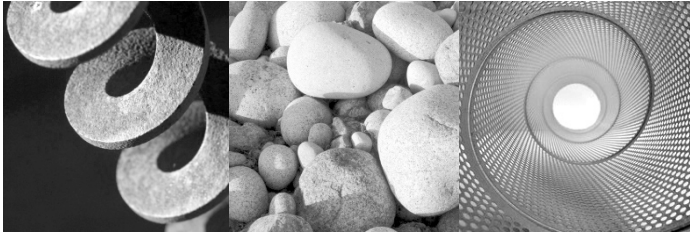


GEI Consultants

Consulting
Engineers and
Scientists

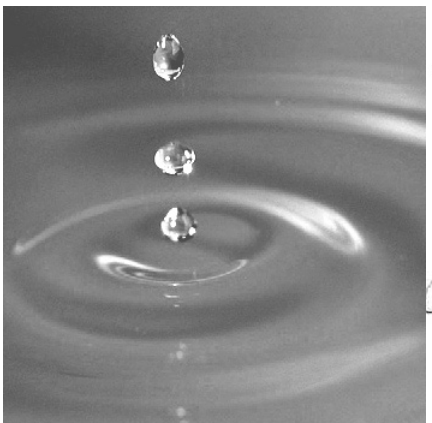
Remedial Investigation Report

LeRoy Non-Owned Former MGP Site
LeRoy, New York
NYSDEC Site # 819020

Submitted to:
National Grid, USA
300 Erie Boulevard West
Syracuse, NY 13202

Submitted by:
GEI Consultants, Inc., P.C.
1301 Trumansburg Road, Suite N
Ithaca, NY 14850
607-216-8955

May 31, 2018
Project 1503890



Bruce Coulombe, P.G.
Project Manager

Jennifer Sandorf, P.G.
Project Geologist

Certification

I Bruce Coulombe, P.G., certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375, and that this Report was prepared in accordance with all applicable statutes and regulations, and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and the DER-approved work plan and any DER-approved modifications.

Table of Contents

Tables

Figures

Appendices

JB:mr

M:\Tech\Project\National Grid\LeRoy\RI Report\Draft LeRoy RI Report_5.18.18.docx

Abbreviations and Acronyms

AWQS	Ambient Groundwater Quality Standards
bgs	Below ground surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAMP	Community Air Monitoring Plan
COPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
DNAPL	Dense Non-Aqueous Phase Liquid
DOT	Department of Transportation
DUSR	Data Usability Summary Report
EDR	Environmental Data Resources
EPA	United States Environmental Protection Agency
ft	Foot/feet
GEI	GEI Consultants, Inc., P.C.
HA	History Associates
Hartgen	Hartgen Archeological Associates, Inc.
HSA	Hollow Stem Auger
ID	Inner Diameter
MAH	Monocyclic Aromatic Hydrocarbons
MGP	Manufactured Gas Plant
mg/kg	Milligrams Per Kilogram
MSL	Mean Sea Level
NAPL	Non-Aqueous Phase Liquid
NAVD	North American Vertical Datum
NCP	National Contingency Plan
NYCRR	New York Code, Rules and Regulations
NYSASP	New York State Analytical Services Protocol
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSOPRHP	New York State Office of Parks, Recreation and Historic Preservation
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PID	Photoionization Detector
PM	Particulate Matter
PPE	Personal Protective Equipment
ppm	Parts per million
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
RI	Remedial Investigation
SC	Site Characterization
SCO	Soil Cleanup Objective
SVOC	Semi-Volatile Organic Compounds
TAL	Target Analyte List

TCL	Target Compound List
TVOC	Total Volatile Organic Compounds
µg/L	Microgram per liter
USDA	United States Department of Agriculture
VOC	Volatile Organic Compound

Executive Summary

GEI Consultants, Inc., P.C. (GEI) was contracted by National Grid to conduct a Remedial Investigation (RI) at the LeRoy Non-Owned Former Manufactured Gas Plant (MGP) site in the Village of LeRoy, Genesee County, New York. The site is currently owned by Mr. Thomas McGinnis and operates as an auto repair facility. The RI was conducted pursuant to New York State Department of Environmental Conservation's (NYSDEC) voluntary cleanup order Index Number D0-0001-0011, dated July 3, 2001.

The former MGP is now the site of ASAP Quick Lube auto garage building and the equipment and storage yard for other businesses owned by Mr. McGinnis. The site is bounded by Oatka Creek to the east, commercial/industrial properties to the north and west, and vacant property, Mill Street, railroad, and residences to the south. The site and surrounding properties are supplied with municipal water. Zoning for the site is industrial.

The soil at the site consists of three basic units. A surface fill unit covers the entire site. This soil is covered in most of the former MGP area by paving, the garage, and lawn areas. Beneath the fill is an alluvial soil unit, consisting of a mix of sand, silt and gravel layers. Underlying the alluvial unit is shale bedrock. Glacial till was also observed at some locations just above the bedrock. The bedrock surface is fairly flat with a slight slope toward Oatka Creek to the east.

Soil and groundwater samples from the site were analyzed for the contaminants of potential concern (COPC), which included volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), inorganics, and total cyanide. The testing performed during the Site Characterization and Remedial Investigation found that PCBs are not present in soil. Impacts were found to be limited to coal-tar related VOC and SVOCs. Total cyanide was below the unrestricted residential standard in all soil samples.

Soil impacts from MGP residuals are found within the fill and alluvial soil units. Subsurface soil has been impacted by coal tar in the north-central portion of the former MGP operations area downgradient of the gas holder. Analytical samples collected from affected subsurface soils contained organic compounds at concentrations above the applicable Industrial Soil Cleanup Objectives (SCOs) standards. Coal tar impacts extend to the top of bedrock in some locations directly beneath the former MGP.

Groundwater flow is to the east toward Oatka Creek. Groundwater in the former MGP area appears to have been affected by MGP residuals. Groundwater containing organic compounds at concentrations in excess of NYSDEC's groundwater standards is present in the

MGP area, and in the eastern area hydraulically downgradient from the former MGP operations. Impacts appear to be limited to the site.

Under current site uses there are no complete exposure pathways for MGP COPC to on-site or off-site receptors. There are several potentially complete exposure pathways for on-site receptors. This includes potential exposure of construction or utility workers to soil and groundwater impacts if subsurface soils are excavated. There are no potentially complete exposure pathways for off-site receptors.

Based on site reconnaissance and completion of NYSDEC's ecological screening guidance decision key, the site offers little attractive habitat for fish and wildlife and a Fish and Wildlife Resources Impact Analysis is not required.

1. Introduction

This Remedial Investigation (RI) Report describes the findings of environmental investigations conducted by GEI Consultants, Inc., P.C. (GEI) on behalf of National Grid USA (National Grid) at the LeRoy Non-Owned Former Manufacturing Gas Plant (MGP) site in the Village of LeRoy, Genesee County, New York. The report integrates and interprets all data and information generated during the initial Site Characterization (SC) in 2016, and RI activities in 2017 and 2018. The SC investigations and the RI were conducted pursuant to New York State Department of Environmental Conservation (NYSDEC) Voluntary Cleanup Order Index Number D0-0001-0011, dated July 3, 2001, and listed as NYSDEC Site #819020 and in accordance with applicable guidelines of the NYSDEC, the New York State Department of Health (NYSDOH), the United States Environmental Protection Agency (EPA), and the National Contingency Plan (NCP).

1.1 Purpose

The purpose of the RI was to:

- Collect additional data to determine the subsurface characteristics of the site.
- More completely determine the nature and extent of MGP-related residuals that are present at the site.
- Identify the potential routes of off-site migration from sources of MGP-related residuals.
- Identify exposure pathways to human and ecological receptors.
- Obtain sufficient data to facilitate the selection of remedial actions to address MGP residuals within the site.

1.2 Report Organization

The remainder of this report is organized in nine sections. Section 2 provides relevant site background, history, and a summary of previous investigations. Section 3 describes the investigation methods. Section 4 presents the physical characteristics of the Site. Section 5 discusses the nature and extent of contamination. Section 6 presents a Qualitative Human Health Exposure Assessment, Section 7 presents a Conceptual Site Model Evaluation, and Section 8 provides Conclusions and Recommendations.

2. Background

This section provides a description of current site conditions, as well as a summary of the site history. The previous environmental investigations for the site are also summarized in Section 2. Photographs showing the site conditions and subsurface structures are provided as Appendix C.

2.1 Site Description

The LeRoy Former MGP site is located near the corner of Lake and Mill Streets on the north side of the Village of LeRoy (Figure 1). The site is on the border between the modern and historic commercial / industrial area and a residential area. The properties immediately surrounding the former MGP parcel are all commercial or industrial (see Table 1 and Figure 2). It is located on a property that is bounded by Lake Street, Mill Street, and by residential properties fronting on Lake Street to the north and Oatka Creek to the east of the site (Figure 2).

The site is the rear parcel from Lake Street. The site is owned by Thomas McGinnis with dimensions of approximately 90 by 210 feet (approximately 0.5 acre). The site currently operates as ASAP Quick Lube, an auto repair facility (Figure 3). The site and surrounding vacant land is also used for truck and equipment parking and storage associated with other McGinnis-owned enterprises.

The site has a variable slope towards Oatka Creek and does not have any surface water features. The site is located in an area that has been modified and backfilled to create the current topography. The current building is on a relatively flat-lying portion of the site, whereas west of the site and east toward the creek are more steeply sloped. Surficial soils are described as alluvial soils (USDA Soil Conservation Service, 2017) and bedrock is Oatka Creek Shale (Rickard and Fisher, 1970) and appears to be relatively shallow as bedrock was observed on the edges of Oatka Creek.

To the west, the site is bordered by commercial and industrial properties. Single-family residential properties are found farther to the north. Directly bordering the site to the south is vacant property owned by National Grid that was once a railroad grade. According to a Quit Claim deed dated June 10, 1983, Niagara Mohawk sold access to approximately 0.513 acres of land together with “right of ingress and egress” for a 15-foot wide strip of land from Mill Street through their parcel to Thomas McGinnis (EDR [Environmental Data Resources] Environmental Lien Report, 2015). Directly to the north is property that was formerly owned by New York Central Lines, LLC (now CSX Railroad), and is also a former railroad grade.

An active railroad is located on the south side of Mill Street and operated by Rochester and Southern Railroad.

2.2 Site History

The history of the LeRoy Former MGP site and surrounding area was developed through the review of available historic Sanborn Fire Insurance (Sanborn) maps and the Browns Directory of American Gas Companies (Browns Directory), as well as historical photographs and documents obtained from sources on the Internet, and documents provided by History Associates (HA) to National Grid for a targeted historical research Phase II Report (HA, 2010). Several of these historical maps and photographs are included in Appendix A. A summary of the known events in the history of the site is presented in Table 2. The historical site features are shown on Figure 4. In addition, a Phase 1A archaeological literature search and sensitivity study was conducted by Hartgen Archeological Associates (Hartgen) [Hartgen, 2018] in accordance with the requirements of the New York State Office of Parks, Recreations and Historic Preservation (NYSOPRHP).

Prior to construction of the MGP, the site was a tannery for salting hides. There was a dam just south of the site in Oatka Creek on Sanborn maps dating as far back as 1885. Its purpose may have been related to the mills that used to be in the LeRoy area. A raceway along the west side of the creek ran from the dam along the east side of what would become the MGP property. In addition, there were three railroads that crossed Oatka Creek in the site vicinity. The site is located between the former New York Central Rail Road (Canandaigua Branch) and the former Erie Railroad. The third railroad grade, south of Mill Street, is still present and previously operated as the Baltimore & Ohio Railroad. This third railroad ran along a coal storage facility, but that was unrelated to the MGP.

2.2.1 MGP History

From the available sources, it is unknown exactly when the LeRoy MGP was constructed and began operations. The earliest record of the site which has been obtained shows the LeRoy Gas Light Company incorporated in July 1860 and began furnishing gas to the town (HA, 2010). The MGP is shown as gas works on a map of LeRoy in 1876 (HA, 2010). The MGP is listed in the first Browns Directory (1887), and shown on the first Sanborn map of the site (1885). Coal gas production methods were used during the known history of the site. The plant was shut down in September 1908 due to natural gas competition.

In June 1897, an inventory of the gas plant and associated equipment included a brick building, engine, and boiler, with the appliances used in the manufacture of gas, such as purifiers, condensers, etc., 148 gas meters, 2 brass barrel drip pumps, 1 air bell pump, 32,330 feet of gas mains and a half acre of land (HA, 2010). In May 1903, the plant consisted of a gasometer, a purifier house, a gas house, retorts and a coal shed (HA, 2010).

On the January 1892 Sanborn, the site is referred to as the LeRoy Gas and Electric Company. The Browns Directory refers to the name change from the LeRoy Gas Light Company in 1899. The LeRoy Gas and Electric Company also produced electricity for lighting purposes. In the 1905 Browns Directory, the name was again changed to the LeRoy Hydraulic Electric-Gas Company, although the company was incorporated under this name on April 1, 1895 (HA, 2010).

The plant operated under some controversy (HA, 2010). In 1897, the Village initiated condemnation proceedings against the LeRoy Gas and Electric Light Company as they were unhappy with the current lighting service and the Village wanted to own and operate its own electric plant. A special election was held for the Village to pursue ownership of the electric plant. However, the Village was also obligated to purchase the gas plant. The Village took control of the gas plant on November 18, 1897 and operated it for about three months. In March 1898, the Supreme Court of Genesee County invalidated the LeRoy special election held to acquire the electric light plant and ceased the condemnation. The new LeRoy Gas and Electric Company incorporated on September 18, 1899 and operated until 1902 (HA, 2010). In October 1902, the LeRoy Hydraulic Electric Company acquired the gas plant property to manufacture gas for heating and cooking. The new LeRoy Hydraulic Electric Gas Company began providing gas on January 25, 1904.

The Pavilion Natural Gas Company organized on November 15, 1905 and was competing with the LeRoy Hydraulic Electric Gas Company. In July 1907, Pavilion Natural Gas Company was granted a franchise in LeRoy. The LeRoy Hydraulic Electric Gas Company shut down on September 15, 1908 and subsequently appeared on August 1920 Sanborn as "not in operation."

2.2.2 Post MGP History

The Gleason Cold Storage Company eventually occupied the property formerly owned by the gas works site by 1919 (HA, 2010). The LeRoy Hydraulic Electric Gas Company merged with the Genesee Light and Power Company on April 23, 1923 and eventually changed into the Western New York Utilities Company (HA, 2010). The property is shown as Western New York Utilities Company in the 1927 Sanborn, although all the former gas works buildings had been removed. In the 1949 Sanborn, the property is shown as Niagara Hudson System Niagara Lockport & Ontario Power Company.

In the 1920s, the property belonged to Western New York Utilities and was used for an electrical transformer station. This is shown in both the 1927 and 1949 Sanborns (Appendix A). According to the Genesee County Assessor's office records, part of the current building was constructed in 1930 (Table 2). This building was related to the electric transformers at the site. The 1949 Sanborn also shows that the head race for Oatka Creek was removed in

the vicinity of the site and a larger transformer structure is in place, although the race appears to continue to the north of the site. Note that the dam on Oatka Creek is also still shown on the 1949 Sanborn.

2.3 Current Site Use

A Niagara Mohawk memo from March 23, 1983 (Appendix A) discusses the retirement of the LeRoy substation (the ultimate successor of the utility property) and proposes the demolition of the buildings and remaining structures. The current owner purchased the property in 1983 and opted to not demolish the remaining structures. The buildings are now used for ASAP Quick Lube auto repair shop. The garage portion of the building was constructed in 1980, according to the Genesee County Assessor's office. There is a floor drain on this side that leads to an oil/water separator located outside the building on the north side. As noted in Section 2.1, there is a Quit Claim Deed granting ingress and egress from Niagara Mohawk to Thomas McGinnis. A steel-frame former electrical transformer rack is present in the back section of the property, as is an unused steel electric transmission tower. In addition, there are several out-of-service vehicles scattered across the property as well as other out-of-service equipment from the auto repair business.

2.4 Previous Investigations

In 2010, an archaeological Phase II historical research was conducted by History Associates for National Grid for LeRoy and several other National Grid sites (HA, 2010) to target historical research "into sites potentially associated with manufactured gas production, storage, and other gas operations".

NYSDEC conducted a brief site visit in 2010 but did not confirm the exact location of the MGP. A site code #819020 was assigned, but the site was classified as having a potential for concern.

A Site Characterization (SC) was conducted by GEI in 2016 (GEI, 2016) for National Grid. This investigation consisted of the excavation of test pits, installation of soil borings and monitoring wells, along with sediment probing of Oatka Creek. MGP-related impacts were observed at several soil borings and monitoring wells, prompting the Remedial Investigation. These impacts included visual and olfactory impacts such as odor, staining, sheen, non-aqueous phase liquid (NAPL)-coated grains and blebs as well as elevated analytical results at several locations. The details from the SC are included with the RI findings in Section 4.

2.5 Utilities Serving the Site

The site and other occupied surrounding properties are served by municipal water and sewer (Figure 3). The sewer and water conduits come into the garage from Mill Street, beneath the

paved driveway that provides access to the garage. Natural gas service also comes into the building, via subsurface conduit, from Mill Street. The exact depths of the subsurface water, sewer, and gas conduits are unknown.

Electricity is provided to the garage via overhead wires along Lake Street. The electrical junction is on the south side of the garage. Inside the site, subsurface electric lines are present within the investigation area. An underground electric line extends from the garage building to a utility box south of the building.

3. Site Investigations and Methods

This section summarizes the methods and procedures applied during the SC and RI.

3.1 Historical Document Search

GEI conducted a historical document search at multiple sources to locate maps, photographs, site drawings, and newspaper articles related to the site, specifically about how the former MGP may have been configured in the late 1800's. In addition, National Grid had an archaeological Phase II document review conducted in 2010 by History Associates. The results of the research were described above, in subsection 2.2 and are summarized in Table 2. Appendix A also contains the historical documentation identified for this site.

3.2 Community Air Monitoring

As required by the NYSDEC and the NYSDOH, community air monitoring was continuously conducted at the upwind and downwind site boundaries during intrusive investigations (test pit excavations and soil borings) to monitor respirable dust and volatile organic compounds (VOCs), weather permitting. The work was performed as specified by the Community Air Monitoring Plan (CAMP) in the SC Work Plan (GEI, 2016). Wind direction was determined using a flag mounted on the air monitoring station.

VOC vapors were monitored using a RAE Systems MiniRAE™ 3000 photoionization detector (PID). Particulates less than 10 microns in size were monitored using a DustTrak particulate meter. The equipment was calibrated at least daily. Fifteen-minute running average concentrations were collected from each of the two air monitoring stations during work activities.

Appendix F summarizes the existing air monitoring data for each event. Fifteen-minute averages for total volatile organic compounds (TVOC) and Respirable Particulate Matter (PM_{10}) data from two tripod-mounted monitoring stations remained below Alert Limits and Action Limits as defined in the CAMP from the SC Work Plan (GEI, 2016) during all investigations.

3.3 Sample Identification

Analytical samples were identified by media based on the following scheme:

- Soil Boring = SB
- Monitoring Well = MW

- Test Pit = TP

Samples were identified as indicated above, with consecutive numbering by sample. For example, SB1 indicates the first subsurface soil sample. The depth of the soil sample was also included in feet, such as SB1 (10-11).

Surface soil samples were not collected at the site due to the large amount of ground disturbance associated with the current use of the site as an auto repair facility and equipment storage yard, which would confound analytical results. Petroleum leaks associated with vehicles, and surface water run-on with sheens, were noted during the investigation.

3.4 Subsurface Clearance

Prior to each subsurface investigation, Dig Safely NY in East Syracuse, NY, was contacted to request a review and mark-out of any utilities at the site and vicinity. In addition, a private utility locator was used to mark utilities at the site. For the 2016 SC, Thew Associates did the utility mark-out. For the 2017 RI, National GPR of Burnsville, MN did the utility mark-out. Hand-clearing to a depth of approximately 5 feet bgs was conducted for the RI locations to assure the clearance of potential subsurface utilities.

3.5 Test Pit Excavation

Test pits were excavated using a backhoe excavator with the intent to assess the location, depth, and condition of the former gas holder foundation; and other former MGP structures, source material, and fill material. Test pits were excavated to a maximum depth of 7 feet below ground surface (bgs), depending on depth to refusal or limits of equipment. The test pit locations are presented in Figure 5.

During test pitting operations, excavated soils were placed on plastic sheeting. The shallower soils, expected to contain the least potential impacts, were used as a "bed" for deeper soils. When the test pits were backfilled, the deeper soils were placed back in the pit first, and compacted, to ensure that all remaining soils could be returned to the pit. Test pits that were located in unpaved locations were restored and seeded where appropriate. Test pits located in paved areas were patched with asphalt.

All test pit excavations in 2016 were conducted by Nothnagle Drilling, Inc. of Scottsville, NY.

At least one soil sample was collected from each test pit for the SC and analyzed for VOCs (Method 8260), SVOCs (Method 8270), Target Analyte List (TAL) metals, PCBs, and total cyanide.

3.6 Soil Boring and Subsurface Soil Sampling

The rationale for each subsurface soil sample location was presented in the respective work plans (SC Work Plan (GEI, 2016); RI Work Plan (GEI, 2017)). Soil boring and monitoring well logs are presented in Appendix B.

A truck-mounted drill rig capable of hollow stem auger (HSA) drilling or GeoProbe® direct-push drilling was used to install overburden soil borings. An all-terrain track rig was also used to access some drilling locations. In general, the initial SC was conducted using the GeoProbe® Model 6600 with direct-push sampling. Monitoring wells were installed using HSA drilling methods. For the RI, soil borings were installed using the GeoProbe® and well installations using HSA drilling methods.

Fifteen subsurface soil samples (including duplicates) were collected during the SC and an additional 14 samples were collected for the RI in 2017. Continuous samples were collected using dedicated, disposable acetate sleeves in a 4-foot long Macrocore® sampler. In the initial SC, analytical soil samples were collected from each boring and analyzed for Target Compound List (TCL) VOCs, SVOCs, PCBs, TAL metals, and total cyanide. The RI analytical soil samples in 2017 were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), polycyclic aromatic hydrocarbons (PAHs), PCBs, TAL metals, and total cyanide. The analytical data are provided in Tables 3, 4, and 5 (compared with Industrial and Unrestricted Soil Cleanup Objectives (SCOs)). Soil boring locations are presented in Figure 5.

An analytical sample collected from SB-15 (10.5-11.5 feet bgs) was submitted for forensic analysis. This was to attempt to determine the source of the impacts observed in the soil there. The sample was submitted to ESS Laboratory in Cranston, RI for META Environmental, Inc. The sample was analyzed for hydrocarbon fingerprint and an expanded list of monocyclic aromatic hydrocarbons (MAHs) and PAHs. The laboratory report is provided in Appendix G.

3.7 Monitoring Well Construction

A total of eight monitoring wells have been installed at the site. Their locations are presented in Figure 5.

The screened intervals for each well were selected based on apparent depth of saturation of soil, the relative depths and locations of different soil units, groundwater flow information, and observations of soil impacts. Due to the shallow depth to bedrock across the site, most wells are screened at the top of the bedrock surface.

When the total depth of the borehole in the overburden was attained, a 2-inch inner diameter (ID), 5- or 10-foot-long, flush-threaded polyvinyl chloride (PVC) screen and solid casing was placed inside the augers for overburden well installation. Well installations used 20-slot screens (0.02-inch slot size). Dense non-aqueous phase liquid (DNAPL) sumps were not installed due to the limited overburden thickness above bedrock.

The annular space between the well screen and borehole wall was backfilled with chemically inert sand (#00 Morie) to promote sufficient groundwater flow into the well and to minimize the passage of any fine-grained formational material into the well. A minimum 1-foot layer of bentonite clay was placed above the sand pack and hydrated with potable water to prevent migration of potential contaminants to the sampling zone (i.e., screened interval) from the surface and overlying material. The remaining annular space was filled to grade with cement/bentonite grout. Each monitoring well was fitted with a flush-mount road box set into a concrete pad or a locking stick-up protective casing in a concrete pad.

All drilling and well installation in 2016 and 2017 was conducted by Nothnagle Drilling of Scottsville, NY. The well construction details are presented in Appendix B.

3.8 Well Development

Wells were developed with the surge and pump method to promote flow of formation groundwater into the well. Development occurred a minimum of 24 hours after the well was installed and the cement had cured. Water levels were initially measured and each well was checked for the presence of NAPL. Recharge water was pumped from the well until at least 10 well volumes had been removed, or the well had been pumped dry three times. Discharge water was contained on site in a poly tank until completion of the year's site activities. The water disposal was coordinated by Capitol Environmental on behalf of National Grid.

3.9 Groundwater Sampling

At least two weeks after wells had been installed and developed, they were prepared for sampling by purging with a peristaltic pump. Purge water was monitored for dissolved oxygen, pH, temperature, conductivity, and turbidity through a closed cell. Groundwater samples were generally collected when the parameters stabilized within 10 percent variance in the measurement. All samples were collected through the peristaltic pump head. The groundwater discharge monitoring parameters, including groundwater purge observations and measurements, are presented in Appendix E.

The initial SC groundwater sampling event in 2016 included the same parameters as the soil analytical sampling (TCL VOCs, TCL SVOCs, PCBs, TAL metals, and total cyanide). NYSDEC approved a shortened analytical parameters list, and subsequent RI groundwater samples were analyzed for BTEX, PAHs, PCBs, TAL metals, and total cyanide in 2017.

Groundwater analytical results are presented in Tables 6, 7, and 8. Appropriate quality assurance/quality control (QA/QC) samples were also collected, analyzed, and reviewed as part of the data validation process. The data validation reports are included in Appendix D.

3.10 Soil Vapor

A soil vapor investigation was not conducted at this site. Similar to the surface soil, the current use of the site as an auto repair facility would confound any results pertaining to the former MGP. No other occupied structures are located within the immediate vicinity of the site, therefore a vapor intrusion exposure was considered to be not a concern.

3.11 Data Validation

All analytical data were validated per appropriate EPA guidance, consistent with New York State Analytical Services Protocol (NYSASP) Category B guidance. The Data Usability Summary Reports (DUSRs) are presented in Appendix D. The validated analytical results for subsurface soil and groundwater are presented in Tables 3 through 8. In general, the data appear usable as reported or usable with minor qualification due to sample matrix or laboratory quality control outliers. All laboratory data and documents are included in Appendix G.

3.12 Surveying

The site base map was developed by Thew Associates (Thew) from Canton, NY. All sample locations and elevations for the 2016 SC and 2017 RI events were surveyed by Thew. The survey was referenced horizontally to the North American Datum of 1983 (NAD83), projected onto the New York State Plane Coordinate System (West Zone), and vertically to the North American Vertical Datum of 1988 (NAVD88).

