.4	62.8	3 8 12 14	20		Gray / green fine to medium GRAVEL and fine to coarse SAND, little silt, occasional coal, slag and brick pieces. (Fill) (Medium Dense, Moist) 5-7' bgs: Strong MGP-like odor. Black tar-like material occupying 25% pore space.	Borehole tremied with cement-bentonite grout to grade Water measured inside augers at 8.3' bgs with bottom of auger at 10' bgs.
10 / -10	S-3	10-12	0.0	N/A	17 17 15 14	32		No Recovery	
	S-4	12-14	1.0	49.3	3 3 9 15	12		Gray fine to medium GRAVEL and fine to coarse SAND, little silt. (Medium Dense, Wet) 12-14' bgs: Strong MGP-like odor. Gold / black tar-like and oil-like material in coarse soil occupying 50% pore space.	
15 / -15	S-5	15-17	0.7	5.5	3 2	4		Gray / brown fine to medium SAND, little fine gravel, little silt. (Loose, Wet)	

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Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-6

Borehole Depth: 47.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-5	15-17	0.7	5.5	2 2	4		15-17' bgs: Moderate MGP-like odor. Sheen in groundwater. End 11/16/05 Start 11/17/05	
20-*20*	S-6	20-22	0.7	15.8	1 1 1 1	2		Brown SILT and fine SAND. (Very Loose, Wet) 20-22' bgs: Moderate MGP-like odor.	Borehole tremied with cement-bentonite grout to grade
25-*25*	S-7	25-27	2.0	0.5	4 3 3 4	6		SAA (Very Loose, Wet) 25-27' bgs: Very faint MGP-like odor.	
30-*30*	S-8	30-32	1.2	0.4	woh 2 4 5	6		SAA (Loose, Wet)	
35-*35*	S-9	35-37	1.0	0.0	1 1	2		SAA (Very Loose, Wet)	

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Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-6

Borehole Depth: 47.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-9	35-37	1.0	0.0	1 1	2			
40-40	S-10	40-42	1.5	0.0	1 2 1 1	3		Brown SILT and fine SAND, occasional 1/2" red Silty CLAY varve @ 40.5' bgs. (Very Loose, Wet)	Borehole tremied with cement-bentonite grout to grade
45-45	S-11	45-47	1.3	0.0	woh 1 1 3	2		Brown SILT and fine SAND. (Very Soft, Wet)	
								Boring terminated at 47' bgs.	
50-50									
55-55									

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Remarks:
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Date Start/Finish: 11/14/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: HSA
Bit Size: NA
Auger Size: 4 1/4"
Rig Type: CME-75 Truck Mount
Sampling Method: SPT (2" Split Spoon)

Northing: 897288.48
Easting: 1231848.78
Casing Elevation:

Borehole Depth: 45.0' bgs
Surface Elevation: N/A

Field Engineer Adam Chwalibog

Well/Boring ID: BH-7

Client: New York State Electric & Gas
Energy East Corporation

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes
0 / 0	S-1	0-2	1.2	0.0	4 4 3 4	7		Brown fine to medium GRAVEL and SAND, little coarse sand, trace organics (roots), frequent coal-like material. (Fill) (Loose, Moist)
5 / -5	S-2	5-7	1.5	0.0	4 4 2 4	6		Brown / gray / red SILT, little fine sand, trace clay. (Fill) (Medium Stiff, Moist)
10 / -10	S-3	10-12	0.6	0.7	2 2 3 2	5		Brown-gray fine GRAVEL and fine to coarse SAND, little silt, trace organics (wood). (Loose, Wet) 10-12' bgs: Faint MGP-like odor.
15 / -15	S-4	15-17	0.5	0.2	8 10	18		Gray fine to medium GRAVEL and fine to coarse SAND, little silt. (Medium Dense, Wet) 15-17' bgs: Faint MGP-like odor.

Borehole Completion:
- Borehole tremied with cement-bentonite grout to grade
- Water measured inside augers at 8.6' bgs with bottom of auger at 15' bgs.

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Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-7

Borehole Depth: 45.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-4	15-17	0.5	0.2	8 12	18		SAA (Medium Dense, Wet)	
	S-5	17-19	0.4	0.3	10 6 7 6	13			
20-*20*	S-6	19-21	1.5	0.0	1 1 1 1	2		Brown Clayey SILT, little fine sand. (Soft, Wet)	Borehole tremied with cement-bentonite grout to grade
	S-7	21-23	2.0	0.0	1 1 1 1	2		Brown SILT and fine SAND. (Loose, Wet)	
	S-8	23-25	0.6	0.0	1 woh 1 woh	1		SAA (Very Loose, Wet)	
25-*25*	S-9	25-27	1.8	0.0	woh 2 3 2	5		SAA (Loose, Wet)	
	S-10	27-29	2.0	0.0	2 3 5 6	8		SAA (Loose, Wet)	
30-*30*	S-11	29-31	1.0	0.0	1 1 1 2	2		SAA, except occasional 1/4" red Silty CLAY laminations. (Very Loose, Wet)	
	S-12	31-33	2.0	0.0	3 4 4 7	8		Brown SILT, little fine sand. (Loose, Wet)	
	S-13	33-35	2.0	0.0	1 1 2 3	3		SAA, except occasional 1/4" red Silty CLAY laminations. (Loose, Wet)	
35-*35*	S-14	35-37	1.3	0.0	2 2	5		Brown SILT, little fine sand. (Loose, Wet)	

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Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-7

Borehole Depth: 45.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-14	35-37	1.3	0.0	3 5	5			
	S-15	37-39	1.8	0.0	3 5 5 7	10		SAA (Medium Dense, Wet)	
40-*40*	S-16	39-41	1.1	0.0	3 3 5 7	8		SAA (Loose, Wet)	Borehole tremied with cement-bentonite grout to grade
	S-17	41-43	2.0	0.0	7 7 7 7	14		Brown fine SAND, some Silt. (Medium Dense, Wet)	
	S-18	43-45	2.0	0.0	7 7 8 10	15		SAA, except occasional 1/4" red Silty CLAY laminations.	
45-*45*								Boring terminated at 45' bgs.	
50-*50*									
55-*55*									

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Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Date Start/Finish: 11/11/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: HSA
Bit Size: NA
Auger Size: 4 1/4"
Rig Type: CME-75 Truck Mount
Sampling Method: SPT (2" Split Spoon)

Northing: 897250.82
Easting: 1231802.88
Casing Elevation:

Borehole Depth: 47.0' bgs
Surface Elevation: N/A

Field Engineer Adam Chwalibog

Well/Boring ID: BH-8

Client: New York State Electric & Gas
Energy East Corporation

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
0 / 0	S-1	0-2	1.0	0.3	3 4 4 5	8		Brown Silty fine SAND, some fine to medium Gravel, little coarse sand, trace organics (roots), frequent red brick and black coal-like material. (Fill) (Loose, Moist)	
5 / -5	S-2	5-7	1.0	21.3	4 5 8 8	13		Gray fine to coarse SAND and fine to medium GRAVEL, little silt, occasional red brick and black coal-like material. (Fill) (Medium Dense, Wet) 5-7' bgs: Moderate MGP-like odor.	Borehole tremied with cement-bentonite grout to grade Water measured inside augers at 8.4' bgs with bottom of auger at 12' bgs.
10 / -10	S-3	10-12	0.8	52.1	9 11 10 10	21		Gray fine to medium GRAVEL and fine to coarse SAND, little silt. (Medium Dense, Wet) 10-12' bgs: Moderate MGP-like odor. Bronze oil-like material on outside of spoon, occasional bronze stained soil within sample.	
15 / -15	S-4	15-17	1.5	9.4	1 3	7		Brown / gray fine SAND, some Silt grading to Clayey SILT, little fine sand. (Loose, Wet)	

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Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-8

Borehole Depth: 47.0' bgs

DEPTH ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-4	15-17	1.5	9.4	4 4	7		15-17' bgs: Moderate MGP-like odor. Sheen in the groundwater. Bronze oil-like material and black tar-like material pooled on top of sample near 15' bgs.	
20-*20*	S-5	20-22	1.3	4.2	woh woh 2 2	2		Gray / brown Clayey SILT, trace fine sand. (Soft, Wet) 20-22' bgs: Faint MGP-like odor. Little bronze oil-like material on outside of spoon. Sheen in groundwater.	Borehole tremied with cement-bentonite grout to grade
25-*25*	S-6	25-27	0.4	39.1	woh woh 1 1	1		Gray / brown fine SAND and SILT. (Very Loose, Wet) 25-27' bgs: Sheen in groundwater.	
30-*30*	S-7	30-32	1.2	5.3	1 2 2 3	4		Gray / brown SILT and fine SAND. (Loose, Wet)	
35-*35*	S-8	35-37	0.8	3.7	3 4	8		SAA (Loose, Wet)	

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Remarks:
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Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-8

Borehole Depth: 47.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-8	35-37	0.8	3.7	4 6	8			
40-40	S-9	40-42	0.8	2.3	woh woh 1 4	1		SAA (Loose, Wet)	Borehole tremied with cement-bentonite grout to grade
45-45	S-10	45-47	0.8	2.3	woh woh 2 5	2		SAA, except occasional 1/4" red Silty CLAY laminations. (Very Loose, Wet)	
								Boring terminated at 47' bgs.	
50-50									
55-55									

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Remarks:
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Date Start/Finish: 11/10/05-11/11/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: HSA
Bit Size: NA
Auger Size: 4 1/4"
Rig Type: CME-75 Truck Mount
Sampling Method: SPT (2" Split Spoon)

Northing: 897216.90
Easting: 1231737.22
Casing Elevation:

Borehole Depth: 45.0' bgs
Surface Elevation: N/A

Field Engineer Adam Chwalibog

Well/Boring ID: BH-9

Client: New York State Electric & Gas
Energy East Corporation

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
0 / 0	S-1	0-2	0.9	0.0	2 3 9 10	12		Brown fine to coarse SAND and GRAVEL, little silt, frequent red brick and black coal-like material. (Fill) (Medium Dense, Moist)	
5 / -5	S-2	5-7	1.0	0.0	5 4 2 5	6		Brown fine SAND, some fine to medium Gravel, little silt, little medium to coarse sand, frequent coal-like material and ash-like material, occasional brick. (Fill) (Loose, Moist)	Borehole tremied with cement-bentonite grout to grade
10 / -10	S-3	10-12	1.1	305	woh woh 1 1	1		Gray medium SAND, trace fine to medium gravel, frequent fine sand and silt zones, occasional wood piece. (Fill) (Very Loose, Wet) 10-12' bgs: Moderate MGP-like odor. Black stained soil throughout the sample. Sheen in groundwater.	Water measured inside augers at 8.3' bgs with bottom of auger at 15' bgs.
15 / -15	S-4	15-17	0.5	61	5 9	20		Gray fine to medium GRAVEL, little fine to coarse sand. (Medium Dense, Wet)	

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Remarks:
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Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-9