3.13 Waste Handling and Disposal

Investigation-derived waste consisting of personal protective equipment (PPE) and drill cuttings were stored in secure, separate Department of Transportation (DOT)-approved steel drums on site. Decontamination wastewater and monitoring well discharge water were stored in 500-gallon poly tank on site. Capitol Environmental Services (a National Grid waste disposal subcontractor) collected waste samples and coordinated disposal of the waste at approved facilities on behalf of National Grid. The solid waste in 2016 was disposed of at Waste Management's High Acres Landfill in Fairport, NY, and the liquid waste was disposed of at Industrial Oil Tank Service in Oriskany, NY. The PPE, soil and liquid wastes in 2018 were disposed of at Industrial Oil.

4. Site Physical Characteristics

This section of the report describes the site physical characteristics, including surface topography, surface water hydrology, surficial and bedrock geology, and groundwater.

4.1 Site Topography and Surface Water Hydrology

The site was mapped by Thew Associates Land Surveyors to establish a base map for the site. The base map is shown as Figure 3.

Site elevation decreases from west to east towards Oatka Creek. The former MGP process area is located within the central portion of the site on a relatively flat area. The wood frame garage, masonry building, and covered storage area that form the current auto repair facility are now located in that area. The topographic high is approximately 863 feet above North American Vertical Datum (NAVD) 88 at the western portion of the former MGP process area, as shown on topographic maps. The topographic low is approximately 846 feet mean sea level (MSL) at the eastern site boundary. Surface water flow during storm events generally follows the topographic contours from high to low.

4.2 Regional Surficial Geology

The site is located in a region of New York State where the surficial soils are the Ontario loam and the Udorthents loamy skeletal, according to the United States Department of Agriculture Natural Resources Conservation Service (USDA, Web Soil Survey https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx). The Ontario loam soils are a loam to gravelly loam, well-drained, with a parent material consisting of calcareous loamy lodgment till derived from limestone, sandstone, and shale. The Udorthents soils are loamy and skeletal, described as a gravelly loamy sand, well-drained.

4.2.1 Site-Specific Surficial Geology

4.2.1.1 Fill

The surface of the former MGP area is composed of fill which appears to be contiguous across the site, and ranges from 5 to 13 feet in thickness. The fill consists of sand, gravel, silt, brick fragments, coal, ash, glass, wood, ceramic, and metal. Based on the history of the site, it is likely that much of the fill was placed during the demolition of the MGP. The ground surface at the time the MGP was in operation was likely slightly lower than present day. The remnants of the former gas holder location were observed by a circular brick wall structure.

4.2.1.2 Sand, Silt, and Gravel

Varying amounts of sand, silt, and gravel are found beneath the fill layer. This unit ranges in thickness from approximately 2 to 24 feet, where present. These materials are likely alluvial deposits associated with the history of Oakta Creek.

4.3 Regional Bedrock Geology

Bedrock in the LeRoy region has been identified as part of the Marcellus Formation (Rickard and Fisher, 1970). The Marcellus formation in the immediate site vicinity has been identified as the Oatka Creek Shale, which is part of the Hamilton group. The Oatka Creek Shale consists of black shale that is distinctly calcareous and fossiliferous. The thickness of the Marcellus Formation is given as 40 to 890 feet. The depth to bedrock was generally observed to be 10 to 26 feet bgs during the RI.

4.3.1 Shale Bedrock

The sand, silt, and gravel unit is underlain by shale bedrock. The shale bedrock is only observed for a few inches at the bottom of several borings as no rock coring was conducted. The observed bedrock consisted of dark gray, hard shale with slight weathering on the joints. The depth below grade to bedrock increases farther east, indicating a sloping surface for this contact (see Figure 6). Lowest bedrock elevation is in vicinity of SB-13 and SB-14, just above Oatka Creek, with the exception of SB-9. Since SB-9 is located adjacent to the former holder foundation under what is now a filled slope, it is possible that bedrock was removed in this area for the holder construction, and has subsequently been filled in following the removal of the holder.

4.4 Geohydrology

4.4.1 Groundwater Elevations and Flow

Groundwater at the site is shallow and was encountered within 5 to 9 feet bgs. Water table elevations were measured at the 2016 and 2018 groundwater sampling events. Table 9 presents groundwater elevations collected to date.

All wells are screened across the water table (Figures 7 through 10). The soils above the bedrock appear to be acting as a single unconfined aquifer unit.

Groundwater elevations have a consistent pattern. The flow is generally from west-northwest to the east to Oatka Creek.

Figure 11 presents groundwater flow contours for January 2018. Groundwater flows in one general direction at the site, to the northwest to the east. Note that the change in elevation

of the water table is slight across the area containing monitoring wells, with a total change in elevation of 6.65 feet, and a gradient in January 2018 ranging from approximately 0.052 to 0.077 feet per foot.

5. Nature and Extent of Contamination

This section of the report describes the findings of the subsurface investigation of the former MGP, and the nature and extent of contamination at the site. Analytical data are provided in Tables 3 through 8. Physical observations and summarized analytical results are included in Figures 8 through 13. Test pit and soil borings logs are provided in Appendix B.

In accordance with NYSDEC regulations, soil analytical results in Tables 3, 4, and 5 are compared to Title 6, Chapter 100, Part 700-705, Subpart 375-6 of the New York State Code of Rules and Regulations (6 NYCRR Part 375) Restricted Use Industrial and Unrestricted Soil Cleanup Objectives (NYSDEC, 2006). In the remaining report text, these standards are referred to as the Industrial SCOs and Unrestricted SCOs. Per Subpart 375, the Industrial SCOs are appropriate for land use related to activities such as manufacturing, production, fabrication or assembly processes and ancillary services, and are the appropriate standard for current site use as the auto repair garage.

In accordance with NYSDEC regulations, groundwater analytical results in Tables 6, 7, and 8 are compared to the New York State Ambient Water Quality Standards (AWQS).

5.1 Subsurface Soil

Subsurface soil analytical samples were collected and analyzed as described in Section 3. The validated analytical data are presented in Tables 3, 4, and 5. Boring and test pit locations are shown in Figure 5, and summarized analytical results are presented in Figure 12.

The depth below ground of analytical samples is provided in parentheses following the soil boring sample name.

5.1.1 Test Pits

Test pits were excavated to assess the location, depth, and condition of former gas plant structures and in particular the former gas holder. The validated analytical sample results are presented in Tables 3, 4, and 5. The test pit and sample locations are presented in Figures 5 and 12. The test pit logs are presented in Appendix B.

Test pits generally revealed the presence of demolition rubble (such as concrete block, bricks, and glass). Some material consisted of coal and ash with some evidence of visual impacts such as hardened tar-like material with a slight hydrocarbon-like odor. Test pits were excavated to depths between 0.2 and 7 feet below ground.

Test pits TP-1 and TP-2 were excavated within the footprint of the gas holder on the northwest side of the garage. Both test pits revealed miscellaneous fill material such as

brick, ceramics, ash, glass insulators, and piping. No visual or olfactory impacts were observed at TP-1 or TP-2. Analytical samples were collected from the bottom of each test pit for the parameters listed in Section 3.5. Several inorganics were detected above the Unrestricted SCOs at one or both locations including arsenic, barium, copper, lead, mercury, and zinc. In addition, several PAHs exceeded the unrestricted SCOs at TP-2 such as benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene. The detection of benzo(a)pyrene at TP-2 also exceeded the Industrial SCO.

TP-3 was divided into three segments on the north side of the garage building, TP-3A, TP-3B, and TP-3C. This was located downgradient of the former gas holder. TP-3B encountered a concrete slab just below ground surface, so it was terminated. TP-3A and TP-3C both had fill material overlying sand with silt. TP-3C also encountered a thin layer of hardened tar-like material from 3.2 to 3.5 feet bgs. The analytical soil sample was collected from TP-3A. Several PAH compounds were detected above their respective Industrial or Unrestricted SCO, including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene. Metals and VOCs were all detected below Industrial and Unrestricted SCOs at TP-3 and PCBs were all non-detect.

Test pits TP-4 and TP-5 were excavated on the south side of the current garage building. Materials observed in these test pits were largely fill consisting of brick, ash, coal, and glass along with silty fine sand. No visual or olfactory impacts were observed in either of these test pits. Analytical soil samples were collected from both of these test pits, but there were no exceedances at TP-5. Several PAH compounds were detected above their respective Industrial or Unrestricted SCOs at TP-4, including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene. Metals, PCBs and VOCs were all detected below Industrial and Unrestricted SCOs at TP-4.

5.1.2 Soil Borings

Subsurface soil analytical samples were collected and analyzed as described in subsection 3.6. The validated analytical data are presented in Tables 3, 4, and 5. Boring locations and summarized analytical results are presented in Figures 5 and 12.

Physical observations from borings ranged from no apparent impacts to tar saturation. Table 10 presents a summary of the physical impacts observed in soil borings.

Based on the extent of physical impacts, the apparent source area is confined to an area in the north-central portion of the site, generally corresponding to downgradient of the former gas holder. In general, physical impacts outside of the source area are minimal (see Figure 12).

5.1.2.1 Soil Borings (Industrial and Unrestricted SCOs)

The majority of the samples with exceedances of the Industrial or Unrestricted SCOs are located in the north-central portion of the site, roughly downgradient of the former gas holder. A few samples had metals detected above the Industrial or Unrestricted SCOs: MW1 (10.5-11.5 feet bgs) contained selenium at 5 milligrams per kilogram (mg/kg) above the 3.9 mg/kg Unrestricted SCO and zinc at estimated value of 123 mg/kg above the 109 mg/kg Unrestricted SCO; MW2 (8.5-9.5 feet bgs) contained mercury at 0.821 mg/kg above the 0.18 mg/kg Unrestricted SCO; SB-7 (1-2 feet bgs) contained copper at an estimated value of 89.8 mg/kg above the 50 mg/kg Unrestricted SCO; and SB-8 (8-9 feet bgs) contained arsenic and lead, above either the Industrial or Unrestricted SCOs. In the 2017 soil sampling, additional metals exceedances of Industrial or Unrestricted SCOs were detected at the following: SB-15 (10-11.3 feet bgs) contained arsenic at 14.4 mg/kg above the 13 mg/kg Unrestricted SCO and copper at 78.6 mg/kg above the 50 mg/kg Unrestricted SCO; lead was detected above the 63 mg/kg Unrestricted SCO at MW-7 (10-11.2 feet bgs), MW-8 (13-14 feet bgs), SB-12 (9-11.5 feet bgs), and SB-15 (10-11.3 feet bgs); zinc was detected above the 110 mg/kg Unrestricted SCO at MW-7 (10-11.2 feet bgs), MW-8 (13-14 feet bgs), SB-12 (9-11.5 feet bgs), and SB-15 (10-11.3 feet bgs); and mercury was detected above the 0.18 mg/kg Unrestricted SCO at MW-8 (13-14 feet bgs), SB-12 (9-11.5 feet bgs), and SB-15 (10-11.3 feet bgs).

The Industrial and/or Unrestricted SCOs were exceeded in 2016 at several locations for one or more BTEX compounds at the following locations: MW-2 (8.5-9.5 feet bgs), MW-2 (10.5-11.5 feet bgs), SB-5 (10.5-11.5 feet bgs), and SB-6 (11-12 feet bgs). No other VOCs were detected above either Industrial or Unrestricted SCOs in the 2016 sampling. In the 2017 soil sampling, the Industrial and/or Unrestricted SCOs were exceeded for one or more BTEX compounds at the following: MW-7 (10-11.2 feet bgs), MW-8 (13-14 feet bgs), SB-10 (8-8.6 feet bgs), SB-11 (13-13.9 feet bgs), SB-12 (9-11.5 feet bgs), and SB-15 (10-11.3 feet bgs).

The remaining exceedances of Industrial or Unrestricted SCOs were of one or more PAHs at MW-1 (10.5-11.5 feet bgs), MW-2 (8.5-9.5 feet bgs), MW-2 (10.5-11.5 feet bgs), MW-3 (8.5-9.5 feet bgs), MW-4 (10-11 feet bgs), MW-7 (10-11.2 feet bgs), MW-8 (13-14 feet bgs), SB-5 (10.5-11.5), SB-6 (11-12 feet bgs), SB-7 (1-2 feet bgs), SB-10 (8-8.6 feet bgs), SB-11 (13-13.9 feet bgs), SB-12 (9-11.5 feet bgs), SB-13 (9-10.5 feet bgs), and SB-15 (10-11.3 feet bgs). Dibenzofuran was detected above the Unrestricted SCO at MW-2 (8.5-9.5 feet bgs), MW-2 (10.5-11.5 feet bgs), and SB-6 (11-12 feet bgs). No other SVOCs were detected above either Industrial or Unrestricted SCOs in the 2016 sampling.

Soil boring SB-7 was located within the apparent footprint of the former holder and met refusal at 9 feet bgs. This boring encountered fill material its entire length.

There were no detections of PCBs in soil during either sampling event.

The soil sample submitted for hydrocarbon fingerprinting from SB-15 contained a wide range distribution of MAHs and PAHs, with naphthalene most abundant. This characteristic is most consistent with soils impacted by coal tar or coal tar products (META, 2017).

5.1.2.2 Soil Boring Summary

On-site subsurface soil is impacted with PAHs above the Industrial or Unrestricted SCOs. The area of principal impact extends from downgradient of the former gas holder near SB-5, east and south to near SB-13 and MW-8. NAPL-coated soils have been observed within this source area. Tar-impacted soils collected from several borings in the north-central portion of the site adjacent to the source area contained PAHs above Industrial or Unrestricted SCOs. Impacts have generally been just above the bedrock surface (Figure 12). No visual or olfactory impacts were observed within the surface of the bedrock unit.

The delineation of soils which exceed 500 parts per million (ppm) of total PAHs (see Figure 12) shows that there were only three locations: MW-2 (8.5-9.5 feet bgs), MW-7 (10-11.2 feet bgs), and SB-13 (9-10.5 feet bgs).

5.2 Groundwater

Two rounds of groundwater samples were collected between 2016 and 2018. Four monitoring wells were sampled in the first event in 2016 (MW-1, MW-2, MW-3, and MW-4). Eight monitoring wells were sampled in the second event in 2018 (MW-1 through MW-8). Groundwater analytical results are presented in Tables 6, 7, and 8 and summarized in Figure 13.

5.2.1 Overburden Groundwater

As discussed in section 3.7, monitoring wells all straddle the water table due to the shallow depth to bedrock. During the SC, MGP-related groundwater impacts in overburden groundwater were apparent in MW-2 and MW-3, located downgradient of the gas holder. Samples collected from MW-2 and MW-3 in 2016 contained BTEX and PAHs including naphthalene above the AWQS. MW-2 and MW-3 were again sampled in January 2018, and BTEX compounds were detected above the AWQS, along with benzo(a)pyrene and naphthalene. Among the wells installed in 2017, MW-7 had detections of BTEX above the AWQS. Total PCBs were detected in the primary groundwater sample at MW-7 at estimated value of 0.1 µg/L, just above the AWQS of 0.09 µg/L. The duplicate sample collected at MW-7 also contained a trace detection of PCBs, but below the AWQS.

Most locations had detections of more than one of the PAHs above the AWQS in one or both sampling rounds including MW-1, MW-2, MW-3, MW-4, MW-7, and MW-8.

Metals detections in groundwater above the AWQS have consisted primarily of iron, lead, magnesium, manganese, sodium, and thallium. These constituents are naturally occurring in groundwater and although exceed the AWQS in many groundwater samples collected, these detections are within range of background levels. Several additional inorganics were also detected at MW-7 and/or MW-8 at concentrations exceeding the AWQS. These inorganics include arsenic, barium, beryllium, cadmium, chromium, copper, mercury, nickel, selenium, and/or zinc.

Total cyanide has been detected in several groundwater samples, but not at concentrations exceeding the AWQS. The highest concentration of total cyanide was detected at MW-6 at 161 µg/L with an AWQS of 200 µg/L.

As shown on Figure 13, the highest elevated BTEX and PAH concentrations are also located just downgradient of the oil-water separator for the current garage. Also shown on Figure 13 is the storm sewer line that runs from Lake Street to Oatka Creek. This sewer line is located between the main site area impacts and those observed at MW-8. This storm sewer is constructed of corrugated metal pipe and could be acting as a conduit for off-site petroleum impacts as well as a possible hydraulic divide between the MGP and possible releases in the parking area used by the current garage.

5.2.2 Groundwater Summary

Groundwater flow is toward the east toward Oatka Creek. Groundwater impacts are closely associated with the areas where NAPL is present in soils. Downgradient groundwater impacts have not been consistently observed. Primary groundwater impacts have been detections of BTEX and PAH compounds, with limited distribution of detections exceeding the AWQS. Figure showing groundwater isopleths for BTEX and PAHs is included as Figure 13. This figure shows the highest concentrations of BTEX and PAHs are to the east of the former gas holder.

5.3 Sediment

As discussed in Section 2.4, sediment probing was conducted in Oatka Creek as part of the SC. Approximately seven transects were manually probed along the section of Oatka Creek immediately adjacent to and downgradient of the site (Figure 5). A threaded rod was used in probing with a maximum penetration of 6 to 8 inches. The stream bed was observed to consist of relatively flat bedrock with only limited areas of sediment consisting of loose stone and gravel. No sheens or other visual MGP impacts were encountered.

5.4 Liquid Sample from Oil-Water Separator Sump

A sample of water from the oil-water separator associated with the auto repair garage was collected for analysis by Meta Environmental. This was done to attempt to clarify if any

impacts in the vicinity of the oil-water separator were from the former MGP operations or possibly from the current garage operation. According to the forensic report, water sample SUMP contained very low concentrations of some MAHs and PAHs, and some petroleum compounds. However, the sample contained substantial amounts of fatty acids and fatty acid esters, fatty alcohols, and other compounds. Hexanoic acid and 2-ethylhexanoic acid appeared to be present at the highest concentrations. Since these were not calibrated target compounds, their concentrations could not be determined. The source(s) of these compounds could not be determined (META, 2017).

It is likely that discharge from the oil-water separator contributes to the impacts observed at the north side of the garage. Based on field observations the structure functions as a discharge sump, with water draining from the sump through slots in the side. The property owner reported that the structure has not been pumped to remove accumulated oil.

5.5 Summary of Nature and Extent of Contamination

Site-related subsurface impacts were identified in subsurface soils. Test pits identified the presence of former structures below current ground surface and also indicated presence of fill materials present across the site. Tar impacts were observed at soil borings immediately downgradient of the gas holder area as were some BTEX and PAH exceedances of Industrial or Unrestricted SCOs. Soil boring impacts are well defined and extend from the area of former MGP features downgradient to the east. NAPL-coated soils have been observed in this area, and BTEX and PAHs have been detected above Industrial or Unrestricted SCOs in the central portion of the site. Soil impacts have been well delineated both vertically and horizontally (Figure 12).

Groundwater impacts have also been delineated. MGP-related groundwater impacts appear to be limited to the central area of the site in the area of the former MGP operations (Figure 13). Groundwater along the north side of the site (MW-5 and MW-6) does not exceed groundwater standards. An off-site well that was expected to be in an unimpacted cross-gradient location was found to have the highest PAH concentration (6,028 ug/L total PAHs). Monitoring well MW-4, with a lower concentration of VOCs, and a much lower concentration of PAHs, is located between MW-8 and the most impacted area at the site. This suggests that the impacts at MW-8 are not associated with the MGP. Note also that a storm sewer line is located between these two wells, conveying water from Lake Street / NYS Route 5. This line and its associated bedding material likely forms a hydraulic barrier between the site and MW-8. MW-8 is installed in a vehicle parking area, therefore the impacts could be associated with a historic petroleum release.

Sediment probing in Oatka Creek did not indicate any MGP-related impacts. No analytical sampling of sediment was conducted.

6. Qualitative Human Health Exposure Assessment

This report section evaluates the qualitative potential for exposure posed to human receptors by contaminants of potential concern (COPCs) detected in subsurface soil and groundwater at the site. The evaluation is based on potential exposure to compound concentrations in excess of the applicable NYSDEC Industrial or Unrestricted SCOs for soil and the NYS AWQS for groundwater.

6.1 Exposure Pathways

An exposure pathway describes the means by which a potential receptor may be exposed to contaminants originating from a site. Assessment of potential exposure pathways includes the following five elements (NYSDEC, 2010a):

- A contaminant source
- Contaminant release and transport mechanisms
- A point of exposure
- A route of exposure
- A receptor population

NYSDEC and NYSDOH consider an exposure pathway complete when all five elements of an exposure pathway are present. An exposure pathway may be eliminated from further evaluation when any one of the five elements comprising an exposure pathway has not existed in the past, does not exist in the present, and will never exist in the future (NYSDEC, 2010a).

The following media of concern related to former use of the site as an MGP have been identified based on the data generated during site investigations: subsurface soil and groundwater. The potential exposure pathways include inhalation of volatiles and particulates (as dust), direct contact, and ingestion.

A summary of the media of concern and potential receptors is presented in the following table. Potential receptors are based on current site use and adjacent sites uses, and the potential for future uses and activities (for example construction/utility activities). Potentially complete exposure pathways are identified if a receptor has a current or potential future exposure to impacted media.

Media of Concern	Exposure Route	Construction/ Utility Worker	Garage Site Worker	Trespasser	Off-Site Resident
Subsurface Soil	Ingestion	√	√	--	--
	Direct Contact	√	√	--	--
	Inhalation	√	√	--	--
Groundwater	Ingestion	√	--	--	--
	Direct Contact	√	--	--	--

Based on the table above, there are a number of potentially complete exposure pathways, as outlined below:

- Ingestion, direct contact, and/or inhalation with subsurface soil by a construction/utility worker or on-site garage worker.
- Accidental ingestion and/or direct contact with groundwater by a construction/utility worker.

The following subsections describe the rationale for establishing potentially complete exposure pathways at this site.

6.2 Surface Soil

The majority of the site is either paved or covered with a gravel fill. Remaining portions of the site are covered by grass, other vegetation, or buildings. Grass and gravel mixed with soil cover the adjacent properties. Although potential contact with surface soil exists, the present surface soil has been exposed to current auto repair garage operations and former MGP impacts are not likely to be present.

6.3 Subsurface Soil

BTEX and PAHs were detected above Industrial and Unrestricted SCOs in several subsurface soil samples at the site. Therefore, a potentially complete exposure pathway to subsurface soil exists for the construction and utility workers and garage workers via ingestion, dermal contact, and inhalation of soil particulates during intrusive activities.

Appropriate mitigation measures will be required during any ground-intrusive excavation activities of the site.

6.4 Groundwater

BTEX and PAHs in groundwater exceeded the AWQS at the central area of the site, and downgradient as far as MW-7 and MW-8.

Groundwater at the site is greater than 5 feet below ground and is not likely to be accessed by site workers or off-site residents. Contaminated groundwater is not being used for drinking water, as the area is served by the public water supply. There are no known domestic water supply wells in the area. As such, direct ingestion of groundwater at or near the site and adjacent properties is not considered a potential exposure pathway for any current or future receptor.

Consequently, the only potential complete exposure pathways for groundwater would be dermal contact with the groundwater and accidental ingestion by the utility/construction workers in excavations that extend below the water table.

6.5 Soil Vapor and Ambient Air

As previously discussed, soil vapor and air samples were not collected at this site due to its current use as an auto repair garage. MGP-related soil impacts are found to the north of the garage, but SB-1 shows that these impacts do not extend far beneath the garage portion of the building. The construction of the eastern portion of the building (the former electric substation building) did not allow for performing a soil boring, but the floor of the structure was built to hold heavy electrical substation equipment. It is unlikely that significant soil vapor migration takes place through this structure. The current garage operations are likely to have volatile emissions that would obscure any potential MGP-related impacts. Therefore, if a potentially complete exposure pathway for MGP-related soil vapor exists, it would not be significant under present site conditions for existing receptors.

6.6 Exposure Characterization Summary

Under current site conditions and uses there are no complete exposure pathways to on-site or off-site receptors from MGP-related soil or groundwater impacts. Excavation or construction which may expose construction or utility workers to impacted media could create a complete exposure pathway. A summary of the site media, exposure routes, and exposure assessment is presented below. This summary follows the format presented in DER-10, Appendix 3B.

Environmental Media & Exposure Route	Human Exposure Assessment
Direct contact with subsurface soils (and incidental ingestion)	• People can come into contact if they complete ground-intrusive work at the site
Ingestion of groundwater	• Contaminated groundwater is not being used for drinking water, as the area is served by the public water supply • Incidental ingestion during ground-intrusive work • There are no known domestic water supply wells in the area
Direct contact with groundwater	• People can come into contact if they complete ground-intrusive work at the site

7. Conceptual Site Model

The Conceptual Site Model (CSM) provides a framework for the physical, chemical, and contaminant distribution at the site that serves as a basis for future decisions regarding investigation and remediation. A CSM describes the site, and identifies the types and sources of contamination, affected media, release mechanisms and migration pathways, and any actual or potential human or environmental receptors.

7.1 Site Description

The site is the location of a former MGP and is currently developed as an auto repair garage. The site is located in a commercial/industrial area bordering on a low-density residential area, but is currently utilized for an industrial purpose.

The site topography is generally sloped toward Oatka Creek with a flat portion where the present business is located which has been built-up with fill, especially on the west side in the vicinity of the gas holder. The water table is generally about 5 to 9 feet bgs, with groundwater flow to the east, toward Oatka Creek. The water table is located within the surface fill soil unit or the underlying alluvial (mixed sand/silt/gravel) soil unit. The fill and alluvial unit form an unconfined aquifer. Beneath the alluvial unit is shale bedrock.

The subsurface structure for the gas holder of the former MGP is still present beneath the ground surface. Foundations for the gas plant building itself and other structures were not found and were likely to have been removed during construction of the later electric transformer building and garage as these structures are located on top of most of the former structures.

7.2 Sources of Contamination

Coal tar is apparent in subsurface soil at the site, primarily in the north-central portion of the site, just north and east of the current garage building. The primary impacts appear to be downgradient of the former gas holder. The tar is at residual concentrations where present in the soil. Tar has been observed to be present at the top of the bedrock unit; however, the tar appears to be thin and discontinuous. Soils exceed 500 ppm of total PAHs in areas where the tar is present. PAH concentrations fall-off rapidly outside of the areas where tar was observed. No migration of tar via gravity along the top of the bedrock unit is apparent, nor has tar been observed within any of the monitoring well sumps/end caps.

Some of the shallow soil and groundwater impacts at the north side of the garage building are associated with an oil-water separator structure. The construction of this structure is such

that accumulated water discharges to the ground. The accumulated oil never been pumped from the structure, therefore it is likely that some oil has been discharged to the nearby soil.

Tar or groundwater impacts were not observed along Oakta Creek. Probing of sediments and at downstream of the site did not show sheens or NAPL.