Borehole Depth: 45.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-4	15-17	0.5	61	11 3	20		15-17' bgs: Moderate MGP-like odor. Black staining near 15' bgs. Sheen in groundwater.	
	S-5	17-19	1.4	24.4	9 11 11 3	22		SAA, except at 18.5' bgs gray fine SAND, some Silt. (Medium Dense, Wet) 17-18' bgs: Sheen in groundwater.	
20-20	S-6	19-21	1.2	225	16 19 15 6	34		Gray fine to medium GRAVEL, little fine to coarse sand. (Dense, Wet) 19-21' bgs: Moderate MGP-like odor. Black tar-like material occupying 70% pore space.	Borehole tremied with cement-bentonite grout to grade
	S-7	21-23	1.1	841	2 2 3 2	5		Black fine GRAVEL grading to gray Clayey SILT at 22' bgs. (Loose, Wet) 21-23' bgs: Strong MGP-like odor. Black tar-like material occupying 85% pore space.	
	S-8	23-25	1.2	0.7	1 2 2 3	4		Brown Clayey SILT and fine SAND. (Soft, Wet)	
25-25	S-9	25-27	1.3	14.9	1 2 2 2	4		Brown SILT, some fine Sand. (Loose, Wet) 25-27' bgs: Sheen in groundwater.	
	S-10	27-29	1.4	0.9	3 3 3 3	6		Brown SILT, little fine sand. (Loose, Wet)	
30-30	S-11	29-31	1.0	2.2	1 1 2 4	3		SAA (Very Loose, Wet)	
	S-12	31-33	1.0	0.4	4 4 5 6	9		SAA (Loose, Wet)	
35-35	S-13	33-35	1.3	0.8	2 2 4 6	6		SAA (Medium Dense, Wet)	
	S-14	35-37	1.2	0.3	2 2	7		SAA, except few red Silty CLAY laminations. (Loose, Wet)	

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Remarks:
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Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-9

Borehole Depth: 45.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-14	35-37	1.2	0.3	5 5	7		Brown SILT, some fine Sand. (Loose, Wet)	
	S-15	37-39	2.0	1.2	4 5 4 4	9		SAA (Loose, Wet)	
40-40	S-16	39-41	1.0	5.7	3 2 4 7	6		SAA (Medium Dense, Wet)	Borehole tremied with cement-bentonite grout to grade
	S-17	41-43	2.0	2.0	10 12 15 7	27		41-43' bgs: Blows may be high because hammer not dropped properly.	
	S-18	43-45	1.6	1.6	4 5 6 6	11		SAA (Medium Dense, Wet)	
45-45								Boring terminated at 45.0' bgs.	
50-50									
55-55									

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Remarks:
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Date Start/Finish: 12/6/05-12/7/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: HSA
Bit Size: NA
Auger Size: 4 1/4"
Rig Type: CME-75 Truck Mount
Sampling Method: SPT (2" Split Spoon)

Northing: 897135.74
Easting: 1231657.18
Casing Elevation:

Borehole Depth: 47.0' bgs
Surface Elevation: N/A

Field Engineer Adam Chwalibog

Well/Boring ID: BH-11

Client: New York State Electric & Gas
Energy East Corporation

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
0	0	S-1	0-2	1.2	N/A	7 8 8 9	16		Brown Silty fine to coarse SAND and fine to medium GRAVEL, occasional red brick. (Fill) (Medium Dense, Moist)	
5	-5	S-2	5-7	1.5	0.4	6 7 7 6	14		SAA (Medium Dense, Moist)	Borehole tremied with cement-bentonite grout to grade
10	-10	S-3	10-12	0.9	30.3	5 5 3 7	8		Black fine to medium GRAVEL, some fine to coarse Sand, little silt. (Loose, Wet) 10-12' bgs: Moderate MGP-like odor. Black tar-like liquid in coarse material occupying 20% pore space.	Water measured inside casing at 12.6' bgs with bottom of casing at 15' bgs.
15	-15	S-4	15-17	1.3	6.1	2 3	7		Brown SILT, little fine SAND. (Loose, Wet)	

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Remarks:
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Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-11

Borehole Depth: 47.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-4	15-17	1.3	6.1	4 2	7		End 12/6/05 Start 12/7/05	
20-*20*	S-5	20-22	1.8	1.0	3 3 3 3	6		Brown SILT and fine SAND. (Loose, Wet)	Borehole tremied with cement-bentonite grout to grade
25-*25*	S-6	25-27	0.9	0.0	woh woh woh woh	N/A		Brown SILT, trace fine sand. (Very Loose, Wet)	
30-*30*	S-7	30-32	1.3	0.2	woh woh woh woh	N/A		SAA (Very Loose, Wet)	
35-*35*	S-8	35-37	1.5	0.0	woh woh	N/A		SAA (Very Loose, Wet)	

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Remarks:
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Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-11

Borehole Depth: 47.0' bgs

DEPTH ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-8	35-37	1.5	0.0	woh 1	N/A			
40-40	S-9	40-42	2.0	0.0	1 1 1 1	2		SAA (Very Loose, Wet)	Borehole tremied with cement-bentonite grout to grade
45-45	S-10	45-47	0.5	0.0	woh woh woh 3	N/A		SAA (Very Loose, Wet)	
								Boring terminated at 47' bgs.	
50-50									
55-55									

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Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Date Start/Finish: 12/5/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: HSA
Bit Size: NA
Auger Size: 4 1/4"
Rig Type: CME-75 Truck Mount
Sampling Method: SPT (2" Split Spoon)

Northing: 897101.83
Easting: 1231637.18
Casing Elevation:

Borehole Depth: 45.0' bgs
Surface Elevation: N/A

Field Engineer Adam Chwalibog

Well/Boring ID: BH-12

Client: New York State Electric & Gas
Energy East Corporation

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
0 / 0	S-1	0-2	0.9	0.0	3 3 4 4	7		Brown SILT, little organics (roots), little fine gravel. (Fill) (Medium Stiff, Moist)	
								0-5' bgs: Red brick in soil cuttings.	
5 / -5	S-2	5-7	1.3	0.0	2 4 8 10	12		SAA, except little fine to medium gravel, little fine sand. (Fill) (Medium Dense, Moist)	Borehole tremied with cement-bentonite grout to grade
								Obstruction encountered @ 8' bgs. Moved boring 5' south and 5' east.	Water measured inside augers at 8.3' bgs with bottom of auger at 10' bgs.
10 / -10	S-3	10-12	1.1	5.1	7 9 10 10	19		Gray fine to medium GRAVEL, little fine to coarse sand, little silt, few wood chips. (Fill) (Medium Dense, Wet)	
								10-12' bgs: Moderate MGP-like odor.	
15 / -15	S-4	15-17	1.4	0.2	8 6	11		Gray SILT, trace fine Sand. (Medium Dense, Wet) 15-17' bgs: Very faint MGP-like odor.	

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Remarks:
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Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-12

Borehole Depth: 45.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-4	15-17	1.4	0.2	5 5	11			
	S-5	17-19	1.7	0.0	5 5 6 4	11		SAA (Medium Dense, Wet)	
20-*20*	S-6	19-21	1.8	0.0	1 1 1 2	2		SAA, except few 1/4" brown fine SAND laminations. (Very Loose, Wet)	Borehole tremied with cement-bentonite grout to grade
	S-7	21-23	1.5	0.0	3 3 4 6	7		Brown SILT and fine SAND. (Loose, Wet)	
	S-8	23-25	1.5	0.0	3 3 4 5	7		SAA (Loose, Wet)	
25-*25*	S-9	25-27	1.3	0.0	woh woh 1 1	1		Brown SILT, some fine Sand, 1/2" red Silty CLAY varve near 26' bgs. (Very Loose, Wet)	
	S-10	27-29	1.7	0.0	1 2 2 2	4		Brown SILT and fine SAND. (Loose, Wet)	
30-*30*	S-11	29-31	1.4	0.0	woh 1 2 4	3		SAA, except few 1/4" red Silty CLAY varves near 30' bgs. (Loose, Wet)	
	S-12	31-33	2.0	0.0	4 4 6 6	10		Brown fine SAND and SILT. (Medium Dense, Wet)	
	S-13	33-35	1.4	0.0	woh woh woh 2	N/A		Brown SILT and fine SAND. (Very Loose, Wet)	
35-*35*	S-14	35-37	1.7	0.0	woh woh	1		Brown SILT, some fine Sand. (Very Loose, Wet)	

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Remarks:
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Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-12

Borehole Depth: 45.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-14	35-37	1.7	0.0	1 1	1			
	S-15	37-39	1.6	0.0	1 1 2 3	N/A		SAA (Very Loose, Wet)	
40-40	S-16	39-41	2.0	0.0	woh woh woh 2	N/A		Brown SILT and fine SAND. (Very Loose, Wet)	Borehole tremied with cement-bentonite grout to grade
	S-17	41-43	1.7	0.0	4 4 5 7	9		SAA (Loose, Wet)	
45-45	S-18	43-45	1.5	0.0	8 9 12 12	21		SAA (Medium Dense, Wet) Boring terminated at 45' bgs.	
50-50									
55-55									

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Date Start/Finish: 11/15/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: HSA
Bit Size: NA
Auger Size: 4 1/4"
Rig Type: CME-75 Truck Mount
Sampling Method: SPT (2" Split Spoon)

Northing: 897147.46
Easting: 1231768.55
Casing Elevation:

Borehole Depth: 43.0' bgs
Surface Elevation: N/A

Field Engineer Adam Chwalibog

Well/Boring ID: BH-13

Client: New York State Electric & Gas
Energy East Corporation

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
0 / 0	S-1	0-2	1.2	0.0	33 25 13 4	38		Brown fine to medium SAND and GRAVEL, frequent concrete pieces. (Fill) (Dense, Moist)	
5 / -5	S-2	5-7	1.7	6.8	1 1 1 2	2		Gray / brown Organic SILT, little fine sand, occasional wood chips. (Fill) (Soft, Wet) 5-7' bgs: Faint MGP-lilke odor.	Borehole tremied with cement-bentonite grout to grade Water measured inside augers at 7.4' bgs with bottom of auger at 10' bgs.
10 / -10	S-3	10-12	1.0	55.4	4 7 10 13	17		Gray fine to medium GRAVEL and fine to medium SAND, little silt, frequent red wood chips. (Fill) (Medium Dense, Wet) 10-12' bgs: Moderate MGP-like odor. Black tar-like material and bronze oil-like material in the coarse material occupying 20% pore space.	
15 / -15	S-4	15-17	1.2	1386	4 5	10		Gray fine to medium GRAVEL and fine to medium SAND, little silt. (Medium Dense, Wet)	

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Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-13