7.3 Migration Pathways

MGP impacts appear to be confined to the site limits within the overburden proximal to the area where most of the former MGP production occurred (gas holder). The observed tar appears to be at residual concentrations, and active migration of tar in the fill and alluvial soil units does not appear to be occurring. Minor soil impacts were measured at SB-15; however, the concentrations contaminants of concern (COPCs) meet the Industrial SCOs.

Overburden groundwater appears to flow through the impacted subsurface soils where MGP constituents are transferred to the dissolved phase. However, the migration of dissolved phase constituents into the overburden groundwater also appears to be limited. Overall, dissolved phase impacts appear to be attenuated before the groundwater reaches monitoring wells farthest to the east and southeast. Monitoring well MW-8, located off site, appears to be impacted by a non-MGP source, most likely related to a petroleum release in the unpaved parking area where the well was installed.

7.4 Ecological Receptors

The site is located within a commercial/industrial area that is surrounded by residential properties. The area of concern has been heavily disturbed by the garage activities. There are no apparent ecological receptors. MGP residuals were not observed migrating to the bank or streambed of Oakta Creek.

7.5 Human Receptors

Under current site conditions there are no complete exposure pathways for MGP residuals for on-site or off-site human receptors. Potentially complete exposure pathways may be created for on-site construction or utility workers who excavate into impacted soils or groundwater, and who may come into contact with subsurface soil and groundwater. There are no complete or potentially complete exposure pathways for off-site human receptors.

8. Conclusions and Recommendations

8.1 Conclusions

This RI for the former LeRoy MGP site has characterized the history and current site conditions associated with former gas production. The former MGP site is now the location of the ASAP Quick Lube garage and associated equipment and storage yard.

MGP structures, tar, or other MGP impacts are not present at the ground surface. The surface soil across the entire site is composed of fill. Due to the current garage and equipment yard operation, surface soils were not submitted for analytical testing.

The subsurface investigation has found that the subsurface portions of the gas holder of the former MGP is still in place, beneath the facilities for the current garage and an adjacent grassy area. Coal tar has been found to be present in soil; however, the tar is present at residual concentrations and does not appear to be migrating. Soils exceeding 500 ppm total PAH are found in close relation with soils containing residual tar. Soils exceeding the Unrestricted SCOs are found within the former MGP area and extend onto National Grid property at MW-8. Soils off site to the north on the railroad property were not investigated, but based on the findings at SB-15, it likely that they exceed Unrestricted SCOs; however, the soils at SB-15 met the 500 ppm total PAH standard for Industrial SCOs at MGP sites.

Groundwater flow is within the fill and alluvial soil units. The flow direction is southeast and then east toward Oatka Creek. The downgradient extent of impacts extends to the property boundary at the creek. Overburden groundwater impacts attenuate to non-detectable concentrations at on-site cross-gradient and down-gradient directions. An off-site cross-gradient well (MW-8) appears to be impacted by an off-site non-MGP source. Potable water is supplied to local businesses and residents by the Village, and groundwater is not used as a resource in the vicinity of the site.

There are currently no complete human exposure pathways associated with MGP residuals. The potentially complete pathways include exposure of construction and utility workers to subsurface soil and groundwater. Potential risk to ecological receptors is not a concern due to lack of habitat on the site.

With the observations and data presented in this report, the nature and extent of MGP-related impacts at the site have been delineated, fulfilling RI requirements outlined in the Order on Consent.

8.2 Recommendations

Based on the results of the investigation we do not recommend further investigation of the former MGP site. Although soil impacts were found along the northern property line at borings SB15 and MW8, the total PAH concentration is less than 500 ppm. Any soil impacts north of this line on railroad property are likely to be a combination of historic MGP materials, historic railroad materials (ash, coal, cinders, petroleum), and modern releases from the current site owner. This area is wooded and generally inaccessible, preventing site use. The stone retaining wall supporting the former railroad bridge embankment is in poor condition, and the drillers expressed concern during the RI of working too closely to the structure. Further investigation or remediation would require significant stabilization measures.

As noted in this report, the impacts observed at MW8 do not appear to be MGP related. Any further work at that location should be associated with a survey of off-site property use.

Following approval of this report by the NYSDEC, an evaluation of remedial options through an alternatives analysis should be undertaken with the direction of the NYSDEC.

References

EDR, 2015. Environmental Data Resources, Environmental Lien Report, 2015.

GEI, 2016. Site Characterization Work Plan, LeRoy Former MGP Site, LeRoy, New York, March 1, 2016.

GEI, 2017. Remedial Investigation Work Plan, National Grid LeRoy Non-Owned Former MGP Site, LeRoy, New York, July 14, 2017.

Hartgen, 2018. Phase 1A Archeological Investigation, Former LeRoy National Grid Manufactured Gas Plant Site, January 2018.

History Associates, 2010. Targeted Historical Research Phase II Report, May 7, 2010.

META, 2017. Environmental Forensic Report, LeRoy Former MGP Site, META Environmental, December 20, 2017.

NYSDEC, 2006. Rules and Regulations, 6 NYCRR Subpart 375-6, Remedial Program Soil Cleanup Objectives, dated December 14, 2006.

NYSDEC, 2010a. DER-10 Technical Guidance for Site Investigation and Remediation, May 2010.

NYSDEC, 2010b. CP-51/Soil Cleanup Guidance DEC Policy, October 21, 2010.

New York State Department of Health (NYSDOH), 2005. Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes, November 2005.

NYSDOH, 2006. Guidance for Evaluating Soil Vapor Intrusion in the State of New York. New York State Department of Health, Center for Environmental Health, Bureau of Environmental Exposure Investigation, October 2006.

Rickard, L.V. and D. W. Fisher, 1970. Geologic Map of New York, Finger Lakes Sheet, Scale 1:250,000, New York State Museum and Science Service, Map and Chart Series No. 15, March 1970.

United States Department of Agriculture Soil Conservation Service, retrieved from the World Wide Web on December 29, 2017.
https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

Tables

Table 1
Property Ownership Information
LeRoy Former MGP Site
LeRoy, New York

On-Site Properties			
	Tax ID 6.-1-56	Parcel Address	78 1/2 Lake St
Owner	Thomas McGinnis	Occupant/Land Use	Auto Body Shop
Off-Site Properties			
	Tax ID 6.-1-3.1	Parcel Address	78 Lake St
Owner	Thomas McGinnis	Occupant/Land Use	Vacant Industrial Land
	Tax ID 6.-1-3.2	Parcel Address	78 Lake St
Owner	Thomas McGinnis	Occupant/Land Use	Hotel / Bar
	Tax ID 6.-1-53	Parcel Address	Mill St
Owner	Thomas McGinnis	Occupant/Land Use	ASAP Plumbing / Vacant Commercial Land
	Tax ID 6.-1-4	Parcel Address	80 Lake St
Owner	Thomas McGinnis	Occupant/Land Use	manufacturing and processing
	Tax ID 6.-1-5	Parcel Address	88 Lake St
Owner	Thomas McGinnis	Occupant/Land Use	one family residential
	Tax ID 6.-1-6	Parcel Address	92 Lake St
Owner	Thomas McGinnis	Occupant/Land Use	apartments
	Tax ID 6.-1-7.2	Parcel Address	Lake St
Owner	Thomas McGinnis	Occupant/Land Use	residential vacant land
		Parcel Address	
Owner	National Grid	Occupant/Land Use	Public Utility vacant land
	Tax ID 6.-1-51./A	Parcel Address	76 Lake St
Owner	National Grid	Occupant/Land Use	The Dugout snack bar
	Tax ID 6.-1-50	Parcel Address	Mill St
Owner	New York Central Lines LLC	Occupant/Land Use	Vacant Industrial Land
	Tax ID 6.-1-2	Parcel Address	53 Church St
Owner	Orcon Industries Corp	Occupant/Land Use	Other Warehouse
	Tax ID 6.-1-1	Parcel Address	Church St
Owner	Orcon Industries Corp	Occupant/Land Use	Vacant Industrial Land
	Tax ID 6.-1-49	Parcel Address	Red Mill St
Owner	Village of LeRoy	Occupant/Land Use	sewage treatment

Table 2
Site History Summary
LeRoy Former MGP Site
LeRoy, New York

Date	Observation/Activity	Data Source
1860	LeRoy Gas Light Company incorporated	LeRoy Historical Society
1876	Atlas shows gas works present at site with gas holder and associated buildings.	Century Map Co.
1885	Gas holder and gas house present with adjacent coal and lumber shed	Sanborn
1887	LeRoy Gas Light Company with coal process	Browns
1889	LeRoy Gas Light Company with coal process	Browns
1890	Gas production output listed at 1,500,000 cubic foot (cf) per year.	Browns
1891	Gas production output listed at 2,543,100 cf per year.	Browns
1892	Gas company also lists electrical department; now shown as LeRoy Gas & Electric Company. Buildings added for coal, dynamos and retorts. Adjacent building now shown for just coal.	Sanborn, Browns
1893	Continue with coal process and include electrical department	Browns
1894	Plant has been converted to carbureted water gas process	Le Roy Gazette May 9, 1894
1897	Gas holder now called gasometer	Sanborn
1899	LeRoy Gas and Electric Light Company has 100 consumers and 75% of gas sold for fuel purposes	Browns
1900	LeRoy Gas and Electric Company output listed at 300,000,000 cf with 10% sold for fuel purposes; process listed as coal and gray	Browns
1901-1902	Process listed as coal and gray	Browns
1903	Gas house shows retorts south of previous location and labels the purifier house; process listed as water; plant bought in October 1902 by D.C. Howard Prentice	Sanborn, Browns
1905	LeRoy Hydraulic Electric-Gas Company is successor to previous company; uses coal process	Browns
1906	Gas production output listed at 1,376,900 cf per year	Browns
1907	Gas production output listed at 1,276,800 cf per year	Browns
1908	Plant shut down September 1908 due to natural gas competition	Browns
1910	Site features unchanged, but coal shed is vacant and property listed as “not in operation”	Sanborn
1927	Buildings associated with gas plant are no longer indicated, have been replaced by Western New York Utilities Company transformers	Sanborn
1930	Portion of current building constructed	Genesee County Assessor’s Office
1949	Head race for Oatka Creek is gone and a transformer yard is located in that area. Operated by Niagara Hudson System for Niagara Lockport & Ontario Power Company.	Sanborn
1980	Second portion of current building constructed	Genesee County Assessor’s Office
1983	Property sold to Thomas McGinnis	Genesee County Assessor’s Office

Notes:
Browns – Browns Directory of American Gas Companies
cf – cubic foot
Sanborn – Sanborn Fire Insurance Map

Table 3
Soil Analysis Results - VOCs
LeRoy Former MGP
LeRoy, New York

Analyte	Unrestricted SCO	Industrial SCO	Sample Name	MW1 (10.5-11.5)	MW2 (8.5-9.5)	MW2 (10.5-11.5)	MW3 (8.5-9.5)	MW3 (13-14)	MW4 (10-11)	DUP05132016	MW-5 (9.5-10.5)	MW-6 (9.5-10.5)	MW-7 (10-11.2)	MW-8 (13-14)	SB1 (10-11)	SB2 (12-13)	SB3 (18-19)	SB4 (18-19)	SB5 (10.5-11.5)	SB6 (11-12)
			Start Depth	10.5	8.5	10.5	8.5	13	10	10	9.5	9.5	10	13	10	12	18	18	10.5	11
			End Depth	11.5	9.5	11.5	9.5	14	11	11	10.5	10.5	11.2	14	11	13	19	19	11.5	12
			Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
			Sample Date	5/13/2016	5/11/2016	5/11/2016	5/11/2016	5/11/2016	5/13/2016	5/13/2016	12/4/2017	12/5/2017	12/4/2017	12/4/2017	5/16/2016	5/13/2016	5/12/2016	5/13/2016	5/11/2016	5/11/2016
			Parent Sample							MW4 (10-11)										
BTEX (mg/kg)																				
Benzene	0.06	89		**0.039 J**	**77**	**9**	0.22 U	**0.0008 J**	0.0037 U	0.0042 U	0.004 U	**0.00032 J**	**160**	**4.5**	**0.0006 J**	**0.00022 J**	**0.00034 J**	0.004 U	**0.082 J**	**0.56**
Toluene	0.7	1000		**0.079 J**	**110**	**2.5 J**	**0.057 J**	0.0039 U	0.0037 U	0.0042 U	0.004 U	0.0053 U	**360**	**0.03**	0.0037 U	0.0034 U	**0.00093 J**	0.004 U	0.31 U	**0.56**
Ethylbenzene	1	780		**0.055 J**	**130**	**10**	**0.057 J**	**0.00087 J**	0.0037 U	0.0042 U	0.004 U	0.0053 U	**420**	**10**	0.0037 U	0.0034 U	0.0035 U	0.004 U	**0.48**	**6.3**
o-Xylene	0.26	1000		**0.066 J**	**110**	**7.5**	**0.06 J**	**0.0007 J**	0.0037 U	0.0042 U	0.004 U	0.0053 U	**360**	**4.2**	0.0037 U	0.0034 U	0.0035 U	0.004 U	**0.15 J**	**5**
m/p-Xylene	0.26	1000		**0.19 J**	**340**	**25**	**0.17 J**	**0.0014 J**	0.0074 U	0.0085 U	0.008 U	0.011 U	**1100**	**9.1**	0.0075 U	0.0067 U	**0.00095 J**	0.0081 U	**0.17 J**	**13**
Total BTEX	NE	NE		**0.429**	**767**	**54**	**0.344**	**0.00377**	ND	ND	ND	**0.00032**	**2400**	**27.83**	**0.0006**	**0.00022**	**0.00222**	ND	**0.882**	**25.42**
Other VOCs (mg/kg)																				
Acetone	0.05	1000		0.3 U	10 U	3.6 U	0.22 U	**0.0061**	**0.022**	**0.028**	NA	NA	NA	NA	**0.013**	**0.0052**	**0.0036**	**0.007**	0.31 U	0.37 U
Bromochloromethane	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Bromodichloromethane	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Bromoform	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Bromomethane	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Carbon disulfide	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 UJ	0.0037 UJ	0.0042 UJ	NA	NA	NA	NA	**0.00096 J**	0.0034 UJ	0.0035 UJ	0.004 UJ	**0.25 J**	0.37 U
Carbon tetrachloride	0.76	44		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Chlorobenzene	1.1	1000		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Chloroethane	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Chloroform (Trichloromethane)	0.37	700		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Chloromethane	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Cyclohexane	NE	NE		**0.29 J**	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	**0.0011 J**	0.004 U	0.31 U	0.37 U
1,2-Dibromo-3-chloropropane	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Dibromochloromethane	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
1,2-Dibromoethane (EDB)	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
1,2-Dichlorobenzene (o-DCB)	1.1	1000		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
1,3-Dichlorobenzene (m-DCB)	2.4	560		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
1,4-Dichlorobenzene (p-DCB)	1.8	250		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Dichlorodifluoromethane (Freon 12)	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
1,1-Dichloroethane	0.27	480		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	**0.00087 J**	0.0035 U	0.004 U	0.31 U	0.37 U
1,2-Dichloroethane	0.02	60		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
1,1-Dichloroethene	0.33	1000		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
cis-1,2-Dichloroethene	0.25	1000		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
trans-1,2-Dichloroethene	0.19	1000		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
1,2-Dichloropropane	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
cis-1,3-Dichloropropene	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
trans-1,3-Dichloropropene	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
1,4-Dioxane	0.1	250		6 R	210 R	72 R	4.4 R	0.078 R	0.074 R	0.085 R	NA	NA	NA	NA	0.075 R	0.067 R	0.069 R	0.081 R	6.3 R	7.5 R
2-Hexanone	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Isopropylbenzene	NE	NE		0.3 U	**11**	**1.8 J**	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	**0.34**	**1.6**
Methyl acetate	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	**0.26 J**	**0.19 J**
Methyl ethyl ketone (2-Butanone)	0.12	1000		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	**0.0061**	**0.0065**	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Methyl tert-butyl ether (MTBE)	0.93	1000		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
4-Methyl-2-pentanone (MIBK)	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Methylcyclohexane	NE	NE		**0.99**	**4.3 J**	3.6 U	**0.14 J**	0.0039 UJ	0.0037 UJ	0.0042 UJ	NA	NA	NA	NA	**0.0011 J**	0.0034 UJ	**0.0018 J**	0.004 UJ	**0.13 J**	**0.2 J**
Methylene chloride	0.05	1000		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Styrene	NE	NE		0.3 U	**21**	3.6 U	**0.062 J**	**0.00071 J**	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	**0.085 J**	0.37 U
1,1,2,2-Tetrachloroethane	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Tetrachloroethene (PCE)	1.3	300		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
1,2,3-Trichlorobenzene	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
1,2,4-Trichlorobenzene	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
1,1,1-Trichloroethane (TCA)	0.68	1000		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	**0.0033 J**	**0.004**	0.0035 U	0.004 U	0.31 U	0.37 U
1,1,2-Trichloroethane	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Trichloroethene (TCE)	0.47	400		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Trichlorofluoromethane (Freon 11)	NE	NE		0.3 U	10 U	3.6 U	0.22 U	0.0039 U	0.0037 U	0.0042 U	NA	NA	NA	NA	0.0037 U	0.0034 U	0.0035 U	0.004 U	0.31 U	0.37 U
Vinyl chloride	0.02	27		0.3 U	10 U	3.6 U	0.22 U	0.0039 UJ	0.0037 UJ	0.0042 UJ	NA	NA	NA	NA	0.0037 UJ	0.0034 UJ	0.0035 UJ	0.004 UJ	0.31 U	0.37 U

Table 3
Soil Analysis Results - VOCs
LeRoy Former MGP
LeRoy, New York

Analyte	Unrestricted SCO	Industrial SCO	Sample Name	SB7 (1-2)	SB8 (8-9)	SB-9 (16.5-17.5)	SB-10 (8-8.6)	SB-11 (13-13.9)	SB-12 (9-11.5)	DUP-1	SB-13 (9-10.5)	SB-14 (9-11)	SB-15 (10-11.3)	SB-16 (10.5-11.5)	TP1	TP2	TP3	TP4	TP5
			Start Depth	1	8	16.5	8	13	9	9	9	9	10	10.5	6	4.5	5	6	5.2
			End Depth	2	9	17.5	8.6	13.9	11.5	11.5	10.5	11	11.3	11.5	7	6.5	6	7	6.2
			Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
			Sample Date	5/12/2016	5/12/2016	12/6/2017	12/5/2017	12/4/2017	12/4/2017	12/4/2017	12/4/2017	12/6/2017	12/6/2017	12/4/2017	5/9/2016	5/10/2016	5/10/2016	5/10/2016	5/10/2016
			Parent Sample							SB-12 (9-11.5)									
BTEX (mg/kg)																			
Benzene	0.06	89		0.0041 U	0.006 U	0.0042 U	**0.12**	**0.61**	**2.2**	**2.9**	**0.0072**	0.0036 U	**5.6**	**0.00058 J**	0.009 U	0.0067 U	**0.0025 J**	0.0045 U	0.0042 U
Toluene	0.7	1000		0.0041 U	0.006 U	0.0042 U	**0.0091**	0.55 U	**3.2**	**3.2**	**0.034**	0.0036 U	**0.87 J**	0.0045 U	0.009 U	0.0067 U	**0.0009 J**	0.0045 U	0.0042 U
Ethylbenzene	1	780		**0.00022 J**	**0.0039 J**	0.0042 U	**0.17**	**0.78**	**14 J**	**4.5 J**	**0.063**	0.0036 U	**12**	**0.00021 J**	0.009 U	0.0067 U	**0.004**	0.0045 U	**0.00024 J**
o-Xylene	0.26	1000		**0.00043 J**	**0.0099**	0.0042 U	**0.091**	**0.55**	**9.4 J**	**2.2 J**	**0.1**	0.0036 U	**2.9**	0.0045 U	0.009 U	0.0067 U	**0.0024 J**	0.0045 U	0.0042 U
m/p-Xylene	0.26	1000		0.0082 U	**0.022**	0.0084 U	**0.065**	**1 J**	**31 J**	**8.3 J**	**0.23**	0.0072 U	**3.1**	0.009 U	0.018 U	0.013 U	**0.0025 J**	0.0089 U	0.0084 U
Total BTEX	NE	NE		**0.00065**	**0.0358**	ND	**0.4551**	**2.94**	**59.8**	**21.1**	**0.4342**	ND	**24.47**	**0.00079**	ND	ND	**0.0123**	ND	**0.00024**
Other VOCs (mg/kg)																			
Acetone	0.05	1000		0.0041 U	**0.004 J**	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	**0.047**	**0.026**
Bromochloromethane	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Bromodichloromethane	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Bromoform	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Bromomethane	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Carbon disulfide	NE	NE		0.0041 UJ	0.006 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 UJ	0.0067 UJ	0.0039 UJ	**0.0021 J**	**0.0025 J**
Carbon tetrachloride	0.76	44		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Chlorobenzene	1.1	1000		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Chloroethane	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Chloroform (Trichloromethane)	0.37	700		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Chloromethane	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Cyclohexane	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
1,2-Dibromo-3-chloropropane	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Dibromochloromethane	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
1,2-Dibromoethane (EDB)	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
1,2-Dichlorobenzene (o-DCB)	1.1	1000		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
1,3-Dichlorobenzene (m-DCB)	2.4	560		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
1,4-Dichlorobenzene (p-DCB)	1.8	250		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Dichlorodifluoromethane (Freon 12)	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
1,1-Dichloroethane	0.27	480		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
1,2-Dichloroethane	0.02	60		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
1,1-Dichloroethene	0.33	1000		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
cis-1,2-Dichloroethene	0.25	1000		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
trans-1,2-Dichloroethene	0.19	1000		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
1,2-Dichloropropane	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
cis-1,3-Dichloropropene	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
trans-1,3-Dichloropropene	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
1,4-Dioxane	0.1	250		0.082 R	0.12 R	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.18 R	0.13 R	0.077 R	0.089 R	0.084 R
2-Hexanone	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Isopropylbenzene	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	**0.00052 J**	0.0045 U	0.0042 U
Methyl acetate	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	**0.0014 J**	0.0045 U	0.0042 U
Methyl ethyl ketone (2-Butanone)	0.12	1000		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	**0.013**	**0.0072**
Methyl tert-butyl ether (MTBE)	0.93	1000		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
4-Methyl-2-pentanone (MIBK)	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Methylcyclohexane	NE	NE		0.0041 UJ	0.006 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 UJ	0.0067 UJ	0.0039 UJ	0.0045 UJ	**0.0017 J**
Methylene chloride	0.05	1000		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	**0.001 J**	0.0045 U	0.0042 U
Styrene	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
1,1,2,2-Tetrachloroethane	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Tetrachloroethene (PCE)	1.3	300		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
1,2,3-Trichlorobenzene	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
1,2,4-Trichlorobenzene	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
1,1,1-Trichloroethane (TCA)	0.68	1000		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
1,1,2-Trichloroethane	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Trichloroethene (TCE)	0.47	400		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Trichlorofluoromethane (Freon 11)	NE	NE		0.0041 U	0.006 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 U	0.0067 U	0.0039 U	0.0045 U	0.0042 U
Vinyl chloride	0.02	27		0.0041 UJ	0.006 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.009 UJ	0.0067 UJ	0.0039 UJ	0.0045 UJ	0.0042 UJ

Notes
Soil Analysis Results
LeRoy Former MGP
LeRoy, New York

Notes:

Analytes in blue are not detected in any sample

mg/kg = milligrams/kilogram or parts per million (ppm)

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
PAH = Polycyclic Aromatic Hydrocarbon
PCB = Polychlorinated Biphenyl
SVOC = Semi-Volatile Organic Compound
VOC = Volatile Organic Compound

Total BTEX and Total PAHs are calculated using measured or estimated concentrations only (values below the detection limits are excluded).

Total PAH16 is calculated using the EPA16 list of analytes: Acenaphthene, Acenaphthylene, Anthracene, Benz[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Chrysene, Dibenz[a,h]anthracene, Fluoranthene, Fluorene, Indeno[1,2,3-cd]pyrene, Naphthalene, Phenanthrene, and Pyrene

Total PAH17 is calculated using the EPA16 list of analytes plus 2-Methylnaphthalene

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

ND = Not Detected
NE = Not Established

Bolding indicates a detected result concentration
Gray shading and bolding indicates that the detected result value exceeds the Unrestricted SCO
Yellow shading and bolding indicates that the detected result value exceeds the Industrial SCO

Validation Qualifiers:

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

Table 4
Soil Analysis Results - SVOCs
LeRoy Former MGP
LeRoy, New York

Analyte	Unrestricted SCO	Industrial SCO	Sample Name	MW1 (10.5-11.5)	MW2 (8.5-9.5)	MW2 (10.5-11.5)	MW3 (8.5-9.5)	MW3 (13-14)	MW4 (10-11)	DUP05132016	MW-5 (9.5-10.5)	MW-6 (9.5-10.5)	MW-7 (10-11.2)	MW-8 (13-14)	SB1 (10-11)	SB2 (12-13)	SB3 (18-19)	SB4 (18-19)	SB5 (10.5-11.5)	SB6 (11-12)
			Start Depth	10.5	8.5	10.5	8.5	13	10	10	9.5	9.5	10	13	10	12	18	18	10.5	11
			End Depth	11.5	9.5	11.5	9.5	14	11	11	10.5	10.5	11.2	14	11	13	19	19	11.5	12
			Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
			Sample Date	5/13/2016	5/11/2016	5/11/2016	5/11/2016	5/11/2016	5/13/2016	5/13/2016	12/4/2017	12/5/2017	12/4/2017	12/4/2017	5/16/2016	5/13/2016	5/12/2016	5/13/2016	5/11/2016	5/11/2016
			Parent Sample							MW4 (10-11)										
NYSDEC PAH17 (mg/kg)																				
Acenaphthene	20	1000		**0.81 J**	**210**	**28**	**1.1 J**	0.37 U	0.35 U	0.41 U	0.39 U	0.38 U	**240**	**1.6**	0.37 U	0.36 U	0.37 U	0.38 U	**20**	**27**
Acenaphthylene	100	1000		**0.74 J**	**510**	**5.2 J**	**9.4**	0.37 U	**0.21 J**	**0.21 J**	**0.11 J**	0.38 U	**330**	**0.95**	0.37 U	0.36 U	0.37 U	0.38 U	**2.2 J**	**3.1 J**
Anthracene	100	1000		**2.3**	**500**	**35**	**6.1**	0.37 U	0.35 U	0.41 U	**0.3 J**	0.38 U	**390**	**1.4**	0.37 U	0.36 U	0.37 U	0.38 U	**21**	**29**
Benzo(a)anthracene	1	11		**5**	**320**	**24**	**4.4**	0.37 U	**1.5**	**1.5**	**0.94**	0.38 U	**280**	**3.7**	0.37 U	0.36 U	0.37 U	0.38 U	**13**	**21**
Benzo(b)fluoranthene	1	11		**4.5**	**230**	**18**	**4.6**	0.37 U	**1.8**	**1.9**	**0.79**	0.38 U	**220**	**5.5**	0.37 U	0.36 U	0.37 U	0.38 U	**14**	**17**
Benzo(k)fluoranthene	0.8	110		**1.4**	**100 J**	**7.8**	**1.6 J**	0.37 U	**0.7**	**0.73**	**0.34 J**	0.38 U	**84 J**	**1.9**	0.37 U	0.36 U	0.37 U	0.38 U	**4.7 J**	**6.5 J**
Benzo(g,h,i)perylene	100	1000		**2.9**	**120 J**	**9.1**	**6.2**	0.37 U	**0.89**	**0.93**	**0.25 J**	0.38 U	**130 J**	**3.3**	0.37 U	0.36 U	0.37 U	0.38 U	**19**	**7.8**
Benzo(a)pyrene	1	1.1		**4.6**	**220**	**17**	**6.3**	0.37 U	**1.6**	**1.7**	**0.69**	0.38 U	**230**	**4.3**	0.37 U	0.36 U	0.37 U	0.38 U	**20**	**15**
Chrysene	1	110		**4.1**	**240**	**20**	**4.4**	0.37 U	**1.2**	**1.3**	**0.74**	0.38 U	**220**	**4.2**	0.37 U	0.36 U	0.37 U	0.38 U	**15**	**18**
Dibenz(a,h)anthracene	0.33	1.1		**0.65 J**	**30 J**	**2.5 J**	3.8 U	0.37 U	**0.27 J**	**0.27 J**	**0.1 J**	0.38 U	**30 J**	**0.8 J**	0.37 U	0.36 U	0.37 U	0.38 U	**1.6 J**	**2.1 J**
Fluoranthene	100	1000		**9**	**820**	**56**	**15**	0.37 U	**1.7**	**1.7**	**1.3**	0.38 U	**710**	**7.6**	0.37 U	0.36 U	0.37 U	0.38 U	**45**	**50**
Fluorene	30	1000		**1.6**	**560**	**30**	**4.2**	0.37 U	0.35 U	0.41 U	0.39 U	0.38 U	**400**	**0.96**	0.37 U	0.36 U	0.37 U	0.38 U	**12**	**27**
Indeno(1,2,3-cd)pyrene	0.5	11		**2.1**	**94 J**	**7.5**	**3.3 J**	0.37 U	**0.78**	**0.83**	**0.29 J**	0.38 U	**130**	**3.4**	0.37 U	0.36 U	0.37 U	0.38 U	**9.5**	**6.7 J**
2-Methylnaphthalene	NE	NE		**0.41 J**	**840**	**24**	**6.8**	0.37 U	0.35 U	0.41 U	0.39 U	0.38 U	**610 J**	**0.35 J**	0.37 U	0.36 U	0.37 U	0.38 U	**2.2 J**	**22**
Naphthalene	12	1000		1.2 U	**2400**	**67**	**51**	0.37 U	0.35 U	0.41 U	0.39 U	0.38 U	**2100**	**3.5**	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	**54**
Phenanthrene	100	1000		**5.3**	**1300**	**87**	**25**	0.37 U	0.35 U	**0.098 J**	**0.35 J**	0.38 U	**1200**	**3.7**	0.37 U	0.36 U	0.37 U	0.38 U	**74**	**77**
Pyrene	100	1000		**9.8**	**590**	**42**	**18**	0.37 U	**2.1**	**2.3**	**1.3**	0.38 U	**590**	**7**	0.37 U	0.36 U	0.37 U	0.38 U	**58**	**36**
Total PAH (17)	NE	500		**55.21**	**9084**	**480.1**	**167.4**	ND	**12.75**	**13.47**	**7.5**	ND	**7894**	**54.16**	ND	ND	ND	ND	**331.2**	**419.2**
NYSDEC PAH17 Other SVOCs (mg/kg)																				
Acetophenone	NE	NE		1.2 UJ	160 UJ	6.9 UJ	3.8 UJ	0.37 UJ	0.35 UJ	0.41 UJ	NA	NA	NA	NA	0.37 UJ	0.36 UJ	0.37 UJ	0.38 UJ	8.5 UJ	6.8 UJ
Atrazine	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
Benzaldehyde	NE	NE		6.1 UJ	840 UJ	35 UJ	20 UJ	1.9 U	1.8 UJ	2.1 UJ	NA	NA	NA	NA	1.9 UJ	1.9 U	1.9 UJ	1.9 U	44 UJ	35 UJ
Biphenyl (1,1-Biphenyl)	NE	NE		1.2 U	**110 J**	**3.8 J**	**4.1**	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	**6.1 J**	**3.4 J**
Bis(2-chloroethoxy)methane	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
Bis(2-chloroethyl)ether	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
2,2-oxybis(1-Chloropropane)	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
Bis(2-ethylhexyl)phthalate	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
4-Bromophenyl phenyl ether	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
Butyl benzyl phthalate	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
Caprolactam	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
Carbazole	NE	NE		1.2 U	**160**	**14**	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	**8.3**
4-Chloro-3-methylphenol	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
4-Chloroaniline	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
2-Chloronaphthalene	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
2-Chlorophenol	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
4-Chlorophenyl phenyl ether	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
Dibenzofuran	7	1000		**0.57 J**	**430**	**20**	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	**1.7 J**	**18**
3,3-Dichlorobenzidine	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
2,4-Dichlorophenol	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
Diethyl phthalate	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
Dimethyl phthalate	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
2,4-Dimethylphenol	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
Di-n-butyl phthalate	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
4,6-Dinitro-2-methylphenol	NE	NE		6.1 U	840 U	35 U	20 U	1.9 U	1.8 U	2.1 U	NA	NA	NA	NA	1.9 U	1.9 U	1.9 U	1.9 U	44 U	35 U
2,4-Dinitrophenol	NE	NE		6.1 U	840 U	35 U	20 U	1.9 U	1.8 U	2.1 U	NA	NA	NA	NA	1.9 U	1.9 U	1.9 R	1.9 U	44 U	35 U
2,4-Dinitrotoluene	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
2,6-Dinitrotoluene	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
Di-n-octyl phthalate	NE	NE		1.2 UJ	160 UJ	6.9 UJ	3.8 UJ	0.37 U	0.35 UJ	0.41 UJ	NA	NA	NA	NA	0.37 UJ	0.36 U	0.37 UJ	0.38 U	8.5 UJ	6.8 UJ
Hexachlorobenzene	0.33	12		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
1,3-Hexachlorobutadiene (C-46)	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
Hexachlorocyclopentadiene	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
Hexachloroethane	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
Isophorone	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
1-Methylnaphthalene	NE	NE									0.39 U	0.38 U	**340**	**0.62 J**						
2-Methylphenol (o-Cresol)	0.33	1000		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
3,4-Methylphenol (m,p-Cresol)	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
2-Nitroaniline	NE	NE		6.1 U	840 U	35 U	20 U	1.9 U	1.8 U	2.1 U	NA	NA	NA	NA	1.9 U	1.9 U	1.9 U	1.9 U	44 U	35 U
3-Nitroaniline	NE	NE		6.1 U	840 U	35 U	20 U	1.9 U	1.8 U	2.1 U	NA	NA	NA	NA	1.9 U	1.9 U	1.9 U	1.9 U	44 U	35 U
4-Nitroaniline	NE	NE		6.1 U	840 U	35 U	20 U	1.9 U	1.8 U	2.1 U	NA	NA	NA	NA	1.9 U	1.9 U	1.9 U	1.9 U	44 U	35 U
Nitrobenzene	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
2-Nitrophenol	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
4-Nitrophenol	NE	NE		6.1 U	840 U	35 U	20 U	1.9 U	1.8 U	2.1 U	NA	NA	NA	NA	1.9 U	1.9 U	1.9 U	1.9 U	44 U	35 U
N-Nitrosodiphenylamine (NDFA)	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
N-Nitrosodi-n-propylamine (NDPA)	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
Pentachlorophenol	0.8	55		6.1 UJ	840 UJ	35 UJ	20 UJ	1.9 U	1.8 UJ	2.1 UJ	NA	NA	NA	NA	1.9 UJ	1.9 U	1.9 UJ	1.9 U	44 UJ	35 UJ
Phenol	0.33	1000		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
1,2,4,5-Tetrachlorobenzene	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
2,3,4,6-Tetrachlorophenol	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
2,4,5-Trichlorophenol	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U
2,4,6-Trichlorophenol	NE	NE		1.2 U	160 U	6.9 U	3.8 U	0.37 U	0.35 U	0.41 U	NA	NA	NA	NA	0.37 U	0.36 U	0.37 U	0.38 U	8.5 U	6.8 U

Table 4
Soil Analysis Results - SVOCs
LeRoy Former MGP
LeRoy, New York

Analyte	Unrestricted SCO	Industrial SCO	Sample Name	SB7 (1-2)	SB8 (8-9)	SB-9 (16.5-17.5)	SB-10 (8-8.6)	SB-11 (13-13.9)	SB-12 (9-11.5)	DUP-1	SB-13 (9-10.5)	SB-14 (9-11)	SB-15 (10-11.3)	SB-16 (10.5-11.5)	TP1	TP2	TP3	TP4	TP5
			Start Depth	1	8	16.5	8	13	9	9	9	9	10	10.5	6	4.5	5	6	5.2
			End Depth	2	9	17.5	8.6	13.9	11.5	11.5	10.5	11	11.3	11.5	7	6.5	6	7	6.2
			Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
			Sample Date	5/12/2016	5/12/2016	12/6/2017	12/5/2017	12/4/2017	12/4/2017	12/4/2017	12/4/2017	12/6/2017	12/6/2017	12/4/2017	5/9/2016	5/10/2016	5/10/2016	5/10/2016	5/10/2016
			Parent Sample							SB-12 (9-11.5)									
NYSDEC PAH17 (mg/kg)																			
Acenaphthene	20	1000		1.1 U	0.38 U	0.36 U	**7.7**	**15**	**8.4**	**4.2**	**26**	0.4 U	**7.2**	0.42 U	0.42 U	0.45 U	**0.55 J**	0.4 U	0.4 U
Acenaphthylene	100	1000		**1.5**	**0.23 J**	0.36 U	**1.3 J**	**2.3 J**	**1.5 J**	**1.3 J**	**25**	0.4 U	**1.1 J**	0.42 U	0.42 U	**0.59**	**1.6**	**0.24 J**	0.4 U
Anthracene	100	1000		**0.99 J**	**0.43**	0.36 U	**9.2**	**20**	**6.1**	**4.4**	**75**	0.4 U	**2.8**	0.42 U	0.42 U	**0.68**	**2.9**	**0.4 J**	**0.091 J**
Benzo(a)anthracene	1	11		**4.9**	**0.63**	0.36 U	**8.3**	**16**	**5.4 J**	**13 J**	**50**	0.4 U	**5.1**	0.42 U	**0.17 J**	**2.8**	**10**	**2.8**	**0.32 J**
Benzo(b)fluoranthene	1	11		**6.4**	**0.64**	0.36 U	**9**	**14**	**5.1 J**	**17 J**	**39**	0.4 U	**6.9**	0.42 U	**0.24 J**	**3.3**	**13**	**4**	**0.49**
Benzo(k)fluoranthene	0.8	110		**2.6**	**0.22 J**	0.36 U	**3.2**	**5.3**	**2 J**	**5.5**	**15**	0.4 U	**2.3 J**	0.42 U	**0.092 J**	**1.2**	**5**	**1.5**	**0.17 J**
Benzo(g,h,i)perylene	100	1000		**4**	**0.45**	0.36 U	**7.7**	**6.4**	**3.1**	**6.7**	**18**	0.4 U	**5.2**	0.42 U	**0.18 J**	**2**	**9.9**	**2.9**	**0.36 J**
Benzo(a)pyrene	1	1.1		**5.4**	**0.59**	0.36 U	**9.5**	**13**	**5.3 J**	**12 J**	**37**	0.4 U	**6**	0.42 U	**0.21 J**	**2.7**	**12**	**3.7**	**0.42**
Chrysene	1	110		**5**	**0.52**	0.36 U	**8**	**12**	**4.6 J**	**13 J**	**41**	**0.081 J**	**5.4**	0.42 U	**0.15 J**	**2.7**	**8.8**	**2.4**	**0.35 J**
Dibenz(a,h)anthracene	0.33	1.1		**1.2**	**0.089 J**	0.36 U	**1.2 J**	**2.1 J**	**0.73 J**	**2.4 J**	**5.7 J**	0.4 U	**0.86 J**	0.42 U	0.42 U	**0.49**	**2.2**	**0.73**	**0.11 J**
Fluoranthene	100	1000		**7.8**	**1.5**	0.36 U	**21**	**36**	**13**	**18**	**110**	0.4 U	**13**	0.42 U	**0.18 J**	**5.6**	**14**	**3.3**	**0.37 J**
Fluorene	30	1000		**0.26 J**	**0.24 J**	0.36 U	**6**	**18**	**5.7**	**3.1**	**47**	0.4 U	**3.6**	0.42 U	0.42 U	**0.11 J**	**1.4**	**0.075 J**	0.4 U
Indeno(1,2,3-cd)pyrene	0.5	11		**3.3**	**0.34 J**	0.36 U	**6.9**	**7.3**	**3.2 J**	**8 J**	**21**	0.4 U	**4.8**	0.42 U	**0.12 J**	**1.6**	**7.2**	**2.3**	**0.28 J**
2-Methylnaphthalene	NE	NE		1.1 U	**0.15 J**	0.36 U	**5.7**	**13 J**	**6.7 J**	**1.8 J**	**26 J**	0.4 U	**1.1 J**	0.42 U	0.42 U	**0.082 J**	**0.46 J**	0.4 U	**0.065 J**
Naphthalene	12	1000		1.1 U	0.38 U	0.36 U	**16**	**23**	**34**	**21**	**75**	0.4 U	**28**	**0.2 J**	0.42 U	**0.092 J**	**2.5**	0.4 U	0.4 U
Phenanthrene	100	1000		**2.8**	**1.5**	0.36 U	**24**	**50**	**20**	**13**	**150**	**0.15 J**	**8.5**	0.42 U	**0.11 J**	**2.1**	**6.8**	**0.7**	**0.24 J**
Pyrene	100	1000		**6.6**	**1.3**	0.36 U	**20**	**29**	**12**	**17**	**88**	0.4 U	**12**	0.42 U	**0.19 J**	**4.6**	**14**	**3.5**	**0.41**
Total PAH (17)	NE	500		**52.75**	**8.829**	ND	**164.7**	**282.4**	**136.83**	**161.4**	**848.7**	**0.231**	**113.86**	**0.2**	**1.642**	**30.64**	**112.3**	**28.54**	**3.676**
NYSDEC PAH17 Other SVOCs (mg/kg)																			
Acetophenone	NE	NE		1.1 UJ	0.38 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 UJ	0.45 UJ	1.2 UJ	0.4 UJ	0.4 UJ
Atrazine	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
Benzaldehyde	NE	NE		5.7 UJ	2 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.2 U	2.3 U	6 U	2.1 UJ	2 UJ
Biphenyl (1,1-Biphenyl)	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	**0.24 J**	0.4 U	0.4 U
Bis(2-chloroethoxy)methane	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
Bis(2-chloroethyl)ether	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
2,2-oxybis(1-Chloropropane)	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
Bis(2-ethylhexyl)phthalate	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
4-Bromophenyl phenyl ether	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
Butyl benzyl phthalate	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
Caprolactam	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
Carbazole	NE	NE		1.1 U	**0.12 J**	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	**0.1 J**	**0.97 J**	**0.099 J**	0.4 U
4-Chloro-3-methylphenol	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
4-Chloroaniline	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
2-Chloronaphthalene	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
2-Chlorophenol	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
4-Chlorophenyl phenyl ether	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
Dibenzofuran	7	1000		1.1 U	**0.18 J**	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	**1.2**	0.4 U	0.4 U
3,3-Dichlorobenzidine	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
2,4-Dichlorophenol	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
Diethyl phthalate	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
Dimethyl phthalate	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
2,4-Dimethylphenol	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
Di-n-butyl phthalate	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
4,6-Dinitro-2-methylphenol	NE	NE		5.7 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.2 U	2.3 U	6 U	2.1 U	2 U
2,4-Dinitrophenol	NE	NE		5.7 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.2 U	2.3 U	6 U	2.1 U	2 U
2,4-Dinitrotoluene	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
2,6-Dinitrotoluene	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
Di-n-octyl phthalate	NE	NE		1.1 UJ	0.38 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 UJ	0.4 UJ
Hexachlorobenzene	0.33	12		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
1,3-Hexachlorobutadiene (C-46)	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
Hexachlorocyclopentadiene	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
Hexachloroethane	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
Isophorone	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
1-Methylnaphthalene	NE	NE				0.36 U	**3.5**	**7.9**	**4.7**	**2.8**	**23**	0.4 U	**2.7**	0.42 U					
2-Methylphenol (o-Cresol)	0.33	1000		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
3,4-Methylphenol (m,p-Cresol)	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
2-Nitroaniline	NE	NE		5.7 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.2 U	2.3 U	6 U	2.1 U	2 U
3-Nitroaniline	NE	NE		5.7 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.2 UJ	2.3 UJ	6 UJ	2.1 U	2 U
4-Nitroaniline	NE	NE		5.7 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.2 U	2.3 U	6 U	2.1 U	2 U
Nitrobenzene	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
2-Nitrophenol	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
4-Nitrophenol	NE	NE		5.7 U	2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.2 U	2.3 U	6 U	2.1 U	2 U
N-Nitrosodiphenylamine (NDFA)	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
N-Nitrosodi-n-propylamine (NDPA)	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
Pentachlorophenol	0.8	55		5.7 UJ	2 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.2 U	2.3 U	6 U	2.1 UJ	2 UJ
Phenol	0.33	1000		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
1,2,4,5-Tetrachlorobenzene	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
2,3,4,6-Tetrachlorophenol	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
2,4,5-Trichlorophenol	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U
2,4,6-Trichlorophenol	NE	NE		1.1 U	0.38 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42 U	0.45 U	1.2 U	0.4 U	0.4 U

Notes
Soil Analysis Results
LeRoy Former MGP
LeRoy, New York

Notes:

Analytes in blue are not detected in any sample

mg/kg = milligrams/kilogram or parts per million (ppm)

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
PAH = Polycyclic Aromatic Hydrocarbon
PCB = Polychlorinated Biphenyl
SVOC = Semi-Volatile Organic Compound
VOC = Volatile Organic Compound

Total BTEX and Total PAHs are calculated using measured or estimated concentrations only (values below the detection limits are excluded).

Total PAH16 is calculated using the EPA16 list of analytes: Acenaphthene, Acenaphthylene, Anthracene, Benz[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Chrysene, Dibenz[a,h]anthracene, Fluoranthene, Fluorene, Indeno[1,2,3-cd]pyrene, Naphthalene, Phenanthrene, and Pyrene

Total PAH17 is calculated using the EPA16 list of analytes plus 2-Methylnaphthalene

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

ND = Not Detected
NE = Not Established

Bolding indicates a detected result concentration
Gray shading and bolding indicates that the detected result value exceeds the Unrestricted SCO
Yellow shading and bolding indicates that the detected result value exceeds the Industrial SCO

Validation Qualifiers:

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

Table 5
Soil Analysis Results - PCBs and Metals
LeRoy Former MGP
LeRoy, New York

Analyte	Unrestricted SCO	Industrial SCO	Sample Name	MW1 (10.5-11.5)	MW2 (8.5-9.5)	MW2 (10.5-11.5)	MW3 (8.5-9.5)	MW3 (13-14)	MW4 (10-11)	DUP05132016	MW-5 (9.5-10.5)	MW-6 (9.5-10.5)	MW-7 (10-11.2)	MW-8 (13-14)	SB1 (10-11)	SB2 (12-13)	SB3 (18-19)	SB4 (18-19)	SB5 (10.5-11.5)	SB6 (11-12)
			Start Depth	10.5	8.5	10.5	8.5	13	10	10	9.5	9.5	10	13	10	12	18	18	10.5	11
			End Depth	11.5	9.5	11.5	9.5	14	11	11	10.5	10.5	11.2	14	11	13	19	19	11.5	12
			Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
			Sample Date	5/13/2016	5/11/2016	5/11/2016	5/11/2016	5/11/2016	5/13/2016	5/13/2016	12/4/2017	12/5/2017	12/4/2017	12/4/2017	5/16/2016	5/13/2016	5/12/2016	5/13/2016	5/11/2016	5/11/2016
			Parent Sample							MW4 (10-11)										
PCB Aroclors (mg/kg)																				
Aroclor 1016	NE	NE		0.04 U	0.16 U	0.046 U	0.038 U	0.037 U	0.035 U	0.041 U	0.039 U	0.038 U	0.33 U	0.22 U	0.037 U	0.036 U	0.037 U	0.038 U	0.043 U	0.045 U
Aroclor 1221	NE	NE		0.081 U	0.33 U	0.093 U	0.077 U	0.075 U	0.072 U	0.083 U	0.078 U	0.076 U	0.67 U	0.44 U	0.075 U	0.073 U	0.076 U	0.076 U	0.087 U	0.092 U
Aroclor 1232	NE	NE		0.04 U	0.16 U	0.046 U	0.038 U	0.037 U	0.035 U	0.041 U	0.039 U	0.038 U	0.33 U	0.22 U	0.037 U	0.036 U	0.037 U	0.038 U	0.043 U	0.045 U
Aroclor 1242	NE	NE		0.04 U	0.16 U	0.046 U	0.038 U	0.037 U	0.035 U	0.041 U	0.039 U	0.038 U	0.33 U	0.22 U	0.037 U	0.036 U	0.037 U	0.038 U	0.043 U	0.045 U
Aroclor 1248	NE	NE		0.04 U	0.16 U	0.046 UJ	0.038 UJ	0.037 UJ	0.035 UJ	0.041 U	0.039 U	0.038 U	0.33 U	0.22 U	0.037 U	0.036 UJ	0.037 UJ	0.038 UJ	0.043 UJ	0.045 U
Aroclor 1254	NE	NE		0.04 U	0.16 U	0.046 UJ	0.038 UJ	0.037 UJ	0.035 UJ	0.041 U	0.039 U	0.038 U	0.33 U	0.22 U	0.037 U	0.036 UJ	0.037 UJ	0.038 UJ	0.043 UJ	0.045 U
Aroclor 1260	NE	NE		0.04 U	0.16 U	0.046 UJ	0.038 UJ	0.037 UJ	0.035 UJ	0.041 U	0.039 U	0.038 U	0.33 U	0.22 U	0.037 U	0.036 UJ	0.037 UJ	0.038 UJ	0.043 UJ	0.045 U
Total Metals (mg/kg)																				
Aluminum	NE	NE		**1510**	**6330**	**4810**	**4000**	**5620**	**6320**	**7960**	**5240**	**3500**	**9330**	**5120**	**3130**	**3270**	**2680**	**2750**	**5940**	**5070**
Antimony	NE	NE		6.9 U	9.9 U	8.2 U	6.8 U	6.6 U	6.3 U	7.4 U	7 UJ	6.6 UJ	11.8 UJ	7.5 UJ	6.6 U	6.5 U	6.7 U	6.8 U	7.8 U	7.9 U
Arsenic	13	16		**4.1 J**	**5.6 J**	**3 J**	**2.3 J**	**2.3 J**	**4.8 J**	**5.3 J**	**2 J**	**1.6 J**	**9.7 J**	**6.9 J**	**1.9 J**	1.5 UJ	**2.2 J**	**1.6 J**	**2.1 J**	**3 J**
Barium	350	10000		**17.6 J**	**107 J**	**175 J**	**30.6 J**	**53.4 J**	**76.2 J**	**132 J**	**36**	**26**	**98.6**	**75.9**	**26.2 J**	**25.9 J**	**25.9 J**	**27.9 J**	**50.8 J**	**207 J**
Beryllium	7.2	2700		0.344 U	**0.298 J**	0.411 U	0.338 U	**0.241 J**	**0.389**	**0.492**	**0.208 J**	**0.176 J**	**0.473 J**	**0.387**	0.328 U	0.323 U	0.337 U	0.342 U	**0.246 J**	0.397 U
Cadmium	2.5	60		0.574 U	0.828 U	0.686 U	0.564 U	0.547 U	**0.431 J**	**0.603 J**	0.579 UJ	0.549 UJ	0.986 UJ	**0.662 J**	0.546 U	0.539 U	0.561 U	0.569 U	0.647 U	0.661 U
Calcium	NE	NE		**227000**	**69600**	**109000**	**63800**	**77300**	**3100 J**	**7280 J**	**43000**	**37600**	**152000**	**45400**	**105000**	**61500**	**60000**	**53400**	**43200**	**103000**
Chromium	NE	NE		**3.1**	**8.2**	**5.5**	**6.5**	**8.8**	**9.9**	**11.9**	**7.4**	**5.8**	**13.5**	**11**	**5.7**	**5.7**	**5.8**	**5**	**8.9**	**5.3**
Cobalt	NE	NE		**2.3 J**	**4.9 J**	**3.5 J**	**3 J**	**4.5 J**	**6.3 J**	**9.6 J**	**4.1 J**	**2.3 J**	**5.4 J**	**5.1 J**	**2.9 J**	**2.6 J**	**2.2 J**	**2.5 J**	**3.5 J**	**3.2 J**
Copper	50	10000		**20.7 J**	**19.7 J**	**24.5 J**	**10 J**	**11.5 J**	**18.6 J**	**24.1 J**	**10.8**	**8.1**	**31.4**	**33.5**	**8.4 J**	**7.2 J**	**6.9 J**	**6.4 J**	**9 J**	**28.5 J**
Iron	NE	NE		**7130**	**12500**	**8590**	**9220**	**13300**	**17400**	**20300**	**9340**	**7840**	**17900**	**25000**	**8880**	**8270**	**8490**	**8300**	**10900**	**7750**
Lead	63	3900		**23.9 J**	**34.1 J**	**40.4 J**	**4.7 J**	**5.7 J**	**19.7 J**	**20.4 J**	**6.8**	**4.8 J**	**68.8**	**94.6**	**5.4 J**	**3.2 J**	**3.6 J**	**3.2 J**	**13.9 J**	**45.1 J**
Magnesium	NE	NE		**5610 J**	**8220 J**	**10100 J**	**19100 J**	**26300 J**	**2060 J**	**2610 J**	**18000**	**16500**	**10500**	**3620**	**23700 J**	**20500 J**	**18200 J**	**18200 J**	**12900 J**	**7080 J**
Manganese	1600	10000		**165**	**408**	**572**	**299**	**358**	**326 J**	**930 J**	**225**	**177**	**543**	**429**	**294**	**299**	**252**	**256**	**259**	**414**
Mercury	0.18	5.7		**0.069**	**0.821**	**0.141**	**0.014 J**	**0.07**	**0.028 J**	**0.03 J**	**0.021 J**	**0.013 J**	**0.11**	**0.341**	**0.015 J**	**0.01 J**	**0.004 J**	**0.008 J**	**0.095**	**0.098**
Nickel	30	10000		**7**	**10.4**	**7.4**	**5.8**	**10**	**18.4**	**24**	**7.6**	**5.7**	**13.5**	**13.8**	**9.1**	**5.7**	**3.6 J**	**5.1**	**6.9**	**9.9**
Potassium	NE	NE		**411**	**1410**	**1240**	**998**	**1540**	**784**	**937**	**1110**	**718**	**1630**	**857**	**894**	**889**	**675**	**718**	**959**	**1830**
Selenium	3.9	6800		**5**	**2.3**	**2.9**	1.1 U	**1.6**	1.1 U	1.2 U	1.2 UJ	1.1 UJ	2 UJ	1.3 UJ	**2.2**	**0.883 J**	**0.842 J**	1.1 U	**0.97 J**	**1.9**
Silver	2	6800		1.2 U	1.7 U	1.4 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	**0.631 J**	**0.5 J**	1.1 U	1.1 U	1.1 U	1.1 U	1.3 U	1.3 U
Sodium	NE	NE		**158**	**218**	**193**	**104 J**	**164**	**115**	**160**	**194**	**198**	**602**	**364**	**140**	**128**	**128**	**119**	**94.7 J**	**269**
Thallium	NE	NE		**6.1**	1.7 U	1.4 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U	**4.5**	1.3 U	1.8 U	1.1 U	1.1 U	1.1 U	1.3 U	**1.7**
Vanadium	NE	NE		**7.6**	**14.4**	**11.1**	**11.3**	**14.7**	**13.6**	**16.1**	**12.8**	**10.1**	**16.2**	**14.9**	**8.7**	**10.1**	**10**	**10.3**	**12.5**	**11.1**
Zinc	109	10000		**123 J**	**51.3 J**	**51.7 J**	**26 J**	**24.5 J**	**41.1 J**	**50.7 J**	**41.1**	**25.9**	**235**	**118**	**17.8 J**	**17.7 J**	**20.6 J**	**16.7 J**	**34.2 J**	**61.1 J**
Cyanides (mg/kg)																				
Total Cyanide	27	10000		**0.222 J**	**2.77 J**	**0.1 J**	**0.05 J**	0.11 UJ	**0.12 J**	**0.18 J**	0.3 UJ	**0.27 J**	**2.12 J**	**0.71 J**	0.11 UJ	0.092 UJ	0.11 UJ	0.1 UJ	**0.22 J**	**18.9 J**