Borehole Depth: 43.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-4	15-17	1.2	1386	5 5	10		15-17' bgs: Strong MGP-like odor. Black tar-like material and bronze oil-like material in coarse material occupying 70% pore space.	
	S-5	17-19	1.6	21.0	1 1 2 5	3		Gray SILT and fine SAND. (Loose, Wet)	
20-*20*	S-6	19-21	1.3	6.9	2 2 3 3	5		SAA (Loose, Wet) At 20' drillers switched to double casing. Advanced boring using 3" casing inside 4 1/4" augers.	Borehole tremied with cement-bentonite grout to grade
	S-7	21-23	2.0	2.1	2 2 2 2	4		Gray SILT, trace fine sand, few 1/4" red-brown Silty CLAY laminations. (Loose, Wet)	
	S-8	23-25	1.5	3.2	1 3 2 1	5		Brown SILT, little fine sand. (Loose, Wet)	
25-*25*	S-9	25-27	0.0	0.8	4 4 4 4	8		No Recovery	
	S-10	27-29	1.0	0.7	9 9 6 8	15		Brown SILT and fine SAND. (Medium Dense, Wet)	
30-*30*	S-11	29-31	2.0	0.0	3 2 2 5	4		Brown SILT, some fine Sand. (Loose, Wet)	
	S-12	31-33	2.0	0.0	4 5 5 8	10		Brown SILT and fine SAND. (Medium Dense, Wet)	
	S-13	33-35	1.9	0.0	7 4 4 5	8		SAA (Loose, Wet)	
35-*35*	S-14	35-37	1.6	0.0	4 4	8		SAA (Loose, Wet)	

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Client: New York State Electric & Gas
Energy East Corporation

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: BH-13

Borehole Depth: 43.0' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-14	35-37	1.6	0.0	4 6	8		Brown fine SAND and SILT. (Medium Dense, Wet)	
	S-15	37-39	1.2	0.0	4 6 6 9	12		SAA (Medium Dense, Wet)	
40-40	S-16	39-41	1.6	0.0	5 6 7 7	13		SAA (Medium Dense, Wet)	Borehole tremied with cement-bentonite grout to grade
	S-17	41-43	2.0	0.0	6 6 6 6	12		Boring terminated at 43' bgs.	
45-45									
50-50									
55-55									

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Remarks:
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Date Start/Finish: 12/15/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: Drive and Wash Casing
Bit Size: N/A
Auger Size: 3" Casing
Rig Type: Barge Mounted Tripod
Sampling Method: SPT (2" Split Spoon)

Northing: 897168.89
Easting: 1231634.00
Casing Elevation: N/A

Borehole Depth: 12' bgs
Surface Elevation:

Field Engineer Adam Chwalibog

Well/Boring ID: SB-301

Client: New York State Electric & Gas
Energy East

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
0 / 0	S-1	0-2	0.0	0.0	3 1 1 1	2		No Recovery	
	S-2	2-4	0.7	5.4	1 2 4 13	6		Gray fine to medium GRAVEL, some fine to coarse Sand, trace silt. (Loose, Wet)	
5 / -5	S-3	4-6	0.5	7.6	46 44 42 38	86		Gray fine to medium GRAVEL, trace fine to coarse sand. (Very Dense, Wet) 4-6' bgs: Very faint MGP-like odor.	
	S-4	6-8	1.0	80.4	38 30 27 18	57		Brown fine to coarse SAND, some fine Gravel, trace silt. (Very Dense, Wet) 6-8' bgs: Moderate MGP-like odor. Sheen in groundwater. Occasional oil-like material in coarse soil occupying 10% pore space.	
	S-5	8-10	0.4	5.4	6 6 3 4	9		Brown SILT and fine SAND, little coarse sand. (Loose, Wet)	
10 / -10	S-6	10-12	1.6	4.0	6 3 4 4	7		Brown SILT and fine SAND. (Loose, Wet)	
15 / -15									

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Date Start/Finish: 12/14/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: Drive and Wash Casing
Bit Size: NA
Auger Size: 3" Casing
Rig Type: Barge Mounted Tripod
Sampling Method: SPT (2" Split Spoon)

Northing: 897187.99
Easting: 1231626.90
Casing Elevation: NA

Borehole Depth: 12' bgs
Surface Elevation:

Field Engineer Adam Chwalibog

Well/Boring ID: SB-302

Client: New York State Electric & Gas
Energy East

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
0 0	S-1	0-2	0.4	0.9	5 10 18 17	28		Brown fine to medium SAND and GRAVEL, little silt, frequent cobbles encountered. (Medium Dense, Wet)	
	S-2	2-4	0.7	0.5	16 33 27 49	60		SAA (Very Dense, Wet)	
5 -5	S-3	4-6	1.3	1.1	87 81 72 67	153		SAA (Very Dense, Wet)	
	S-4	6-8	1.5	6.4	42 36 32 23	66		SAA (Very Dense, Wet) 6-8' bgs: Faint MGP-like odor. Sheen in groundwater.	
	S-5	8-10	0.6	3.0	17 10 15 4	25		Brown SILT and fine SAND, trace fine gravel. (Medium Dense, Wet) 8-10' bgs: Faint MGP-like odor. Sheen in groundwater.	
10 -10	S-6	10-12	1.6	4.6	7 4 4 3	8		SAA (Loose, Wet)	
								Boring terminated at 12' bgs.	
15 -15									

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Remarks:
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Date Start/Finish: 12/20/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: Drive and Wash Casing
Bit Size: NA
Auger Size: 3" Casing
Rig Type: Barge Mounted Tripod
Sampling Method: SPT (2" Split Spoon)

Northing: 897183.90
Easting: 1231644.88
Casing Elevation: NA

Borehole Depth: 10' bgs
Surface Elevation:

Field Engineer Adam Chwalibog

Well/Boring ID: SB-303 / PZ-2-05

Client: New York State Electric & Gas
Energy East

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes
0 0	S-1	0-2	1.2	1.0	7 5 6 7	11		Brown fine to coarse SAND, little fine gravel, trace silt, frequent red brick pieces. (Fill) (Medium Dense, Wet)
	S-2	2-4	0.7	1.4	15 16 20 27	36		Brown fine to medium GRAVEL, some fine to coarse Sand, trace silt, occasional brick piece. (Fill) (Dense, Wet)
5 -5	S-3	4-6	0.6	9.7	26 26 52 100/ 0.2'	78		Gray / brown fine to coarse GRAVEL, little fine to coarse sand, trace silt. (Very Dense, Wet) 4-6' bgs: Bronze oil-like material towards 6' bgs occupying 15-20% pore space.
	S-4	6-8	1.0	54.0	35 16 10 6	26		Brown coarse SAND and fine GRAVEL, little silt, little fine sand. (Medium Dense, Wet) 6-8' bgs: Strong MGP-like odor. Sheen in groundwater. Bronze oil-like material occupying 50% pore space.
	S-5	8-10	1.3	8.0	11 6 5 5	11		Brown SILT and fine SAND, trace coarse sand. (Medium Dense, Wet) 8-10' bgs: Faint MGP-like odor.
10 -10								Boring terminated at 10' bgs.
15 -15								

Borehole Completion:
- 2" Black Steel Pipe (2.5' ags - 6.5' bgs)
- 2" Stainless Steel Well Point (6.5' bgs - 8.5' bgs, screened from 6.8' bgs - 8.0' bgs)

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Remarks:
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Date Start/Finish: 12/21/05 - 12/22/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: Drive and Wash Casing
Bit Size: NA
Auger Size: 3" Casing
Rig Type: Barge Mounted Tripod
Sampling Method: SPT (2" Split Spoon)

Northing: 897203.19
Easting: 1231652.72
Casing Elevation: NA

Borehole Depth: 12' bgs
Surface Elevation:

Field Engineer Adam Chwalibog

Well/Boring ID: SB-304

Client: New York State Electric & Gas
Energy East

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
									▼
0 0	S-1	0-2	0.2	0.5	20 40 22 21	62		Brown Coarse SAND, little fine gravel. (Very Dense, Wet) 0-2' bgs: Cobbles observed on creek bed.	
	S-2	2-4	0.4	0.7	21 18 19 25	37		Gray fine to medium GRAVEL, some fine to coarse Sand, trace silt. (Loose, Wet)	
5 -5	S-3	4-6	0.6	0.5	16 24 18 74	42		Gray fine to medium GRAVEL, trace fine to coarse sand. (Very Dense, Wet)	
	S-4	6-8	1.0	1.1	20 15 15 11	30		Brown fine to coarse SAND, some fine Gravel, trace silt. (Very Dense, Wet)	
	S-5	8-10	1.3	7.8	71 28 35 42	63		Brown SILT and fine SAND, little coarse sand. (Dense, Wet) 8-10' bgs: Moderate MGP-like odor. Occasional black / gold oil-like material occupying 10% pore space.	
10 -10	S-6	10-12	1.6	5.3	19 6 4 4	10		Brown SILT and fine SAND. (Dense, Wet)	
								Boring terminated at 12' bgs.	
15 -15									

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Remarks:
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Date Start/Finish: 12/23/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: Drive and Wash Casing
Bit Size: NA
Auger Size: 3" Casing
Rig Type: Barge Mounted Tripod
Sampling Method: SPT (2" Split Spoon)

Northing: 897210.58
Easting: 1231674.64
Casing Elevation: NA

Borehole Depth: 14' bgs
Surface Elevation:

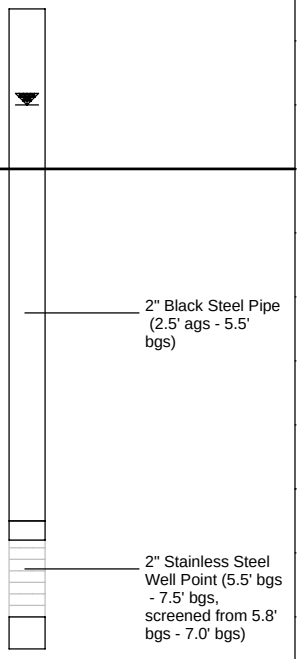
Field Engineer Adam Chwalibog

Well/Boring ID: SB-305 / PZ-1-05

Client: New York State Electric & Gas
Energy East

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes
0 0	S-1	0-2	1.0	0.4	3 3 5 11	8		Brown fine to coarse SAND and fine GRAVEL, occasional red brick pieces. (Fill) (Loose, Wet)
	S-2	2-4	1.2	0.3	62 53 47 45	100		SAA, except no brick pieces. (Very Dense, Wet)
5 -5	S-3	4-6	0.7	0.2	18 16 16 14	32		Gray fine to coarse SAND, some fine to medium Gravel, trace silt. (Dense, Wet)
	S-4	6-8	1.7	0.2	12 16 16 81	32		Gray fine to medium SAND and GRAVEL, little silt. (Dense, Wet)
	S-5	8-10	0.9	1.4	55 40 45 40	95		SAA (Very Dense, Wet)
10 -10	S-6	10-12	0.8	0.5	61 28 40 39	68		SAA (very Dense, Wet)
	S-7	12-14	1.9	0.5	11 3 3 8	6		Brown SILT and fine SAND. (Loose, Wet)
15 -15								Boring terminated at 14' bgs.