Table 5
Soil Analysis Results - PCBs and Metals
LeRoy Former MGP
LeRoy, New York

Analyte	Unrestricted SCO	Industrial SCO	Sample Name	SB7 (1-2)	SB8 (8-9)	SB-9 (16.5-17.5)	SB-10 (8-8.6)	SB-11 (13-13.9)	SB-12 (9-11.5)	DUP-1	SB-13 (9-10.5)	SB-14 (9-11)	SB-15 (10-11.3)	SB-16 (10.5-11.5)	TP1	TP2	TP3	TP4	TP5
			Start Depth	1	8	16.5	8	13	9	9	9	9	10	10.5	6	4.5	5	6	5.2
			End Depth	2	9	17.5	8.6	13.9	11.5	11.5	10.5	11	11.3	11.5	7	6.5	6	7	6.2
			Depth Unit	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
			Sample Date	5/12/2016	5/12/2016	12/6/2017	12/5/2017	12/4/2017	12/4/2017	12/4/2017	12/4/2017	12/6/2017	12/6/2017	12/4/2017	5/9/2016	5/10/2016	5/10/2016	5/10/2016	5/10/2016
			Parent Sample							SB-12 (9-11.5)									
PCB Aroclors (mg/kg)																			
Aroclor 1016	NE	NE		0.037 U	0.038 U	0.037 U	0.044 U	0.21 U	0.23 U	0.24 U	0.21 U	0.04 U	0.051 U	0.042 U	0.042 U	0.045 U	0.039 U	0.04 U	0.04 U
Aroclor 1221	NE	NE		0.075 U	0.078 U	0.074 U	0.089 U	0.43 U	0.46 U	0.49 U	0.42 U	0.081 U	0.1 U	0.085 U	0.085 U	0.091 U	0.078 U	0.082 U	0.08 U
Aroclor 1232	NE	NE		0.037 U	0.038 U	0.037 U	0.044 U	0.21 U	0.23 U	0.24 U	0.21 U	0.04 U	0.051 U	0.042 U	0.042 U	0.045 U	0.039 U	0.04 U	0.04 U
Aroclor 1242	NE	NE		0.037 U	0.038 U	0.037 U	0.044 U	0.21 U	0.23 U	0.24 U	0.21 U	0.04 U	0.051 U	0.042 U	0.042 U	0.045 U	0.039 U	0.04 U	0.04 U
Aroclor 1248	NE	NE		0.037 UJ	0.038 UJ	0.037 U	0.044 U	0.21 U	0.23 U	0.24 U	0.21 U	0.04 U	0.051 U	0.042 U	0.042 U	0.045 U	0.039 U	0.04 UJ	0.04 UJ
Aroclor 1254	NE	NE		0.037 UJ	0.038 UJ	0.037 U	0.044 U	0.21 U	0.23 U	0.24 U	0.21 U	0.04 U	0.051 U	0.042 U	0.042 U	0.045 U	0.039 U	0.04 UJ	0.04 UJ
Aroclor 1260	NE	NE		0.037 UJ	0.038 UJ	0.037 U	0.044 U	0.21 U	0.23 U	0.24 U	0.21 U	0.04 U	0.051 U	0.042 U	0.042 U	0.045 U	0.039 U	0.04 UJ	0.04 UJ
Total Metals (mg/kg)																			
Aluminum	NE	NE		**6080**	**5460**	**1970**	**4860**	**5310**	**4800**	**4090**	**7440**	**5200**	**4780**	**4980**	**7930**	**5750**	**3990**	**5020**	**4790**
Antimony	NE	NE		6.6 U	7 U	6.5 UJ	7.9 UJ	7.7 UJ	**11.6 J**	**3.9 J**	7.6 UJ	7.1 UJ	**6.5 J**	7.5 UJ	7.6 U	8.2 U	6.9 U	7.3 U	6.9 U
Arsenic	13	16		**6.8 J**	**17.3 J**	**1.1 J**	**5.4 J**	**3.4 J**	**10 J**	**7.8 J**	**6.1 J**	**3.9 J**	**14.4 J**	**3.5 J**	**15.3 J**	**13.8 J**	**9.4 J**	**7.1 J**	**8.3 J**
Barium	350	10000		**71.9 J**	**231 J**	**19.9**	**53.4**	**69.8**	**66.9**	**67.3**	**83.8**	**62**	**130**	**72.2**	**933 J**	**165 J**	**33.7 J**	**47.7 J**	**45.8 J**
Beryllium	7.2	2700		**0.352**	**1.2**	**0.086 J**	**0.38 J**	**0.244 J**	**0.401**	**0.439**	**0.441**	**0.343 J**	**0.67**	**0.236 J**	**1.5**	**0.72**	**0.206 J**	**0.305 J**	**0.427**
Cadmium	2.5	60		0.55 U	**0.463 J**	0.538 UJ	0.656 UJ	0.643 UJ	0.668 UJ	0.732 UJ	0.631 UJ	0.592 UJ	**0.899 J**	0.621 UJ	**0.597 J**	**0.734**	0.573 U	0.61 U	0.576 U
Calcium	NE	NE		**66200**	**4120**	**36500**	**175000**	**77600**	**34700**	**33200**	**4380**	**1600**	**29800**	**41500**	**4430**	**42100**	**99700**	**24400**	**27900**
Chromium	NE	NE		**8.2**	**12.7**	**3.9**	**6.8**	**6.8**	**9.6**	**8.7**	**11.1**	**8.7**	**10.8**	**6.7**	**11.1**	**9.8**	**5.2**	**7.7**	**7.8**
Cobalt	NE	NE		**4.4 J**	**7.7 J**	**1.8 J**	**2.3 J**	**3.3 J**	**4.1 J**	**3.9 J**	**7.1**	**5.5 J**	**5.3 J**	**3 J**	**9.9 J**	**7.2 J**	**2.6 J**	**5.6 J**	**5.4 J**
Copper	50	10000		**89.8 J**	**48.6 J**	**5.1**	**12.3**	**15.2**	**34.8**	**43.3**	**17**	**10.9**	**78.6**	**13.7**	**42.2 J**	**95.3 J**	**11.6 J**	**20.9 J**	**22.5 J**
Iron	NE	NE		**13100**	**34600**	**5170**	**10800**	**10500**	**22600**	**19400**	**18100**	**15300**	**17500**	**10500**	**44100**	**15400**	**8180**	**16200**	**18300**
Lead	63	3900		**49.9 J**	**93.5 J**	**2.5 J**	**26.1 J**	**16.4**	**89.5**	**77.8**	**16.5**	**6.8**	**277**	**13.3**	**99.2 J**	**184 J**	**21.5 J**	**46.4 J**	**20.6 J**
Magnesium	NE	NE		**8450 J**	**521 J**	**13800**	**4060**	**6100**	**4700**	**3470**	**2780**	**1600**	**4180**	**10400**	**370 J**	**3290 J**	**14500 J**	**6330 J**	**12800 J**
Manganese	1600	10000		**313**	**44.8**	**199**	**323**	**288**	**267**	**173**	**484**	**304**	**189**	**343**	**57.2**	**231**	**256**	**140**	**317**
Mercury	0.18	5.7		**0.126**	**0.03 J**	0.034 U	**0.082**	**0.033 J**	**0.444**	**0.391**	**0.043**	**0.02 J**	**0.524**	**0.067**	**0.047**	**0.216**	**0.043**	**0.084**	**0.046**
Nickel	30	10000		**9.7**	**19**	**3.7 J**	**7.7**	**9**	**10.6**	**9.9**	**18.4**	**16.1**	**11.6**	**7**	**16.6**	**15.7**	**5.4**	**11.6**	**11.1**
Potassium	NE	NE		**987**	**1020**	**447**	**742**	**1400**	**786**	**715**	**1090**	**639**	**764**	**945**	**1930**	**913**	**933**	**934**	**889**
Selenium	3.9	6800		**1.1**	**0.857 J**	1.1 UJ	1.3 UJ	1.3 UJ	1.3 UJ	1.5 UJ	1.3 UJ	1.2 UJ	**0.96 J**	1.2 UJ	**1.6**	**1.2 J**	**2.1**	**0.805 J**	**0.726 J**
Silver	2	6800		1.1 U	1.2 U	1.1 U	1.3 U	1.3 U	**0.694 J**	**0.557 J**	1.3 U	1.2 U	**0.442 J**	1.2 U	1.3 U	1.4 U	1.2 U	1.2 U	1.2 U
Sodium	NE	NE		**76.5 J**	**281**	**149**	**274**	**465**	**367**	**423**	**219**	**187**	**416**	**213**	**352**	**191**	**141**	**445**	**363**
Thallium	NE	NE		1.1 U	1.2 U	1.1 U	**5.9**	**1.8**	1.3 U	1.5 U	1.3 U	1.2 U	1.5 U	1.2 U	1.3 U	1.4 U	1.8 U	1.2 U	1.2 U
Vanadium	NE	NE		**14.5**	**25.5**	**7.5**	**9.5**	**12.5**	**12.6**	**12.6**	**15**	**12.2**	**14.1**	**11.5**	**38.5**	**20.7**	**10.5**	**15.3**	**16.2**
Zinc	109	10000		**84.9 J**	**14.9 J**	**16.7 J**	**52.6 J**	**43.4**	**149**	**133**	**52.8**	**35.1**	**252**	**41.3**	**72 J**	**239 J**	**48.1 J**	**83.3 J**	**48.4 J**
Cyanides (mg/kg)																			
Total Cyanide	27	10000		**0.08 J**	**0.04 J**	0.27 UJ	**1.8 J**	0.27 UJ	**1.33 J**	**2.54 J**	**2.21 J**	**0.67 J**	**0.47 J**	0.29 UJ	**0.09 J**	**0.32 J**	**0.08 J**	**3.35 J**	**0.04 J**

Notes
Soil Analysis Results
LeRoy Former MGP
LeRoy, New York

Notes:

Analytes in blue are not detected in any sample

mg/kg = milligrams/kilogram or parts per million (ppm)

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
PAH = Polycyclic Aromatic Hydrocarbon
PCB = Polychlorinated Biphenyl
SVOC = Semi-Volatile Organic Compound
VOC = Volatile Organic Compound

Total BTEX and Total PAHs are calculated using measured or estimated concentrations only (values below the detection limits are excluded).

Total PAH16 is calculated using the EPA16 list of analytes: Acenaphthene, Acenaphthylene, Anthracene, Benz[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Chrysene, Dibenz[a,h]anthracene, Fluoranthene, Fluorene, Indeno[1,2,3-cd]pyrene, Naphthalene, Phenanthrene, and Pyrene

Total PAH17 is calculated using the EPA16 list of analytes plus 2-Methylnaphthalene

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

ND = Not Detected
NE = Not Established

Bolding indicates a detected result concentration
Gray shading and bolding indicates that the detected result value exceeds the Unrestricted SCO
Yellow shading and bolding indicates that the detected result value exceeds the Industrial SCO

Validation Qualifiers:

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

Table 6
Groundwater Analysis Results - VOCs
LeRoy Former MGP
LeRoy, New York

Analyte	NYS AWQS	MW-1 6/7/2016	DUP06072016 6/7/2016 MW-1	MW-1 1/10/2018	MW-2 6/7/2016	MW-2 1/9/2018	MW-3 6/7/2016	MW-3 1/9/2018	MW-4 6/7/2016	MW-4 1/10/2018	MW-5 1/9/2018	MW-6 1/9/2018	MW-7 1/9/2018	DUP1092018 1/9/2018 MW-7	MW-8 1/10/2018
BTEX (ug/L)															
Benzene	1	**0.26 J**	1 U	1 U	**1700**	**320**	**50**	**24**	1 U	1 U	1 U	**0.25 J**	**700**	**680**	1 U
Toluene	5	**0.46 J**	**0.53 J**	**0.48 J**	**930**	**91**	**53**	**9.8**	**0.21 J**	**0.65 J**	**0.29 J**	**1.1**	**120**	**110**	**0.5 J**
Ethylbenzene	5	**0.25 J**	**0.34 J**	1 U	**510**	**63**	**38**	**17**	**0.41 J**	1 U	1 U	**0.23 J**	**160**	**160**	**0.84 J**
o-Xylene	5	**0.47 J**	**0.49 J**	1 U	**460**	**56**	**24**	**6.3**	**0.43 J**	1 U	1 U	**0.35 J**	**160**	**150**	**0.69 J**
m/p-Xylene	5	**1 J**	**0.97 J**	2 U	**1300**	**170**	**64**	**15**	**0.78 J**	**0.58 J**	2 U	**0.84 J**	**330**	**320**	**1 J**
Total BTEX	NE	**2.44**	**2.33**	**0.48**	**4900**	**700**	**229**	**72.1**	**1.83**	**1.23**	**0.29**	**2.77**	**1470**	**1420**	**3.03**
Other VOCs (ug/L)															
Acetone	50*	5 U	5 U	NA	50 U	NA	5 U	NA	5 U	NA	NA	NA	NA	NA	NA
Bromochloromethane	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
Bromodichloromethane	50*	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
Bromoform	50*	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
Bromomethane	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
Carbon disulfide	60*	1 U	1 U	NA	10 U	NA	**0.3 J**	NA	1 U	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	5	1 U	1 U	NA	10 U	NA	**0.51 J**	NA	1 U	NA	NA	NA	NA	NA	NA
Chlorobenzene	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
Chloroethane	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
Chloroform (Trichloromethane)	7	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
Chloromethane	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
Cyclohexane	NE	1 U	1 U	NA	**2.7 J**	NA	**0.83 J**	NA	1 U	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	0.04	2 U	2 U	NA	20 U	NA	2 U	NA	2 U	NA	NA	NA	NA	NA	NA
Dibromochloromethane	50*	1 U	1 U	NA	10 UJ	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (EDB)	0.0006	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene (o-DCB)	3	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene (m-DCB)	3	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene (p-DCB)	3	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane (Freon 12)	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	5	1 U	1 U	NA	10 U	NA	**0.31 J**	NA	1 U	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	0.6	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	1	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	0.4	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	0.4	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
1,4-Dioxane	NE	40 R	40 R	NA	400 R	NA	40 R	NA	40 R	NA	NA	NA	NA	NA	NA
2-Hexanone	50*	5 U	5 U	NA	50 U	NA	5 U	NA	5 U	NA	NA	NA	NA	NA	NA
Isopropylbenzene	5	1 U	1 U	NA	**31**	NA	**2**	NA	1 U	NA	NA	NA	NA	NA	NA
Methyl acetate	NE	2 U	2 U	NA	20 U	NA	2 U	NA	2 U	NA	NA	NA	NA	NA	NA
Methyl ethyl ketone (2-Butanone)	50*	5 U	5 U	NA	50 U	NA	5 U	NA	5 U	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	10*	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	NE	5 U	5 U	NA	50 U	NA	5 U	NA	5 U	NA	NA	NA	NA	NA	NA
Methylcyclohexane	NE	**0.35 J**	**0.35 J**	NA	**8.6 J**	NA	**7.4**	NA	1 U	NA	NA	NA	NA	NA	NA
Methylene chloride	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
Styrene	5	1 U	1 U	NA	10 U	NA	**10**	NA	1 U	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
Tetrachloroethene (PCE)	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane (TCA)	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	1	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
Trichloroethene (TCE)	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane (Freon 11)	5	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA
Vinyl chloride	2	1 U	1 U	NA	10 U	NA	1 U	NA	1 U	NA	NA	NA	NA	NA	NA

Notes
Groundwater Analysis Results
LeRoy Former MGP
LeRoy, New York

Notes:

Analytes in blue are not detected in any sample

ug/L = micrograms per liter or parts per billion (ppb)

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
PAH = Polycyclic Aromatic Hydrocarbon
PCB = Polychlorinated Biphenyl
SVOC = Semi-Volatile Organic Compound
VOC = Volatile Organic Compound

Total BTEX and Total PAHs are calculated using measured or estimated concentrations only (values below the detection limits are excluded).

Total PAH16 is calculated using the EPA16 list of analytes: Acenaphthene, Acenaphthylene, Anthracene, Benz[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Chrysene, Dibenz[a,h]anthracene, Fluoranthene, Fluorene, Indeno[1,2,3-cd]pyrene, Naphthalene, Phenanthrene, and Pyrene

Total PAH17 is calculated using the EPA16 list of analytes plus 2-Methylnaphthalene

NYS AWQS = New York State Ambient Water Quality Standards and Guidance Values for GA groundwater
* indicates the value is a guidance value and not a standard

CAS No. = Chemical Abstracts Service Number
MGP = Manufactured Gas Plant
ND = Not Detected
NE = Not Established
NYSDEC = New York State Department of Environmental Conservation

Bolding indicates a detected result concentration
Gray shading and bolding indicates that the detected result value exceeds the NYS AWQS

Validation Qualifiers:

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

Table 7
Groundwater Analysis Results - SVOCs
LeRoy Former MGP
LeRoy, New York

Analyte	NYS AWQS	Sample Name: MW-1	DUP06072016	MW-1	MW-2	MW-2	MW-3	MW-3	MW-4	MW-4	MW-5	MW-6	MW-7	DUP1092018	MW-8
		Sample Date: 6/7/2016	6/7/2016	1/10/2018	6/7/2016	1/9/2018	6/7/2016	1/9/2018	6/7/2016	1/10/2018	1/9/2018	1/9/2018	1/9/2018	1/9/2018	1/10/2018
		Parent Sample:	MW-1											MW-7	
NYSDEC PAH17 (ug/L)															
Acenaphthene	20*	**2.4 J**	**3.3 J**	9.4 U	**120 J**	**150**	**15 J**	**9.7 J**	**1.2 J**	9.4 U	11 U	11 U	**43 J**	**69 J**	**440**
Acenaphthylene	NE	9.4 U	9.4 U	9.4 U	**180 J**	**16 J**	**110**	**40**	9.4 U	9.4 U	11 U	11 U	**68 J**	**99 J**	**59 J**
Anthracene	50*	9.4 U	9.4 U	9.4 U	470 U	**37 J**	**16 J**	**9.9 J**	9.4 U	9.4 U	11 U	11 U	**17 J**	**55 J**	**340**
Benzo(a)anthracene	0.002*	9.4 U	9.4 U	9.4 U	470 U	**19 J**	94 U	**13**	9.4 U	**1.9 J**	11 U	11 U	100 U	**37 J**	**310**
Benzo(b)fluoranthene	0.002*	9.4 U	9.4 U	**1 J**	470 U	**14 J**	94 U	**20**	9.4 U	**2.4 J**	11 U	11 U	100 U	**34 J**	**260**
Benzo(k)fluoranthene	0.002*	9.4 U	9.4 U	9.4 U	470 U	100 U	94 U	**6.5 J**	9.4 U	9.4 U	11 U	11 U	100 U	**13 J**	**94 J**
Benzo(g,h,i)perylene	NE	9.4 U	9.4 U	**0.98 J**	470 U	100 U	94 U	**29**	9.4 U	**1.6 J**	11 U	11 U	100 U	**21 J**	**180**
Benzo(a)pyrene	ND	9.4 U	9.4 U	**1 J**	470 U	**14 J**	94 U	**31**	9.4 U	**2.3 J**	11 U	11 U	100 U	**31 J**	**290**
Chrysene	0.002*	9.4 U	9.4 U	9.4 U	470 U	**15 J**	94 U	**8.9 J**	9.4 U	**1.7 J**	11 U	11 U	100 U	**30 J**	**250**
Dibenz(a,h)anthracene	NE	9.4 U	9.4 U	9.4 U	470 U	100 U	94 U	**2.3 J**	9.4 U	9.4 U	11 U	11 U	100 U	100 U	**32 J**
Fluoranthene	50*	**2 J**	**1.7 J**	9.4 U	**52 J**	**48 J**	**28 J**	**41**	9.4 U	**3.5 J**	11 U	11 U	**18 J**	**100**	**840**
Fluorene	50*	**1.2 J**	**1.9 J**	9.4 U	**110 J**	**95 J**	**36 J**	**23**	9.4 U	9.4 U	11 U	11 U	**53 J**	**91 J**	**330**
Indeno(1,2,3-cd)pyrene	0.002*	9.4 U	9.4 U	9.4 U	470 U	100 U	94 U	**21**	9.4 U	**1.6 J**	11 U	11 U	100 U	**20 J**	**180**
2-Methylnaphthalene	NE	9.4 U	**1.3 J**	9.4 U	**520**	**260**	**91 J**	11 U	9.4 U	9.4 U	11 U	11 U	**150**	**210**	**33 J**
Naphthalene	10*	**2.4 J**	**5.7 J**	9.4 U	**3800**	**790**	**610**	**58**	9.4 U	9.4 U	11 U	11 U	**1200**	**1500**	**570**
Phenanthrene	50*	**1.2 J**	**1.5 J**	9.4 U	**150 J**	**130**	**130**	**80**	9.4 U	**2.3 J**	11 U	11 U	**67 J**	**190 J**	**1100**
Pyrene	50*	**1.9 J**	**1.6 J**	**1.1 J**	470 U	**40 J**	**36 J**	**48**	9.4 U	**2.5 J**	11 U	**1.2 J**	**15 J**	**89 J**	**720**
Total PAH (17)	NE	**11.1**	**17**	**4.08**	**4932**	**1628**	**1072**	**441.3**	**1.2**	**19.8**	ND	**1.2**	**1631**	**2589**	**6028**
NYSDEC PAH17 Other SVOCs (ug/L)															
Acetophenone	NE	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Atrazine	7.5	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Benzaldehyde	NE	47 U	47 U	NA	2400 U	NA	470 U	NA	47 U	NA	NA	NA	NA	NA	NA
Biphenyl (1,1-Biphenyl)	5	9.4 U	9.4 U	NA	**56 J**	NA	**49 J**	NA	9.4 U	NA	NA	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	5	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Bis(2-chloroethyl)ether	1	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
2,2-oxybis(1-Chloropropane)	5	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	5	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	NE	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	50*	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Caprolactam	NE	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Carbazole	NE	9.4 U	9.4 U	NA	**140 J**	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NE	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
4-Chloroaniline	5	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	10*	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
2-Chlorophenol	NE	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	NE	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Dibenzofuran	NE	9.4 U	**1.2 J**	NA	**120 J**	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine	5	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	5	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Diethyl phthalate	50*	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	50*	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	50*	9.4 U	9.4 U	NA	**190 J**	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	50	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NE	47 U	47 U	NA	2400 U	NA	470 U	NA	47 U	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	10*	47 UJ	47 UJ	NA	2400 UJ	NA	470 U	NA	47 UJ	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	5	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	5	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	50*	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.04	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
1,3-Hexachlorobutadiene (C-46)	0.5	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	5	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Hexachloroethane	5	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Isophorone	50*	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	NE	NA	NA	9.4 U	NA	**160**	NA	**20**	NA	9.4 U	11 U	11 U	**100**	**140**	**200**
2-Methylnaphthalene	NE	9.4 U	**1.3 J**	NA	**520**	NA	**91 J**	NA	9.4 U	NA	NA	NA	NA	NA	NA
2-Methylphenol (o-Cresol)	1	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
3,4-Methylphenol (m,p-Cresol)	NE	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
2-Nitroaniline	5	47 U	47 U	NA	2400 U	NA	470 U	NA	47 U	NA	NA	NA	NA	NA	NA
3-Nitroaniline	5	47 U	47 U	NA	2400 U	NA	470 U	NA	47 U	NA	NA	NA	NA	NA	NA
4-Nitroaniline	5	47 U	47 U	NA	2400 U	NA	470 U	NA	47 U	NA	NA	NA	NA	NA	NA
Nitrobenzene	0.4	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NE	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NE	47 U	47 U	NA	2400 U	NA	470 U	NA	47 U	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine (NDFA)	50*	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine (NDPA)	NE	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
Pentachlorophenol	1	47 U	47 U	NA	2400 U	NA	470 U	NA	47 U	NA	NA	NA	NA	NA	NA
Phenol	1	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
1,2,4,5-Tetrachlorobenzene	5	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol	NE	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	NE	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	NE	9.4 U	9.4 U	NA	470 U	NA	94 U	NA	9.4 U	NA	NA	NA	NA	NA	NA

Notes
Groundwater Analysis Results
LeRoy Former MGP
LeRoy, New York

Notes:

Analytes in blue are not detected in any sample

ug/L = micrograms per liter or parts per billion (ppb)

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
PAH = Polycyclic Aromatic Hydrocarbon
PCB = Polychlorinated Biphenyl
SVOC = Semi-Volatile Organic Compound
VOC = Volatile Organic Compound

Total BTEX and Total PAHs are calculated using measured or estimated concentrations only (values below the detection limits are excluded).