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Remarks:
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Date Start/Finish: 12/7/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: HSA
Bit Size: NA
Auger Size: 4 1/4"
Rig Type: CME-75 Truck Mount
Sampling Method: SPT (2" Split Spoon)

Northing: 897105.35
Easting: 1231631.34
Casing Elevation: NA

Borehole Depth: 18' bgs
Surface Elevation:

Field Engineer Adam Chwalibog

Well/Boring ID: SB-306

Client: New York State Electric & Gas
Energy East

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
0 / 0	S-1	0-2	0.9	0.0	4, 5, 7, 8	12		Brown Silty SAND, some fine to medium Gravel, little organics (peat). (Fill) (Medium Dense, Moist)	
	S-2	2-4	0.5	0.5	3, 5, 5, 8	10		SAA (Medium Dense, Moist)	
5 / -5	S-3	4-6	0.5	0.5	3, 2, 2, 2	4		Brown Silty fine SAND, trace fine gravel. (Fill) (Loose, Moist)	Borehole tremied with cement-bentonite grout to grade
	S-4	6-8	0.8	0.9	2, 2, 5, 7	7		SAA (Loose, Wet)	
	S-5	8-10	1.4	295	12, 15, 15, 20	30		Black fine to medium GRAVEL, occasional red brick pieces. (Fill) (Dense, Wet) 8-10' bgs: Moderate MGP-like odor. Black stained soil near 10' bgs.	
10 / -10	S-6	10-12	1.6	124	16, 16, 14, 18	30		SAA (Dense, Wet) 10-12' bgs: Strong MGP-like odor. Sheen in groundwater. Black stained soil.	
	S-7	12-14	0.9	99	20, 21, 17, 19	38		Black / brown / gray fine to medium GRAVEL, little fine to medium sand. (Dense, Wet) 12-14' bgs: Moderate MGP-like odor. Sheen in groundwater. Black tar-like material occupying 40% pore space.	
15 / -15	S-8	14-16	0.6	61.8	10, 14, 11, 7	25		Brown fine to coarse SAND, little silt, little fine gravel. (Medium Dense, Wet)	

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Client: New York State Electric & Gas
Energy East

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: SB-306

Borehole Depth: 18' bgs

DEPTH ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-9	16-18	1.3	39.0	woh 3 2 2	6		Brown SILT and fine SAND. (Loose, Wet)	Borehole tremied with cement-bentonite grout to grade
								Boring terminated at 18' bgs.	
20-*20*									
25-*25*									
30-*30*									
35-*35*									

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Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Date Start/Finish: 12/8/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: HSA
Bit Size: NA
Auger Size: 4 1/4"
Rig Type: CME-75 Truck Mount
Sampling Method: SPT (2" Split Spoon)

Northing: 897120.09
Easting: 123643.27
Casing Elevation: NA

Borehole Depth: 14' bgs
Surface Elevation:

Field Engineer Adam Chwalibog

Well/Boring ID: SB-307

Client: New York State Electric & Gas
Energy East

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
0 0	S-1	0-2	1.2	2.0	12 12 4 3	16		Brown Silty fine to medium SAND, little fine to medium gravel, occasional black coal-like material. (Fill) (Medium Dense, Moist)	
	S-2	2-4	0.8	2.7	5 4 2 1	6		SAA, except some fine to medium Gravel. (Fill) (Loose, Moist)	
5 -5	S-3	4-6	1.3	22.2	2 3 2 3	5		Brown Silty fine SAND, little fine to medium gravel, occasional wood chip. (Fill) (Loose, Moist)	Borehole tremied with cement-bentonite grout to grade
	S-4	6-8	1.6	3.8	3 3 3 4	6		Brown / gray fine Organic SILT, little fine sand, occasional wood chips. (Fill) (Medium Dense, Wet)	
	S-5	8-10	1.5	488	8 8 10 11	18		Brown-gray fine to coarse SAND and GRAVEL, little silt. (Medium Dense, Wet) 8-10' bgs: Moderate MGP-like odor. Black staining in coarse soil. Bronze oil-like material in 2" layer near 9' bgs occupying 10% pore space.	
10 -10	S-6	10-12	1.3	77	11 7 8 2	15		SAA (Medium Dense, Wet) 10-12' bgs: Moderate MGP-like odor. Sheen in groundwater. Black staining in the coarse soil.	
	S-7	12-14	1.3	33.4	3 3 3 3	6		Brown-gray fine SAND and SILT. (Loose, Wet) 12-14' bgs: Faint MGP-like odor.	
15 -15								Boring terminated at 14' bgs.	

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Remarks:
NA = Not applicable/ Not available; a/bgs = above/below ground surface; NAPL = Non-aqueous phase liquid; SAA = Same As Above; WOH = Weight Of Hammer.

Date Start/Finish: 12/8/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: HSA
Bit Size: NA
Auger Size: 4 1/4"
Rig Type: CME-75 Truck Mount
Sampling Method: SPT (2" Split Spoon)

Northing: 897130.52
Easting: 1231650.22
Casing Elevation: NA

Borehole Depth: 14' bgs
Surface Elevation:

Field Engineer Adam Chwalibog

Well/Boring ID: SB-308

Client: New York State Electric & Gas
Energy East

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
0 0	S-1	0-2	0.6	2.6	6 3 11 13	14		Brown fine SAND and fine GRAVEL, little silt, little organics (roots). (Medium Dense, Wet)	
	S-2	2-4	0.0	N/A	6 4 2 2	6		No Recovery, piece of gravel in tip of spoon. (Loose)	
5 -5	S-3	4-6	0.8	4.1	2 1 1 2	2		Brown Sandy SILT, little fine gravel. (Medium Stiff, Moist) 4-6' bgs: Faint MGP-like odor.	Borehole tremied with cement-bentonite grout to grade
	S-4	6-8	0.4	3.8	3 3 4 3	7		SAA, except trace organics (roots). (Medium Stiff, Moist) 6-8' bgs: Faint MGP-like odor.	
	S-5	8-10	1.0	217	2 2 7 10	9		Brown / gray SILT and fine SAND, few 2" coarse sand zones near 10' bgs. (Stiff, Wet) 8-10' bgs: Strong MGP-like odor. Bronze oil-like material from 9-10' bgs occupying 20% pore space.	
10 -10	S-6	10-12	1.3	98.2	7 5 2 2	7		Black fine to coarse SAND and GRAVEL 10-12' bgs: Moderate MGP-like odor. Sheen in groundwater. Black tar-like material ocupying 50% pore space.	
	S-7	12-14	1.2	22.6	5 3 2 2	5		Brown SILT and fine SAND. (Loose, Wet)	
15 -15								Boring terminated at 14' bgs.	