Total PAH16 is calculated using the EPA16 list of analytes: Acenaphthene, Acenaphthylene, Anthracene, Benz[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Chrysene, Dibenz[a,h]anthracene, Fluoranthene, Fluorene, Indeno[1,2,3-cd]pyrene, Naphthalene, Phenanthrene, and Pyrene

Total PAH17 is calculated using the EPA16 list of analytes plus 2-Methylnaphthalene

NYS AWQS = New York State Ambient Water Quality Standards and Guidance Values for GA groundwater
* indicates the value is a guidance value and not a standard

CAS No. = Chemical Abstracts Service Number
MGP = Manufactured Gas Plant
ND = Not Detected
NE = Not Established
NYSDEC = New York State Department of Environmental Conservation

Bolding indicates a detected result concentration
Gray shading and bolding indicates that the detected result value exceeds the NYS AWQS

Validation Qualifiers:

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

Table 8
Groundwater Analysis Results - PCBs and Metals
LeRoy Former MGP
LeRoy, New York

Sample Name		MW-1	DUP06072016	MW-1	MW-2	MW-2	MW-3	MW-3	MW-4	MW-4	MW-5	MW-6	MW-7	DUP1092018	MW-8
Sample Date		6/7/2016	6/7/2016	1/10/2018	6/7/2016	1/9/2018	6/7/2016	1/9/2018	6/7/2016	1/10/2018	1/9/2018	1/9/2018	1/9/2018	1/9/2018	1/10/2018
Parent Sample			MW-1											MW-7	
Analyte	NYS AWQS														
PCB Aroclors (ug/L)															
Aroclor 1016	NE	0.047 U	0.047 UJ	0.05 U	0.05 U	0.05 U	0.047 U	0.05 U	0.047 UJ	0.05 U	0.05 U	0.056 U	0.05 U	0.05 U	0.05 U
Aroclor 1221	NE	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.056 U	0.05 U	0.05 U	0.05 U
Aroclor 1232	NE	0.047 U	0.047 UJ	0.05 U	0.05 U	0.05 U	0.047 U	0.05 U	0.047 UJ	0.05 U	0.05 U	0.056 U	0.05 U	0.05 U	0.05 U
Aroclor 1242	NE	0.047 U	0.047 UJ	0.05 U	0.05 U	0.05 U	0.047 U	0.05 U	0.047 UJ	0.05 U	0.05 U	0.056 U	0.05 U	0.05 U	0.05 U
Aroclor 1248	NE	0.047 U	0.047 U	0.05 U	0.05 U	0.05 U	0.047 U	0.05 U	0.047 U	0.05 U	0.05 U	0.056 U	0.05 U	0.05 U	0.05 U
Aroclor 1254	NE	0.047 U	0.047 U	0.05 U	0.05 U	0.05 U	0.047 U	0.05 U	0.047 U	0.05 U	0.05 U	0.056 U	0.05 U	0.05 U	0.05 U
Aroclor 1260	NE	0.047 U	0.047 U	0.05 U	0.05 U	0.05 U	0.047 U	0.05 U	0.047 U	0.05 U	0.05 U	0.056 U	**0.1 J**	**0.049 J**	0.05 U
Total PCBs	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.1**	**0.049**	ND
Total Metals (ug/L)															
Aluminum	NE	**651**	**716**	**2850**	**99.2 J**	**1800**	**1020**	**1320**	**126**	**16200**	**2600**	**5710**	**23700 J**	**310000 J**	**13500**
Antimony	3	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U	60 U
Arsenic	25	10 U	10 U	**4.2 J**	10 U	**4.7 J**	10 U	10 U	10 U	**9 J**	10 U	**5.2 J**	**21 J**	**264 J**	**154**
Barium	1000	**136 J**	**136 J**	**90.8**	**109 J**	**179**	82.6 UJ	**78**	**134 J**	**275**	**94**	**311**	**239 J**	**2540 J**	**2960**
Beryllium	3*	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	**0.7 J**	3 U	3 U	**1.1 J**	**16 J**	**0.9 J**
Cadmium	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	**1.2 J**	5 U	5 UJ	**4.8 J**	**60.5 J**	**3.8 J**
Calcium	NE	**162000**	**159000**	**117000 J**	**126000**	**142000 J**	**47800**	**54400 J**	**149000**	**481000 J**	**92800 J**	**228000 J**	**177000 J**	**1810000 J**	**200000 J**
Chromium	50	10 U	10 U	**4.1 J**	10 U	10 U	10 U	10 U	10 U	**16.2**	10 U	**7.3 J**	**35.4 J**	**458 J**	**30.6**
Cobalt	NE	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	**9 J**	50 U	50 U	**8.4 J**	**111 J**	50 U
Copper	200	20 U	**7.2 J**	**19.8 J**	20 U	20 U	20 U	20 U	20 U	**26.8**	20 U	**44.8**	**97.3 J**	**1830 J**	**83.5**
Iron	300	**1930**	**1880**	**4950**	**11500**	**23900**	**1340**	**1860**	**60.3 J**	**19100**	**2430**	**8070**	**29900 J**	**613000 J**	**384000**
Lead	25	**5.8**	**7**	**18.3**	5 U	**8.8**	5 U	5 U	5 U	**26.9**	5 U	**87.2**	**235 J**	**3580 J**	**167**
Magnesium	35000*	**32800**	**31900**	**23200**	**37000**	**36900**	**33400**	**32000**	**11600**	**24500**	**33000**	**26700**	**25100 J**	**139000 J**	**21100**
Manganese	300	**1010**	**1340**	**240**	**1350**	**1510**	**79.1**	**83.4**	**1310**	**8910**	**710**	**3280**	**1380 J**	**15500 J**	**3050**
Mercury	0.7	0.2 U	0.2 U	0.2 U	**0.159 J**	0.2 U	**0.079 J**	0.2 U	**0.04 J**	0.2 U	0.2 U	0.2 U	**0.332 J**	**2.7 J**	**0.44**
Nickel	100	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 UJ	**360 J**	40 U
Potassium	NE	**8050**	**8110**	**5390**	**5460**	**4590**	**16100**	**13200**	**5360**	**7990**	**2510**	**6810**	**14700 J**	**65600 J**	**8160**
Selenium	10	10 U	**3.9 J**	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**4.5 J**	**63.3 J**	**18.8**
Silver	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**18.3**	10 U
Sodium	20000	**215000**	**210000**	**119000**	**45300**	**29700**	**51500**	**41700**	**161000**	**44300**	**19000**	**68400**	**56700**	**49800**	**146000**
Thallium	0.5*	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**15 J**	10 U	10 U	10 UJ	**26.9 J**	10 U
Vanadium	NE	50 U	50 U	**7.2 J**	50 U	**5.1 J**	50 U	50 U	50 U	**36.4 J**	**5.4 J**	**10.8 J**	**44.5 J**	**571 J**	**64.9 J**
Zinc	2000*	**98.4**	**91.7**	**102**	**20.2**	**119**	**8.1 J**	**7.5 J**	**1.8 J**	**83.5 J**	**11.2 J**	**104**	**1610 J**	**34700 J**	**500**
Cyanides (ug/L)															
Total Cyanide	200	**10**	**8 J**	**3 J**	**72**	**72**	**16**	**6 J**	**23**	10 U	10 U	**161**	**57**	**51**	**4 J**

Notes
Groundwater Analysis Results
LeRoy Former MGP
LeRoy, New York

Notes:

Analytes in blue are not detected in any sample

ug/L = micrograms per liter or parts per billion (ppb)

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
PAH = Polycyclic Aromatic Hydrocarbon
PCB = Polychlorinated Biphenyl
SVOC = Semi-Volatile Organic Compound
VOC = Volatile Organic Compound

Total BTEX and Total PAHs are calculated using measured or estimated concentrations only (values below the detection limits are excluded).

Total PAH16 is calculated using the EPA16 list of analytes: Acenaphthene, Acenaphthylene, Anthracene, Benz[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Chrysene, Dibenz[a,h]anthracene, Fluoranthene, Fluorene, Indeno[1,2,3-cd]pyrene, Naphthalene, Phenanthrene, and Pyrene

Total PAH17 is calculated using the EPA16 list of analytes plus 2-Methylnaphthalene

NYS AWQS = New York State Ambient Water Quality Standards and Guidance Values for GA groundwater
* indicates the value is a guidance value and not a standard

CAS No. = Chemical Abstracts Service Number
MGP = Manufactured Gas Plant
ND = Not Detected
NE = Not Established
NYSDEC = New York State Department of Environmental Conservation

Bolding indicates a detected result concentration
Gray shading and bolding indicates that the detected result value exceeds the NYS AWQS

Validation Qualifiers:

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

Table 9
Monitoring Well Construction Summary and Groundwater Elevations
LeRoy Former MGP Site
LeRoy, New York

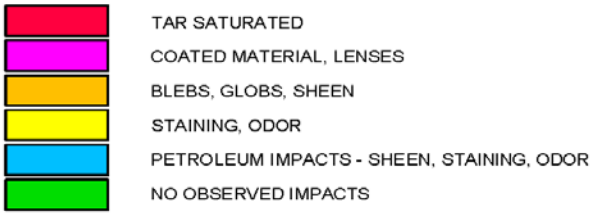
Well Construction									Groundwater Elevations			
Location	Northing	Easting	Ground Elevation	Top of Inner Well Casing Elevation	Top of Screen (ft, bgs)	Bottom of Screen Depth (ft, bgs)	Elevation of Screen Top	Elevation of Screen Bottom	Depth to Water 6/7/16	Groundwater Elevation 6/7/16	Depth to Water 1/9/18	Groundwater Elevation 1/9/18
MW-1	1087458.80	1306953.60	847.6	847.19	4.0	11.0	843.60	836.60	6.94	840.25	6.57	840.62
MW-2	1087521.70	1306908.60	848.2	847.98	3.5	11.0	844.70	837.20	5.37	842.61	5.4	842.58
MW-3	1087516.60	1306871.40	852.0	851.88	4.5	14.5	847.50	837.50	8.59	843.29	8.39	843.49
MW-4	1087480.20	1306993.50	847.3	846.82	4.0	11.0	843.30	836.30	8.64	838.18	8.82	838.00
MW-5	1087546.20	1306883.90	848.3	850.5	5.5	10.5	842.80	837.80	NI	--	5.85	844.65
MW-6	1087548.90	1306969.00	847.0	849.42	5.8	10.8	841.20	836.20	NI	--	11.28	838.14
MW-7	1087507.80	1306950.20	847.4	847.04	6.5	11.5	840.90	835.90	NI	--	6.49	840.55
MW-8	1087442.50	1306971.00	850.5	850.05	7.0	14.0	843.50	836.50	NI	--	9.68	840.37

Vertical Datum NAVD88; Horizontal Datum NAD83/2011
Elevations in feet above NAVD88
Location coordinates in NAD83/2011
New York State Plane,West Zone
ft , bgs = feet below ground surface
NI = well not yet installed

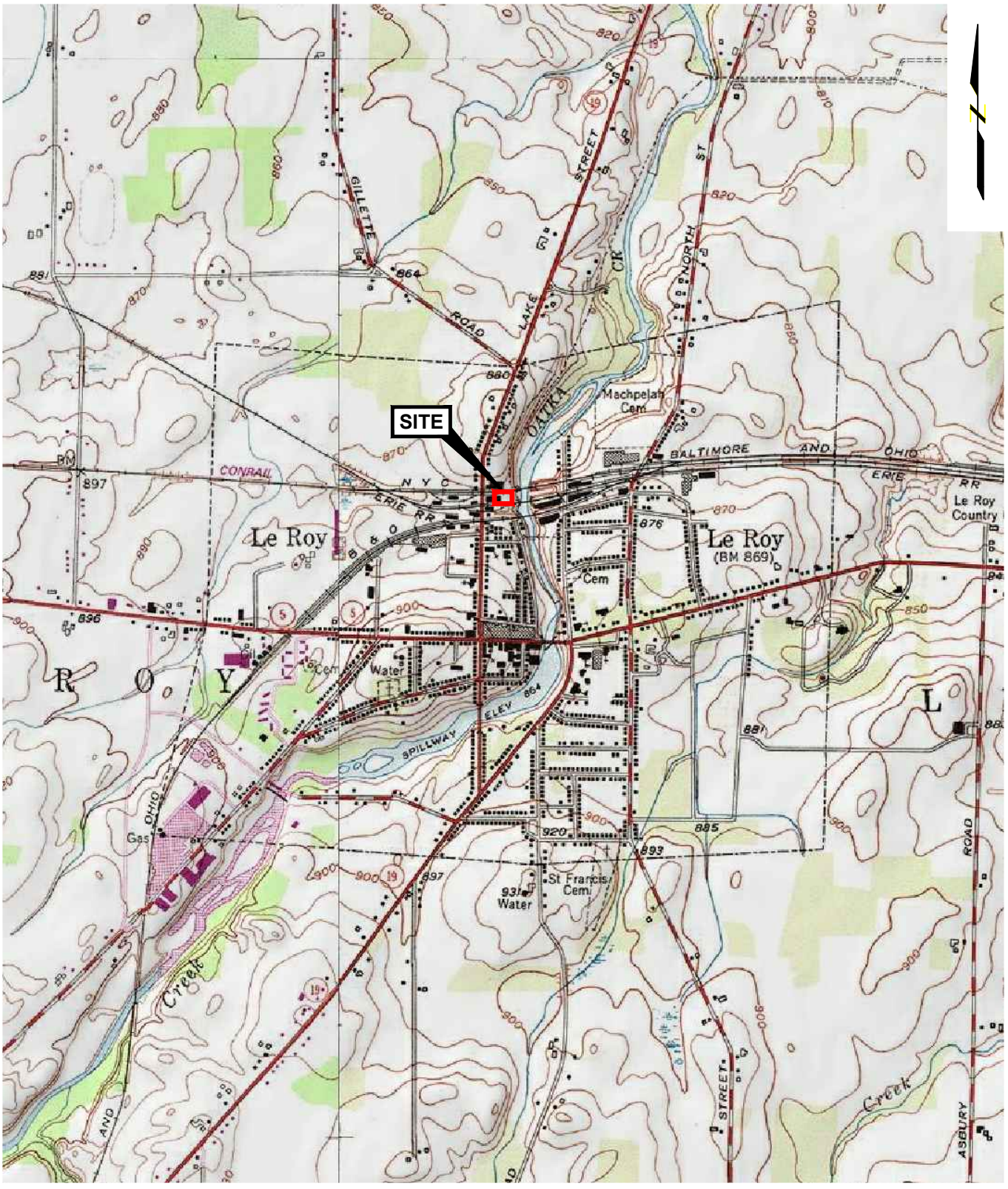
Table 10
Physical Impacts in Soil Borings
LeRoy Former MGP Site
LeRoy, New York

Boring ID	Date Installed	Bottom of Boring (ft, bgs)	Depth	Description of NAPL
SB-1	5/16/2016	12.5	No impacts observed.	--
SB-2	5/13/2016	16.4	No impacts observed.	--
SB-3	5/12/2016	26.5	No impacts observed.	--
SB-4	5/13/2016	25.5	No impacts observed.	--
SB-5	5/11/2016	13.6	8-13.4	staining, sheen, blebs
SB-6	5/11/2016	12.0	11-11.5	sheen
SB-7	5/12/2016	9.0	4-9	sheen
SB-8	5/12/2016	12.8	No NAPL observed	slight to moderate hydrocarbon-like odor
SB-9	12/6/2017	17.5	No impacts observed	--
SB-10	12/5/2017	9.5	No impacts observed	--
SB-11	12/4/2017	13.4	12.5-13.9	light to moderate sheen
SB-12	12/4/2017	11.5	No NAPL observed	heavy NAPL staining
SB-13	12/4/2017	10.7	No NAPL observed	light sheen on bedrock fragments in bottom of sampler
SB-14	12/4/2017	11.0	No impacts observed	--
SB-15	12/5/2017	11.5	No impacts observed	--
SB-16	12/6/2017	11.3	No NAPL observed	slight naphthalene-like odor
MW-1	5/13/2016	11.5	No NAPL observed	moderate hydrocarbon-like odor
MW-2	5/11/2016	11.5	6-10	sheens, NAPL coated grains
MW-3	5/11/2016	14.5	No NAPL observed	very slight hydrocarbon-like odor
MW-4	5/13/2016	11.5	No impacts observed	--
MW-5	12/5/2017	10.5	No impacts observed	--
MW-6	12/5/2017	10.8	No impacts observed	--
MW-7	12/4/2017	11.2	9-11.2	moderate sheen, NAPL staining below 10.5' bgs
MW-8	12/4/2017	14.0	13-14	very slight sheen on water, slight hydrocarbon-like odor
TP-1	5/9/2016	7.0	No impacts observed	--
TP-2	5/10/2016	5.5	No impacts observed	--
TP-3A	5/10/2016	6.0	No impacts observed	--
TP-3B	5/10/2016	2.0	No impacts observed	--
TP-3C	5/10/2016	5.0	3.2-3.5	hardened tar-like material
TP-4	5/10/2016	7.0	No impacts observed	--
TP-5	5/10/2016	6.2	No impacts observed	--

Notes:
ft, bgs = feet below ground surface.



Figures



SOURCE: Map created with TOPO! ® © 2001 National Geographic (www.nationalgeographic.com/topo)

Remedial Investigation Report LeRoy Former MGP site LeRoy, New York	GEI Consultants	SITE LOCATION MAP
nationalgrid	Project 1503890	May 2018 Fig. 1

---- I:\Project\National Grid\LeRoy\1503890\Drawings\Figures\RIR\1503890_RIR-SLM F1.dwg - 5/18/2018

Warehouse

Now or Formerly
Property of
Thomas W. McGinnis
Liber 633 - Page 303
Tax Parcel No. 6.-1-4

Centerline of Former New York Central Rail Road (Canandaigua Branch)

Property of
Thomas W. McGinnis
Liber 468 - Page 239
Tax Parcel No. 6.-1-56
Contains 0.490

FORMER TRANSFORMER RACK

Retaining Wall

Gravel Drive

Chain Link Fence

Now or Formerly
Property of
New York Central Lines, LLC
Liber 741 - Page 303
Tax Parcel No. 6.-1-50

Concrete

Concrete

Concrete Slab

Concrete

Wood Frame Storage

Chain Link Fence

Concrete

Now or Formerly
Property of
Thomas W. McGinnis
Liber 633 - Page 303
Tax Parcel No. 6.-1-4

Wood Frame Garage

Masonry Building

Covered Storage

Asphalt Parking Area

Concrete

Concrete Slab

Gravel Parking Area

Asphalt Drive

Oatka Creek

Now or Formerly
Property of
Orcon Industries Corporation
Liber 858 - Page 994
Tax Parcel No. 6.-1-2

Former Centerline of Ashery Road

Asphalt Parking Area

Centerline of Former
Erie Railroad

Now or Formerly
Property of
Orcon Industries Corporation
Liber 858 - Page 994
Tax Parcel No. 6.-1-2

Concrete

Now or Formerly
Property of
Niagara Mohawk Power Corporation
Liber 306 - Page 596]
Tax Parcel No. 6.-1-51

Concrete
Foundation
Remnants

Now or Formerly
Property of
ASAP Plumbing, Inc.
Liber 530 - Page 244
Tax Parcel No. 6.-1-53

Mill Street

N

SOURCES:

1. Survey titled: Former Leroy National Grid MGP Site, Lands of Thomas W. McGinnis, Tax Parcel No. 6.-1-56, 78-1/2 Lake Street, Village of Leroy, Count of Genesee, State of New York, prepared by Thew Associates Land Surveyors, Date: 6/24/2016.
2. 1885, 1892, 1987, 1903 and 1910 Sanborn Fire Insurance Maps, Assembled by EDR, Order Date: 3/17/2015, Inquiry Number 4236142.3.

0 40' 80'

SCALE: 1" = 40'

Remedial Investigation Report
LeRoy Former MGP site
LeRoy, New York

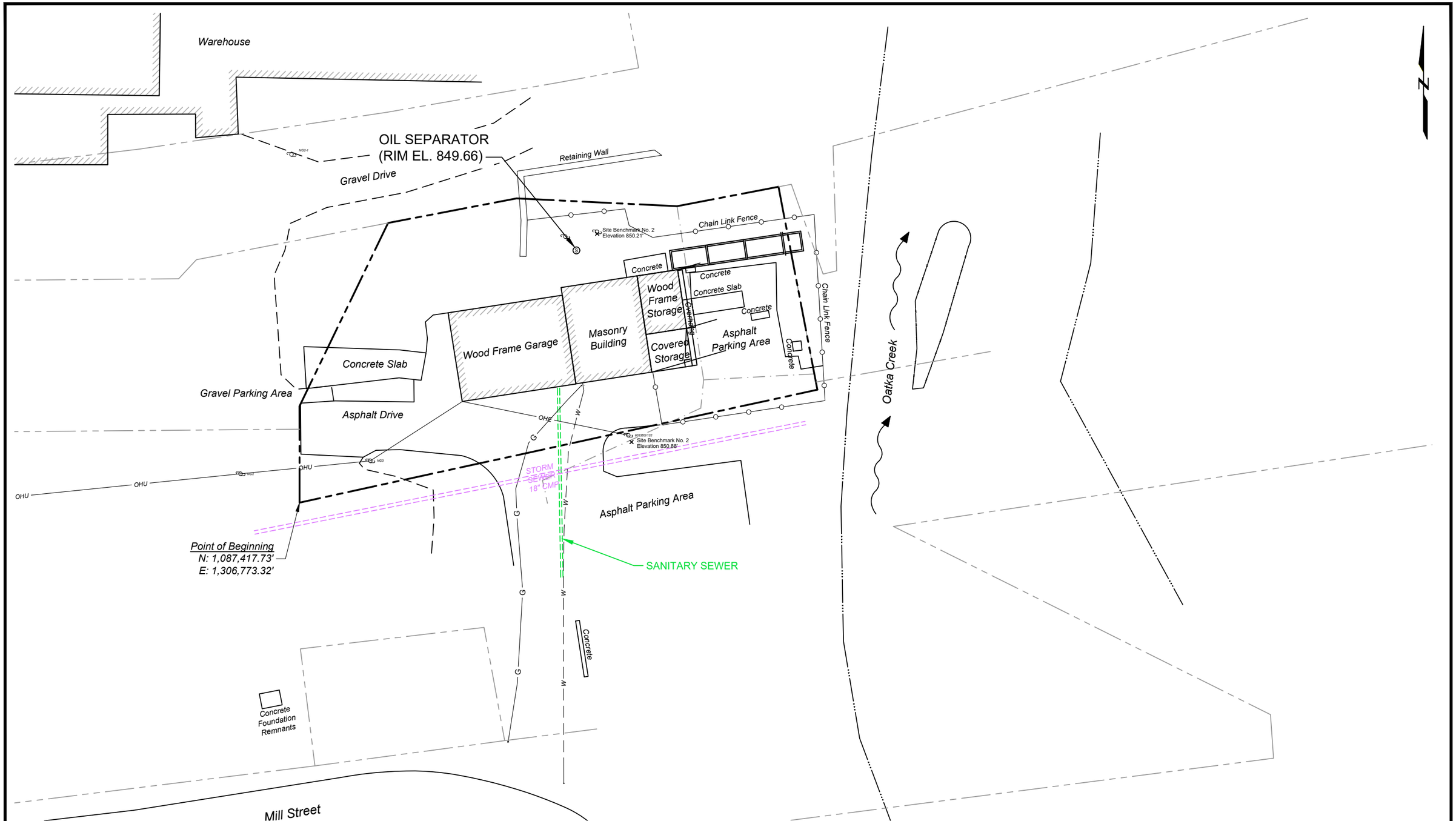
nationalgrid

GEI Consultants

PROPERTY DEED INFORMATION

Project 1503890 | May 2018 | Fig. 2

---- I:\Project\National Grid\LeRoy\1503890\Drawings\Figures\RIR\1503890_RIR-F2 thru F7.dwg - 6/1/2018



SOURCES:

1. Survey titled: Former Leroy National Grid MGP Site, Lands of Thomas W. McGinnis, Tax Parcel No. 6.-1-56, 78-1/2 Lake Street, Village of Leroy, Count of Genesee, State of New York, prepared by Thew Associates Land Surveyors, Date: 6/24/2016.
2. 1885, 1892, 1987, 1903 and 1910 Sanborn Fire Insurance Maps, Assembled by EDR, Order Date: 3/17/2015, Inquiry Number 4236142.3.

0 40' 80'

SCALE: 1" = 40'

Remedial Investigation Report
LeRoy Former MGP site
LeRoy, New York

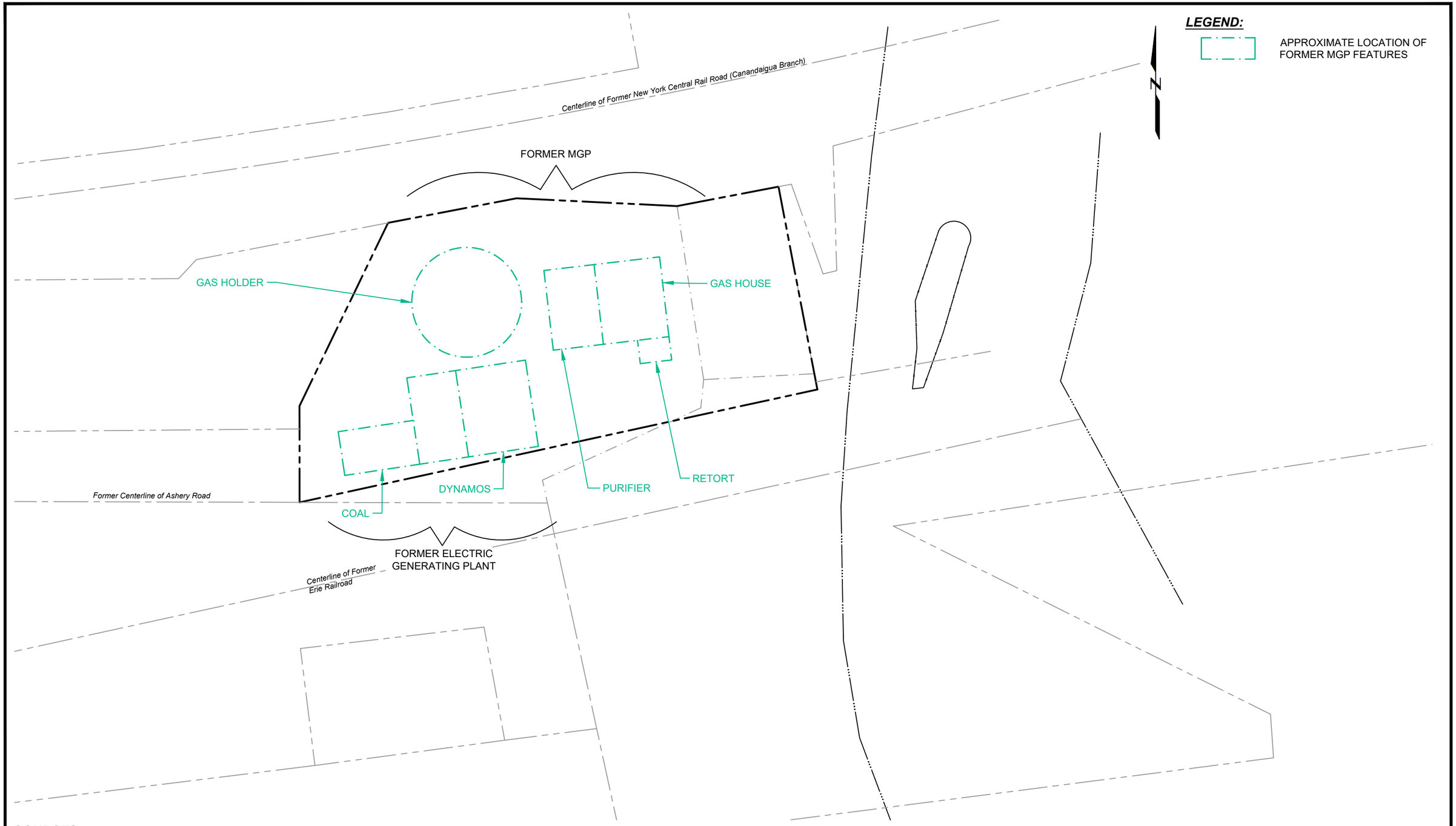
nationalgrid

GEI Consultants

SITE PLAN

Project 1503890 | May 2018 | Fig. 3

---- I:\Project\National Grid\LeRoy\1503890\Drawings\Figures\RIR\1503890_RIR-F2 thru F7.dwg - 6/1/2018



SOURCES:

1. Survey titled: Former Leroy National Grid MGP Site, Lands of Thomas W. McGinnis, Tax Parcel No. 6.-1-56, 78-1/2 Lake Street, Village of Leroy, Count of Genesee, State of New York, prepared by Thew Associates Land Surveyors, Date: 6/24/2016.
2. 1885, 1892, 1987, 1903 and 1910 Sanborn Fire Insurance Maps, Assembled by EDR, Order Date: 3/17/2015, Inquiry Number 4236142.3.

0 40' 80'

SCALE: 1" = 40'

Remedial Investigation Report
LeRoy Former MGP site
LeRoy, New York

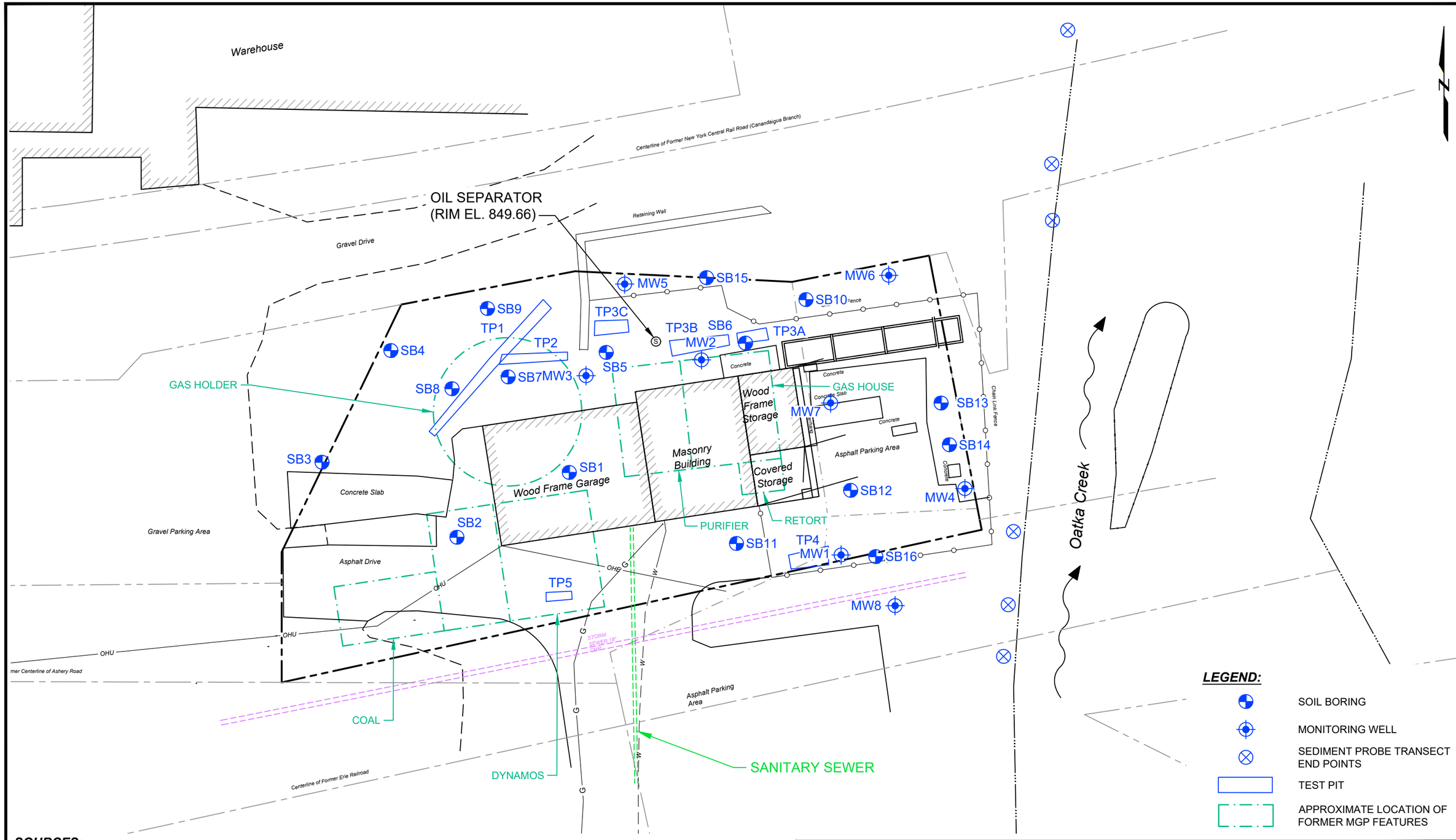
nationalgrid

GEI Consultants

HISTORICAL SITE FEATURES

Project 1503890 | May 2018 | Fig. 4

---- I:\Project\National Grid\LeRoy\1503890\Drawings\Figures\RIR\1503890_RIR-F2 thru F7.dwg - 6/1/2018



SOURCES:

1. Survey titled: Former Leroy National Grid MGP Site, Lands of Thomas W. McGinnis, Tax Parcel No. 6.-1-56, 78-1/2 Lake Street, Village of Leroy, Count of Genesee, State of New York, prepared by Thew Associates Land Surveyors, Date: 6/24/2016.
2. 1885, 1892, 1987, 1903 and 1910 Sanborn Fire Insurance Maps, Assembled by EDR, Order Date: 3/17/2015, Inquiry Number 4236142.3.

0 30' 60'

SCALE: 1" = 30'

Remedial Investigation Report
LeRoy Former MGP site
LeRoy, New York

nationalgrid

GEI Consultants

SUBSURFACE INVESTIGATION POINTS

Project 1503890 | May 2018 | Fig. 5

---- I:\Project\National Grid\LeRoy\1503890\Drawings\Figures\RIR\1503890_RIR-F2 thru F7.dwg - 6/1/2018

LEGEND:

- SOIL BORING
- MONITORING WELL
- SEDIMENT PROBE TRANSECT END POINTS
- TEST PIT
- APPROXIMATE LOCATION OF FORMER MGP FEATURES
- 836.2 — ELEVATION OF BEDROCK SURFACE

N

OIL SEPARATOR
(RIM EL. 849.66)

Retaining Wall

Gravel Drive

837

836.4
SB15

MW5
837.8

MW6
836.2

<836.5
SB10

Chain Link Fence

831.5
SB9
GAS HOLDER

TP1

TP2

TP3C

TP3B

836.5

TP3A

836

SB4
837.3

SB5
837.4

SB6

MW2
836.7

Concrete

SB7
NA

MW3
837.7

SB8
<844.7

Wood Frame Storage

GAS HOUSE

MW7
836.2

SB13
835.9

Chain Link Fence

835.8
SB14

SB3
836.6

Concrete Slab

Wood Frame Garage

SB1
839.2

PURIFIER

Masonry Building

Covered Storage

Asphalt Parking Area

836

SB12
<835.8

MW4
836.3

RETORT

SB2
839.9

Asphalt Drive

SB11
<845.5

TP4

MW1
836.6

SB16
<836.2

Oatka Creek

837

838

839

TP5

MW8
836.5

COAL

DYNAMOS

SOURCES:

1. Survey titled: Former Leroy National Grid MGP Site, Lands of Thomas W. McGinnis, Tax Parcel No. 6.-1-56, 78-1/2 Lake Street, Village of Leroy, Count of Genesee, State of New York, prepared by Thew Associates Land Surveyors, Date: 6/24/2016.
2. 1885, 1892, 1987, 1903 and 1910 Sanborn Fire Insurance Maps, Assembled by EDR, Order Date: 3/17/2015, Inquiry Number 4236142.3.

0 20' 40'

SCALE: 1" = 20'

Remedial Investigation Report
LeRoy Former MGP site
LeRoy, New York

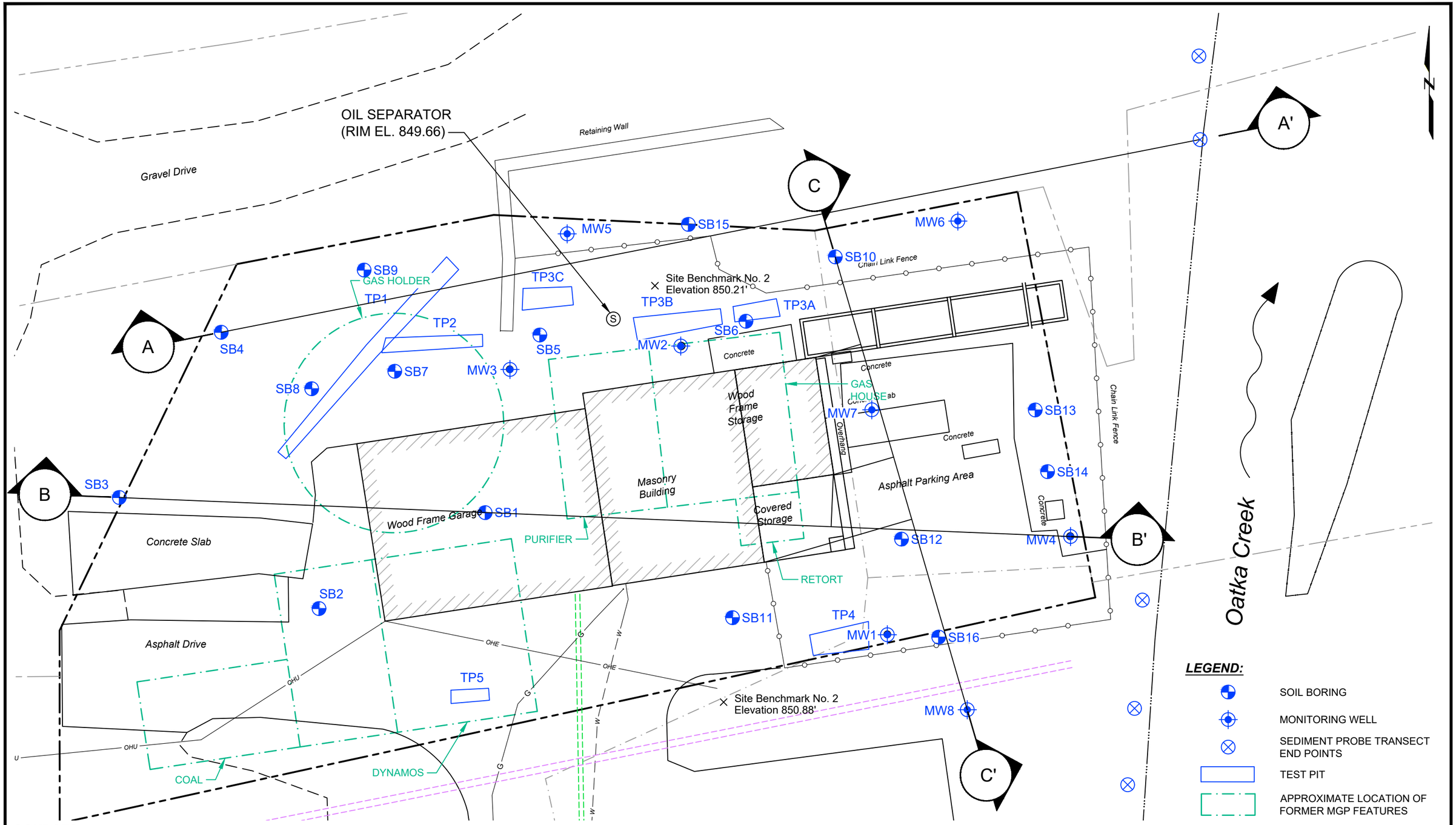
nationalgrid

GEI Consultants

TOP OF BEDROCK SURFACE ELEVATIONS

Project 1503890 | May 2018 | Fig. 6

---- I:\Project\National Grid\LeRoy\1503890\Drawings\Figures\RIR\1503890_RIR-F2 thru F7.dwg - 6/1/2018



SOURCES:

1. Survey titled: Former Leroy National Grid MGP Site, Lands of Thomas W. McGinnis, Tax Parcel No. 6.-1-56, 78-1/2 Lake Street, Village of Leroy, Count of Genesee, State of New York, prepared by Thew Associates Land Surveyors, Date: 6/24/2016.
2. 1885, 1892, 1987, 1903 and 1910 Sanborn Fire Insurance Maps, Assembled by EDR, Order Date: 3/17/2015, Inquiry Number 4236142.3.

0 20' 40'

SCALE: 1" = 20'

Remedial Investigation Report
LeRoy Former MGP site
LeRoy, New York

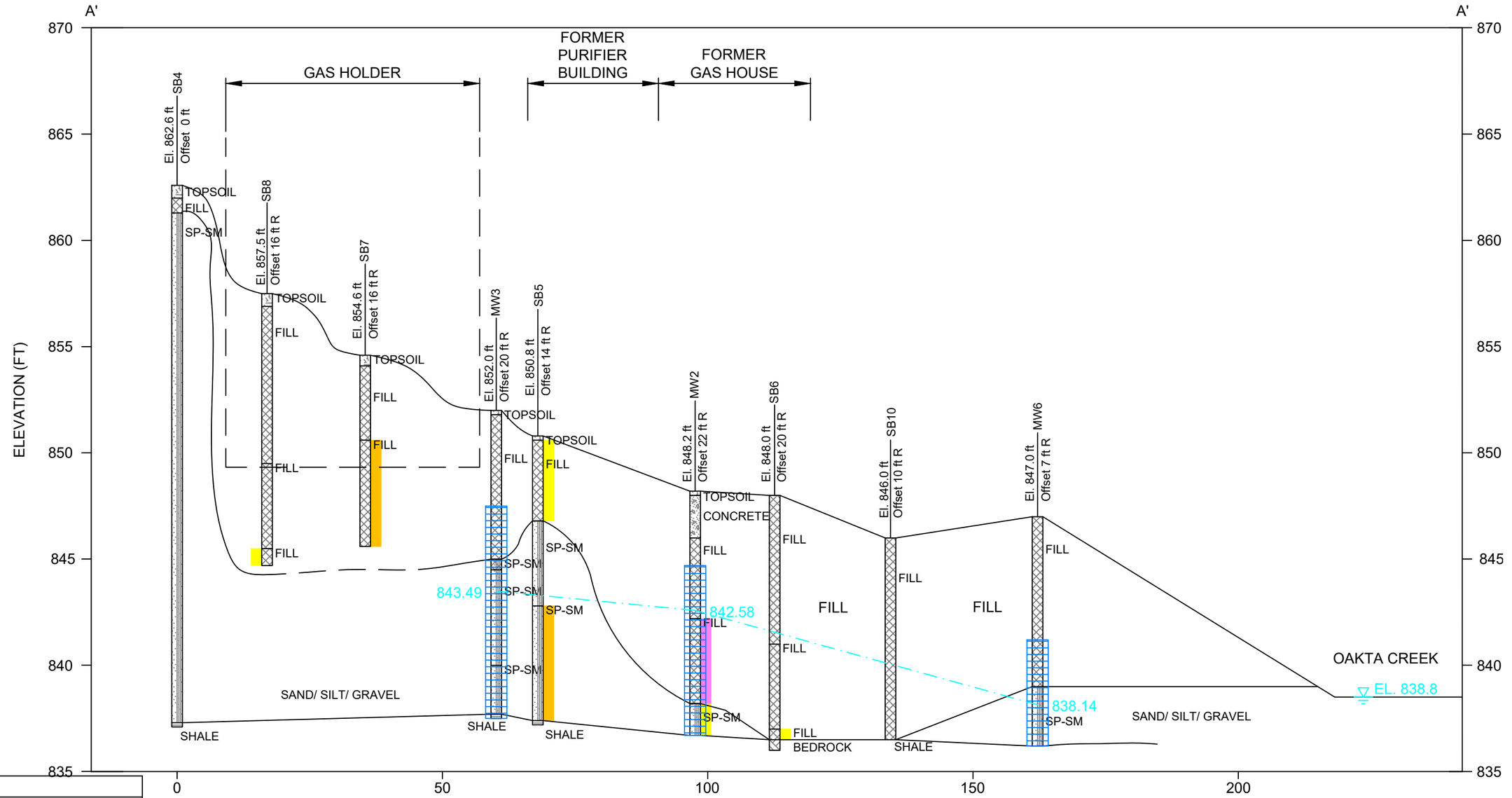
nationalgrid

GEI Consultants

CROSS-SECTION LOCATIONS

Project 1503890 | May 2018 | Fig. 7

---- I:\Project\National Grid\LeRoy\1503890\Drawings\Figures\RIR\1503890_RIR-F2 thru F7.dwg - 6/1/2018



	WELL SCREEN
	GROUNDWATER
	NAPL SATURATED
	NAPL COATED MATERIAL
	SOLID NAPL
	NAPL BLEBS, GLOBS, SHEEN
	STAINING, ODOR
	INDUSTRIAL IMPACTS - (PETROLEUM OR OTHER UNNATURAL) SATURATION & SHEENS
	INDUSTRIAL IMPACTS - (PETROLEUM OR OTHER UNNATURAL) STAINING & ODORS
	WOOD CHIPS/BLUE DISCOLORATION/SULFER-LIKE ODOR
	NO OBSERVED IMPACTS

Note: In instances where multiple impacts are present, a combination of colors should be used (such as a color with cross hatching) to clearly identify where these co-mingled impacts are present.

HORIZONTAL SCALE: 1" = 20'

0 20' 40'

0 5' 10'

VERTICAL SCALE: 1" = 5'

NOTE: 4x VERTICAL EXAGGERATION

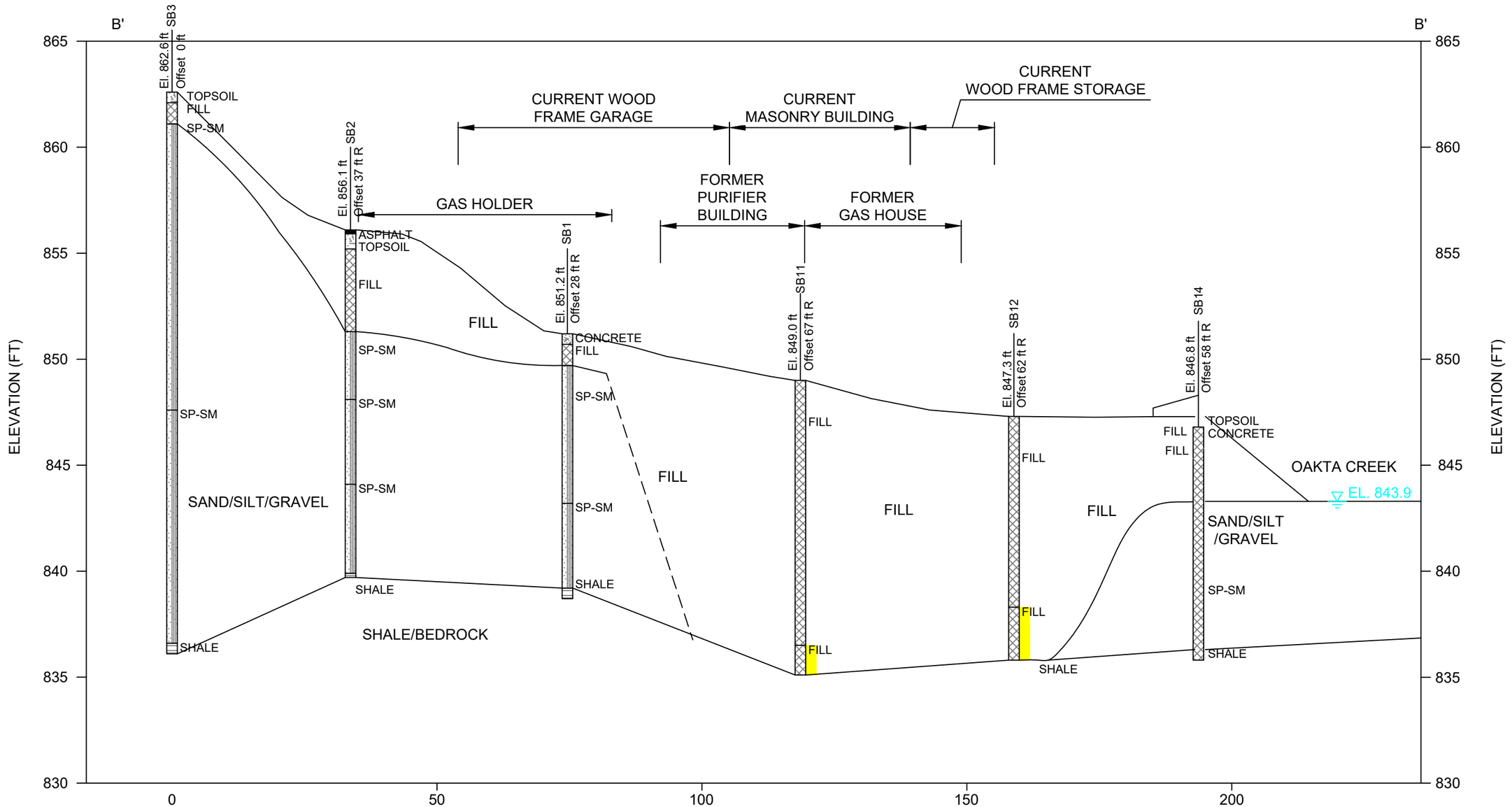
Remedial Investigation Report
LeRoy Former MGP site
LeRoy, New York

nationalgrid

GEI Consultants

SECTION A

Project 1503890 | May 2018 | Fig. 8



	NAPL SATURATED
	NAPL COATED MATERIAL
	SOLID NAPL
	NAPL BLEBS, GLOBS, SHEEN
	STAINING, ODOR
	INDUSTRIAL IMPACTS - (PETROLEUM OR OTHER UNNATURAL) SATURATION & SHEENS
	INDUSTRIAL IMPACTS - (PETROLEUM OR OTHER UNNATURAL) STAINING & ODORS
	WOOD CHIPS/BLUE DISCOLORATION/SULFER-LIKE ODOR
	NO OBSERVED IMPACTS

Note: In instances where multiple impacts are present, a combination of colors should be used (such as a color with cross hatching) to clearly identify where these co-mingled impacts are present.

DISTANCE ALONG PROFILE (FT)

HORIZONTAL SCALE: 1" = 20'

0 20' 40'

0 5' 10'

VERTICAL SCALE: 1" = 5'

NOTE: 4x VERTICAL EXAGGERATION

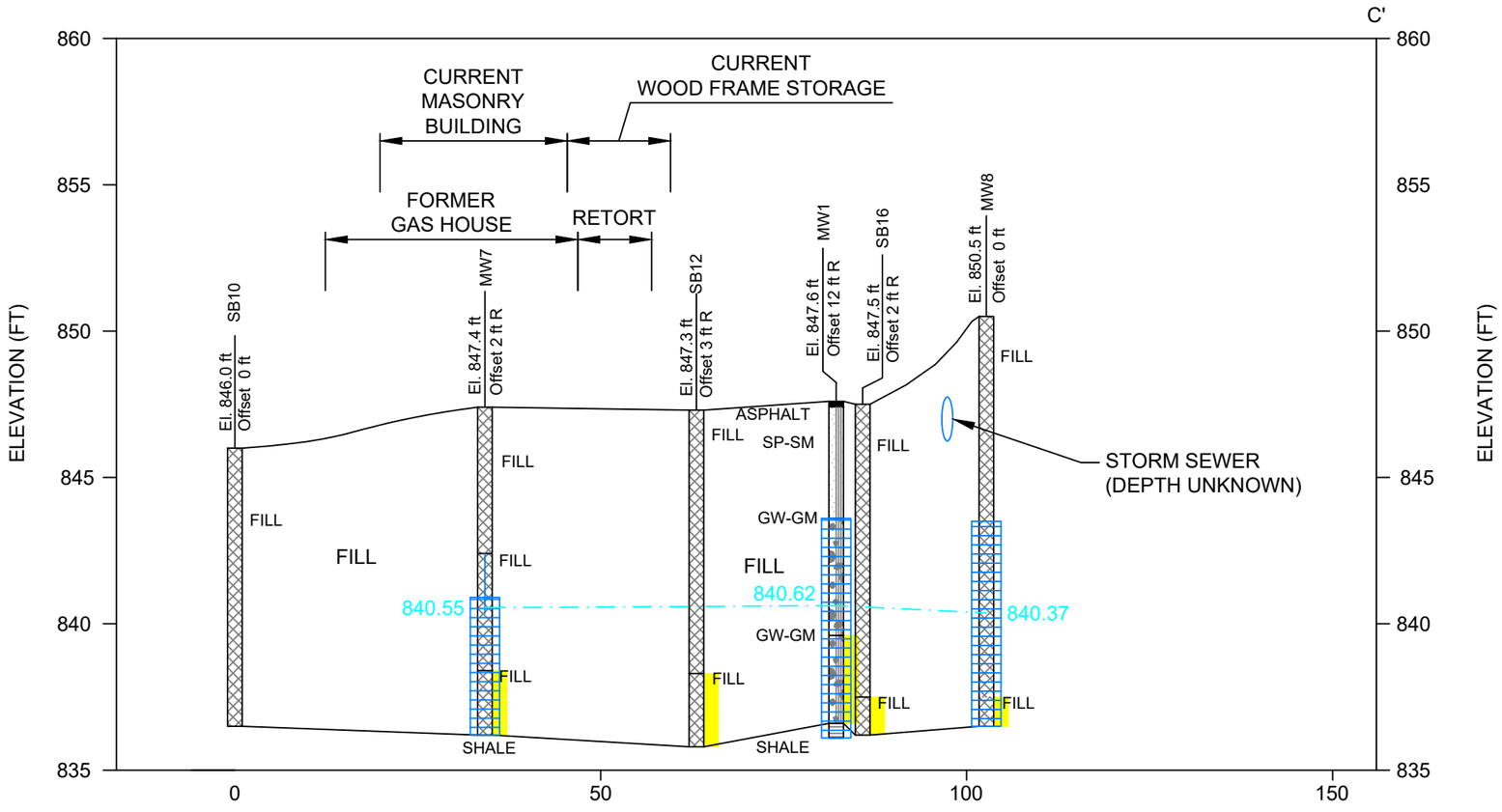
Remedial Investigation Report
LeRoy Former MGP site
LeRoy, New York

nationalgrid

GEI Consultants

SECTION B

Project 1503890 | May 2018 | Fig. 9



	WELL SCREEN
	GROUNDWATER
	NAPL SATURATED
	NAPL COATED MATERIAL
	SOLID NAPL
	NAPL BLEBS, GLOBS, SHEEN
	STAINING, ODOR
	INDUSTRIAL IMPACTS - (PETROLEUM OR OTHER UNNATURAL) SATURATION & SHEENS
	INDUSTRIAL IMPACTS - (PETROLEUM OR OTHER UNNATURAL) STAINING & ODORS
	WOOD CHIPS/BLUE DISCOLORATION/SULFER-LIKE ODOR
	NO OBSERVED IMPACTS

Note: In instances where multiple impacts are present, a combination of colors should be used (such as a color with cross hatching) to clearly identify where these co-mingled impacts are present.