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Date Start/Finish: 12/22/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: Drive and Wash Casing
Bit Size: NA
Auger Size: 3" Casing
Rig Type: Barge Mounted Tripod
Sampling Method: SPT (2" Split Spoon)

Northing: 897223.15
Easting: 1237223.15
Casing Elevation: NA

Borehole Depth: 14' bgs
Surface Elevation:

Field Engineer Adam Chwalibog

Well/Boring ID: SB-311

Client: New York State Electric & Gas
Energy East

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
									▼
0 0	S-1	0-2	0.2	0.3	16 22 20 24	44		Brown Coarse SAND, little fine gravel. (Very Dense, Wet)	
	S-2	2-4	0.7	0.2	20 14 35 26	49		Brown / gray fine to coarse SAND and fine to medium GRAVEL, trace silt. (Dense, Wet)	
5 -5	S-3	4-6	0.9	0.3	73 30 15 16	45		SAA (Dense, Wet)	
	S-4	6-8	0.9	0.5	11 10 10 12	20		Gray fine to coarse SAND and fine to medium GRAVEL, little silt. (Medium Dense, Wet)	
	S-5	8-10	1.1	0.6	20 22 30 36	52		SAA (Dense, Wet)	
10 -10	S-6	10-12	1.0	0.2	21 22 15 6	37		SAA, except at 11.5' bgs grades to brown silt and fine sand. (Dense, Wet)	
	S-7	12-14	1.4	0.2	11 8 8 6	16		Brown SILT and fine SAND. (Medium Dense, Wet)	
15 -15								Boring terminated at 14' bgs.	

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Date Start/Finish: 12/19/05
Drilling Company: SJB Services, Inc.
Driller's Name: Walt Ketter
Drilling Method: Drive and Wash Casing
Bit Size: NA
Auger Size: 3" Casing
Rig Type: Barge Mounted Tripod
Sampling Method: SPT (2" Split Spoon)

Northing: 897163.05
Easting: 1231623.94
Casing Elevation: NA

Borehole Depth: 27' bgs
Surface Elevation:

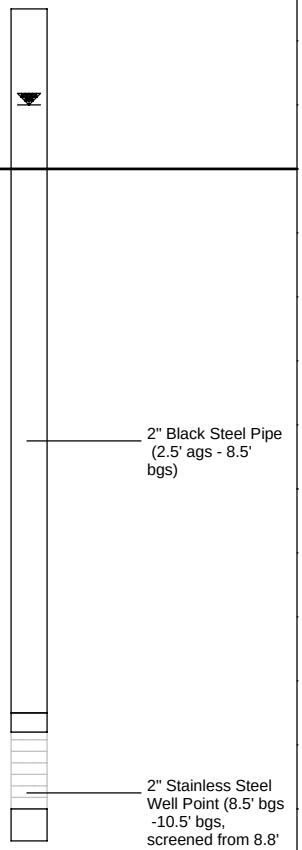
Field Engineer Adam Chwalibog

Well/Boring ID: SB-310 / PZ-3-05

Client: New York State Electric & Gas
Energy East

Location: Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes
0 / 0	S-1	0-2	0.3	0.0	12 3 2 2	5		Brown fine to medium GRAVEL, frequent wood chips. (Fill) (Loose, Wet)
	S-2	2-4	0.5	0.0	12 20 18 19	38		Brown fine to coarse SAND, little fine to medium gravel, trace silt. (Dense, Wet)
5 / -5	S-3	4-6	0.7	0.3	11 15 18 21	33		Gray SILT and fine SAND, some fine Gravel. (Dense, Wet)
	S-4	6-8	1.2	1.6	8 11 13 13	24		Brown / gray fine to coarse SAND and GRAVEL, little silt. (Medium Dense, Wet) 6-8' bgs: Faint MGP-like odor.
	S-5	8-10	1.4	0.8	8 5 5 9	10		Brown Clayey SILT and fine SAND, trace coarse sand. (Medium Dense, Wet) 8-10' bgs: Very faint MGP-like odor.
10 / -10	S-6	10-12	1.7	0.4	7 5 5 6	10		SAA (Medium Dense, Wet)
15 / -15	S-7	15-17	1.5	0.0	4 4	9		Brown SILT, some fine Sand. (Loose, Wet)



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Client: New York State Electric & Gas
Energy East

Site Location:
Western Plant Area
Oneonta Former MGP Site
Oneonta, NY

Well/Boring ID: SB-310 / PZ-3-05

Borehole Depth: 27' bgs

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Blows / 6 Inches	N - Value	Geologic Column	Stratigraphic Description/Notes	Borehole Completion
	S-7	15-17	1.5	0.0	5 3	9			
20-*20*	S-8	20-22	1.4	0.0	7 11 9 8	20		SAA (Medium Dense, Wet)	
25-*25*	S-9	25-27	1.7	0.0	7 11 13 8	24		SAA (Medium Dense, Wet)	
								Boring terminated at 27' bgs.	
30-*30*									
35-*35*									

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