HORIZONTAL SCALE: 1" = 20'

0 20' 40'

0 5' 10'

VERTICAL SCALE: 1" = 5'

NOTE: 4x VERTICAL EXAGGERATION

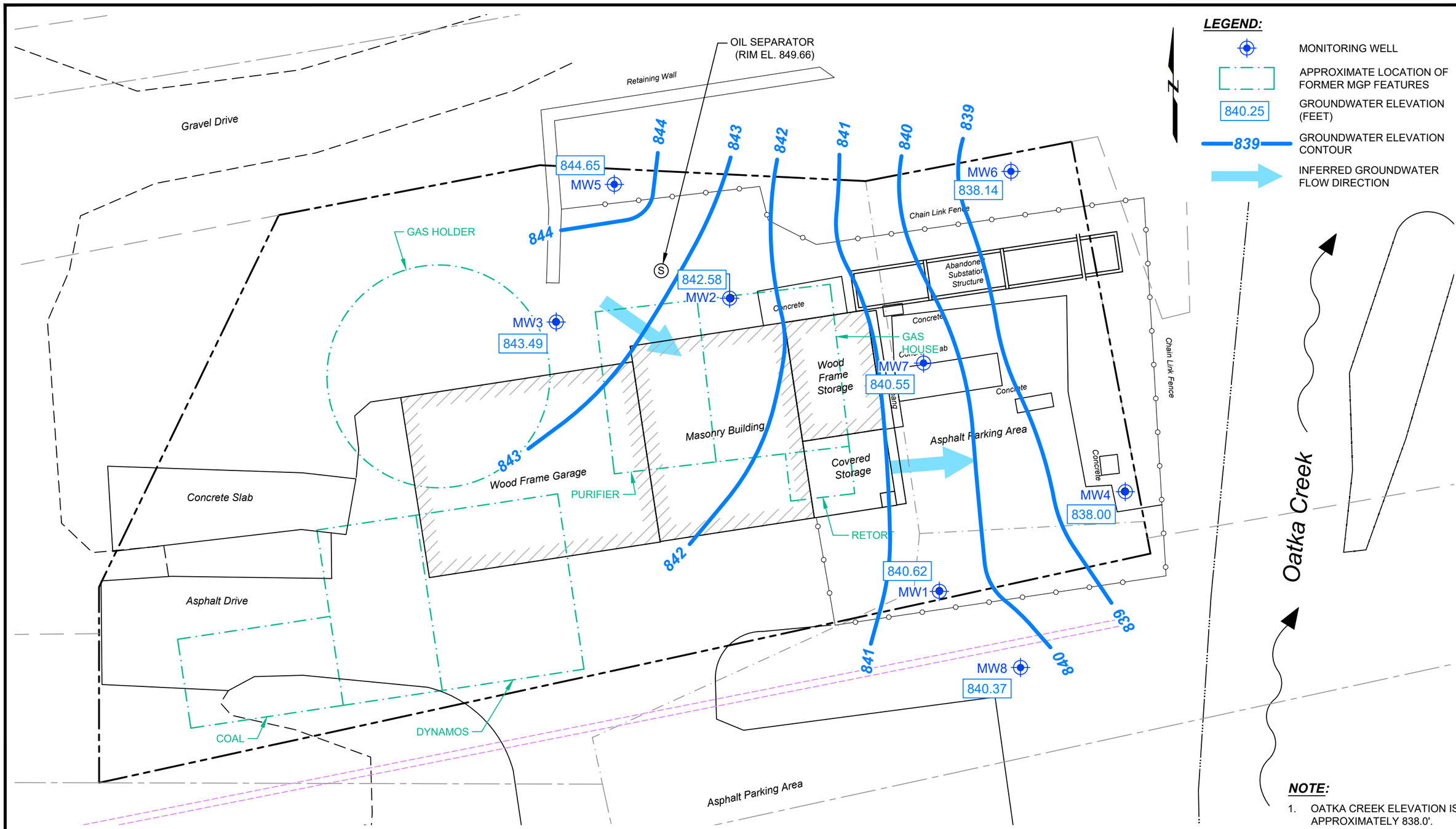
Remedial Investigation Report
LeRoy Former MGP site
LeRoy, New York

nationalgrid

GEI Consultants

SECTION C

Project 1503890 | May 2018 | Fig. 10



SOURCES:

1. Survey titled: Former Leroy National Grid MGP Site, Lands of Thomas W. McGinnis, Tax Parcel No. 6.-1-56, 78-1/2 Lake Street, Village of Leroy, Count of Genesee, State of New York, prepared by Thew Associates Land Surveyors, Date: 6/24/2016.
2. 1885, 1892, 1987, 1903 and 1910 Sanborn Fire Insurance Maps, Assembled by EDR, Order Date: 3/17/2015, Inquiry Number 4236142.3.

0 20' 40'

SCALE: 1" = 20'

Remedial Investigation Report
LeRoy Former MGP site
LeRoy, New York

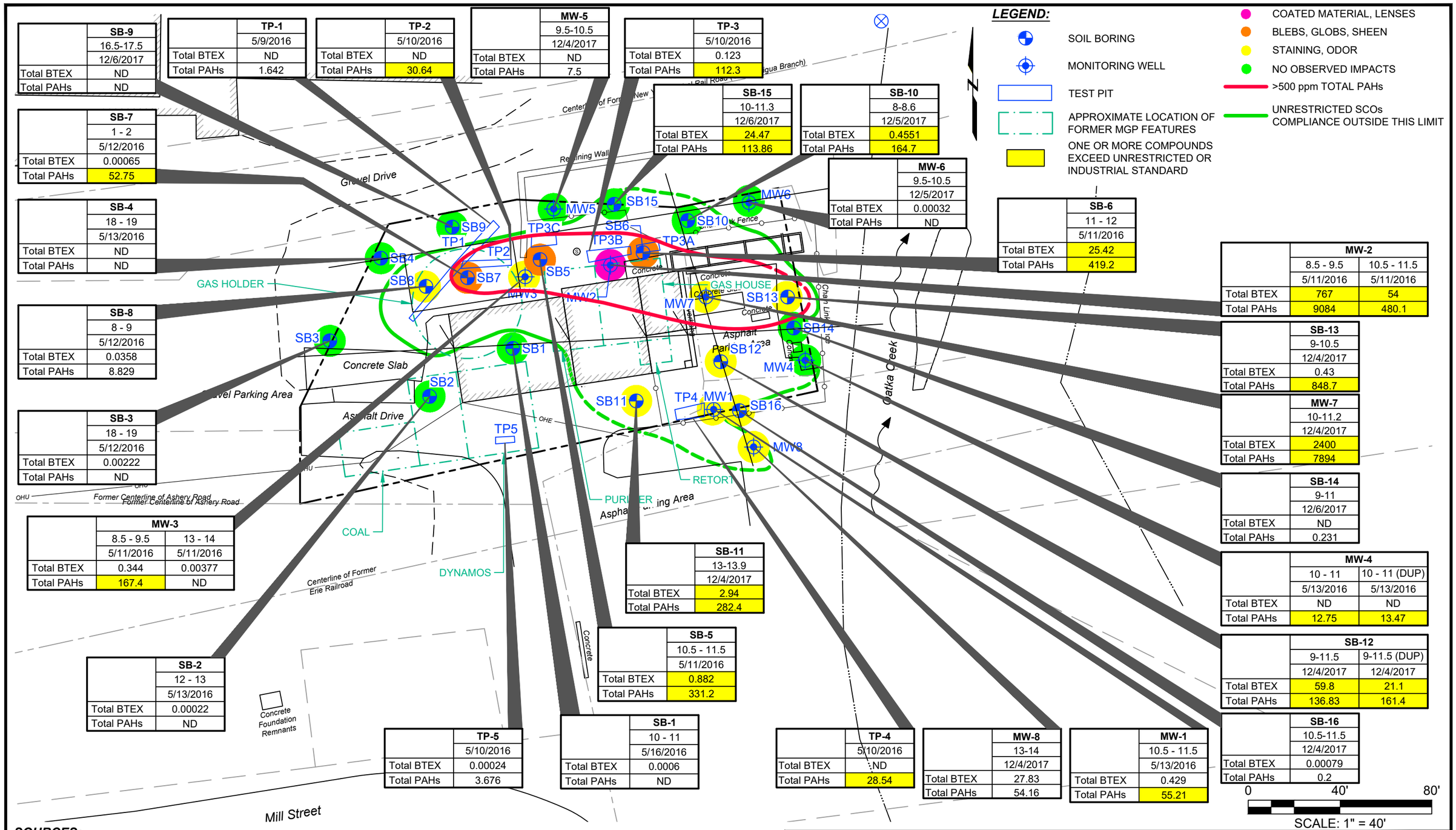
nationalgrid

GEI Consultants

GROUNDWATER ELEVATION CONTOUR MAP JANUARY 9, 2018

Project 1503890 | May 2018 | Fig. 11

---- I:\Project\National Grid\LeRoy\1503890\Drawings\Figures\RIR\1503890_RIR-F11.dwg - 6/1/2018



SOURCES:

1. Survey titled: Former Leroy National Grid MGP Site, Lands of Thomas W. McGinnis, Tax Parcel No. 6.-1-56, 78-1/2 Lake Street, Village of Leroy, Count of Genesee, State of New York, prepared by Thew Associates Land Surveyors, Date: 6/24/2016.
2. 1885, 1892, 1987, 1903 and 1910 Sanborn Fire Insurance Maps, Assembled by EDR, Order Date: 3/17/2015, Inquiry Number 4236142.3.

NOTE:

1. RESULTS ARE REPORTED IN MILLIGRAMS PER KILOGRAM (mg/kg)

Remedial Investigation Report
LeRoy Former MGP site
LeRoy, New York

nationalgrid

GEI Consultants

SUMMARIZED SOIL ANALYTICAL RESULTS (mg/Kg)

Project 1503890 | May 2018 | Fig. 12

---- I:\Project\National Grid\LeRoy\1503890\Drawings\Figures\RIR\1503890_RIR-F12.dwg - 6/1/2018

	MW-5
	1/9/2018
Total BTEX	0.29
Total PAHs	ND

	MW-6
	1/9/2018
Total BTEX	2.77
Total PAHs	1.2

	MW-7	DUP1092018
	1/9/2018	1/9/2018
Total BTEX	1470	1420
Total PAHs	1631	2589

	MW-2	MW-2
	6/7/2016	1/9/2018
Total BTEX	4900	700
Total PAHs	4932	1628

	MW-4	MW-4
	6/7/2016	1/10/2018
Total BTEX	1.83	1.23
Total PAHs	1.2	19.8

	MW-3	MW-3
	6/7/2016	1/9/2018
Total BTEX	229	72.1
Total PAHs	1072	441.3

	MW-1	DUP06072016	MW-1
	6/7/2016	6/7/2016	1/10/2018
Total BTEX	2.44	2.33	0.48
Total PAHs	11.1	17	4.08

	MW-8
	1/10/2018
Total BTEX	3.03
Total PAHs	6028

OIL SEPARATOR
(RIM EL. 849.66)

MW1 MW2 MW3 MW4 MW5 MW6 MW7 MW8

100 1000 100 10 10 1 10 1000 1.0

Centerline of Former New York Central Rail Road (Canandaigua Branch)
Retaining Wall
Gravel Drive
GAS HOLDER
Chain Link Fence
Concrete
Asphalt Parking Area
Concrete Slab
Asphalt Drive
PURIFIERS
RETORT
COAL
DYNAMOS
Former Centerline of Ashery Road
STORM SEWER 18" CMP
Centerline of Former Erie Railroad
Culvert
Concrete Foundation Remnants
Edge of Asphalt
Mill Street
Oatka Creek

N

LEGEND:

- MONITORING WELL
- APPROXIMATE LOCATION OF FORMER MGP FEATURES
- ONE OR MORE COMPOUNDS EXCEED NEW YORK AMBIENT WATER QUALITY STANDARD
- BTEX — BENZENE, TOLUENE, ETHYLBENZENE, XYLENES
- PAH — POLYCYCLIC AROMATIC HYDROCARBONS
- 1.0 — TOTAL BTEX ISOCONCENTRATION (ug/L) (JANUARY 2018)
- 1.0 — TOTAL PAHs ISOCONCENTRATION (ug/L)(JANUARY 2018)

NOTE:

1. RESULTS ARE REPORTED IN MICROGRAMS PER LITER (ug/L).

SOURCES:

1. Survey titled: Former Leroy National Grid MGP Site, Lands of Thomas W. McGinnis, Tax Parcel No. 6.-1-56, 78-1/2 Lake Street, Village of Leroy, Count of Genesee, State of New York, prepared by Thew Associates Land Surveyors, Date: 6/24/2016.
2. 1885, 1892, 1987, 1903 and 1910 Sanborn Fire Insurance Maps, Assembled by EDR, Order Date: 3/17/2015, Inquiry Number 4236142.3.

0 40' 80'

SCALE: 1" = 40'

Remedial Investigation Report
LeRoy Former MGP site
LeRoy, New York

nationalgrid

GEI Consultants

SUMMARIZED GROUNDWATER ANALYTICAL RESULTS (ug/L)

Project 1503890 | May 2018 | Fig. 13

---- I:\Project\National Grid\LeRoy\1503890\Drawings\Figures\RIR\1503890_RIR-F13.dwg - 6/1/2018

Appendix A

Sanborn Map and Historical Photographs

Appendix A

Sanborn Map and Historical Photographs

Prentice's Gas and Electric Company

by Lynne Belluscio

Last week's article, the topic was natural gas. LeRoy was connected to the natural gas wells in Pavilion in 1907, but LeRoy had "manufactured gas" before that.

"Manufactured gas" was available in Philadelphia as early as 1796. Baltimore provided manufactured gas to residences, street lights, and businesses in 1816. This gas was extracted from coal and was known as coal gas.

Many small communities had gas companies. I am still not sure exactly when LeRoy was first supplied with gas, but I'm still looking. (I'm hampered with the lack of a bulb for the microfilm reader. Elizabeth Bolton, who works in the Gallery, has been reading through the pages of the *LeRoy Gazette* gathering information. It's slow going!)

Discoveries in the process of manufacturing gas, resulted in a process that manufactured gas from water. Known as "water gas", it produced heat as it burned, but it did not burn with a flame that produced enough illumination. Then in 1877, T.S.C. Lowe discovered the "carbureted water gas process" which made gas from water but it could be "enriched" or carbureted with light oils, which when burned, produced a bright light.

We have two gas chandeliers in LeRoy House. Both have been electrified. In the back parlor is a gas chandelier that came from Ingham University. A little research into the Ingham records might prove when Ingham used gas. Another gas chandelier hangs in the front parlor, from a house on Church Street. Most of the fireplaces in LeRoy House are also plumbed for gas.

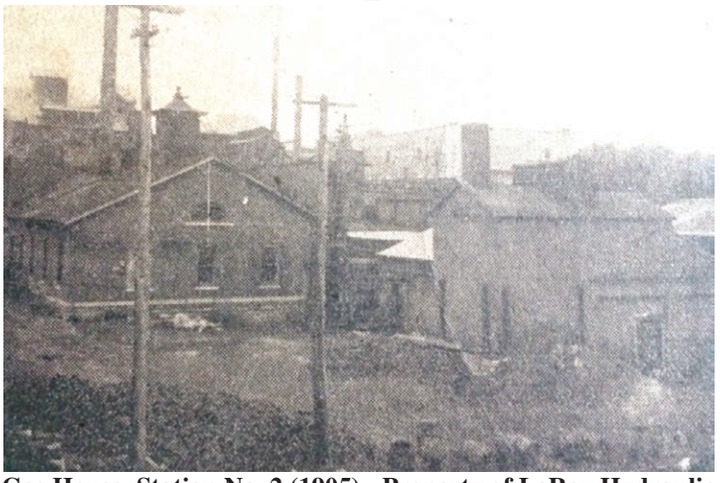
In the May 9, 1894 issue of the *LeRoy Gazette*, on the front page, was an explanation of the carbureted gas process at Prentice's Mill, north of town along the Oatka Creek: "gas making by the old system was continuous - - night and day, with constant attention. (This implies that there was a coal gas plant in LeRoy) Now, enough for a whole day is made in 25 minutes, and the plant is idle for nearly 24 hours, thus greatly lessening the cost all around. A blast of steam was forced up through the coke, and water gas plain and simple was the result. Water gas alone burns with a blue flame and with no illuminating power. Then a small quantity of petroleum was admitted through another pipe, and this added the illuminating property of the gas. The gas is then passed through a scrubber which separated the impurities. The gas was then piped into a cylinder tank filled with water that prevents the escape of the gas." This tank held the gas until it was needed.

The article continues: "Technically speaking, the new process consists of the destructive distillation of water, accomplished by passing steam through incandescent fuel, thereby separating the hydrogen from oxygen. The gas is afterwards carbureted up to the desired candlepower by the introduction of oil or other like hydrocarbons. The apparatus is the invention of James Gray, a well known engineer from Pittsburgh. . ."

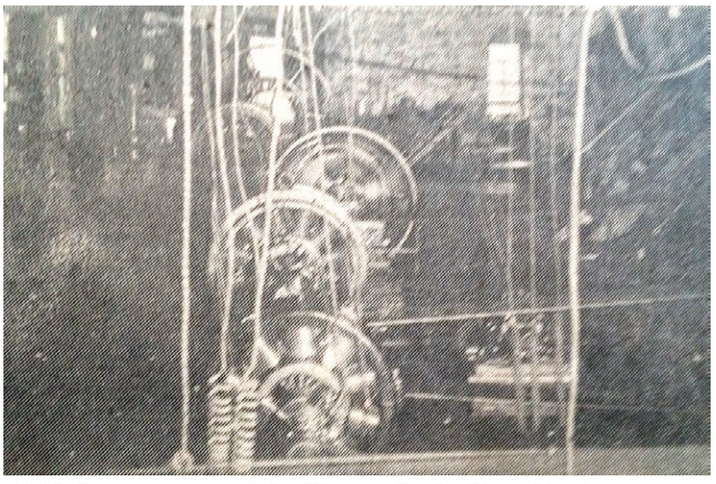
At the same time, Prentice was producing gas, he was also producing electricity. Just a few months before the announcement of his new gas facility, he announced his new electric facility. Prentice had purchased the site of the old Jones paper mill (now the site of the sewage treatment plant) and was retrofitting the mill for the production and transmission of electricity. He widened the old millrace and installed McCormick 21 inch cylinder gate turbines. It is clearly stated that "It will be of the alternating variety." (see note below)

Prentice installed a coal fired 150 horse power boiler and 150 horse power engine to supplement the water supply when necessary. Prentice's electric station was in service by June 13, 1894. A short article mentions that "the light furnished is of great brilliance - - it is now in use in Mr. Prentice's residence (on Church St.) his mill and office, the salt works refinery and N.B. Keeney and Son's warehouse. The arc light in Taft's store will be in use this evening.

"The following week another article mentioned that electricity would be furnished all night ... 'thus providing against the use of the dangerous kerosene lamp or any other light where flame is produced or where matches are used."



Gas House, Station No. 2 (1905) - Property of LeRoy Hydraulic Electric Gas Company.



(1905) Interior view of the Electric Light Plant No. 1.

For many years, people could choose electricity or gas. Periodically, the Village would use electric street lights and then it would go back to gas. A wonderful story was told by Andrew Weinman, who as a boy, had the job of lighting and extinguishing the gas lamps in the Village. He was paid $20 a month.

In 1886, the Village voted to replace the gas lights with electric lights. "I for one wasn't sorry about the change because lighting and extinguishing the gas lights was a strenuous job. We had to start lighting just before dark and extinguished them between 12 and 1 am. We had the Village divided into four routes. My route started at the Village Hall on Bank Street, up Myrtle Street to Bissell's Grove and down Gilbert and West Main and Main Street to Mill Street. I often wonder how many lads in these days would want to make two such trips every night, winter and summer for $5 a week. Many times we had to wade through snow more than knee deep . . ."

*The notice about Prentice's electric facility which provided "alternating" current is extremely interesting, since it was only a few years before, that equipment for alternating current was developed. Thomas Edison believed that direct current was the only solution for transmitting electricity. The problem was, that direct current could not be transmitted any further than two miles at the most. Nicola Tesla knew that alternating current was the only way to transmit electricity.

The *LeRoy Gazette* published a long article about Tesla's work in April 1893 "Light Minus Heat – the Discoveries Nikola Tesla is Giving the World." Nicola's patents would be bought by George Westinghouse and would be implemented in the massive power plants at Niagara Falls in 1895.

National Grid - Leroy
78 Lake Street
Le Roy, NY 14482

Inquiry Number: 4236142.3
March 17, 2015

Certified Sanborn® Map Report

6 Armstrong Road, 4th Floor
Shelton, Connecticut 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

3/17/15

Site Name:
National Grid - Leroy
78 Lake Street
Le Roy, NY 14482

Client Name:
GEI Consultants, Inc
1301 Trumansburg Road
Ithaca, NY 14850

EDR Inquiry # 4236142.3

Contact: Garrett C. Schmidt

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by GEI Consultants, Inc were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Site Name: National Grid - Leroy
Address: 78 Lake Street
City, State, Zip: Le Roy, NY 14482
Cross Street:
P.O. # IO-549
Project: National Grid - LeRoy, NY
Certification # E7C2-4C90-8166

Maps Provided:

1949	1885
1927	
1910	
1903	
1897	
1892	

Sanborn® Library search results
Certification # E7C2-4C90-8166

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

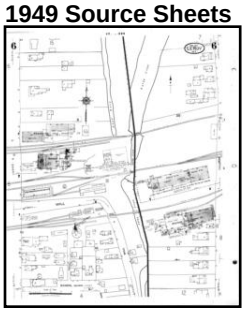
Limited Permission To Make Copies

GEI Consultants, Inc (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

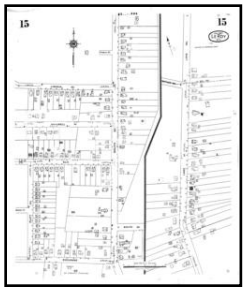
Sanborn Sheet Thumbnails

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1949 Source Sheets

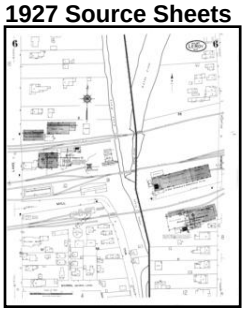


Volume 1, Sheet 6

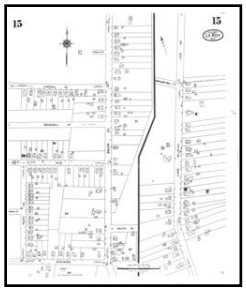


Volume 1, Sheet 15

1927 Source Sheets



Volume 1, Sheet 6



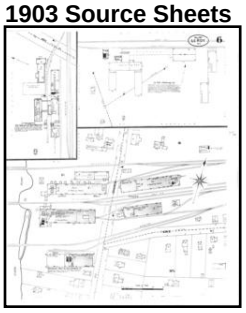
Volume 1, Sheet 15

1910 Source Sheets

Volume 1, Sheet 5

Volume 1, Sheet 2

1903 Source Sheets



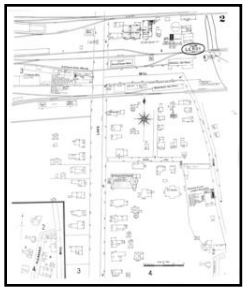
Volume 1, Sheet 6

Volume 1, Sheet 2

Volume 1, Sheet Keymap/Sheet1

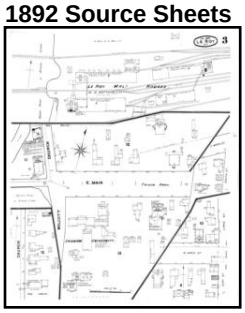
1897 Source Sheets

Volume 1, Sheet Keymap/Sheet1



Volume 1, Sheet 2

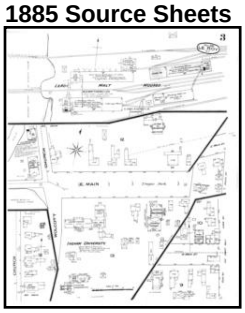
1892 Source Sheets



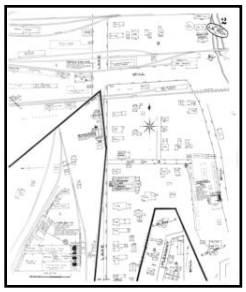
Volume 1, Sheet 3

Volume 1, Sheet 2

1885 Source Sheets

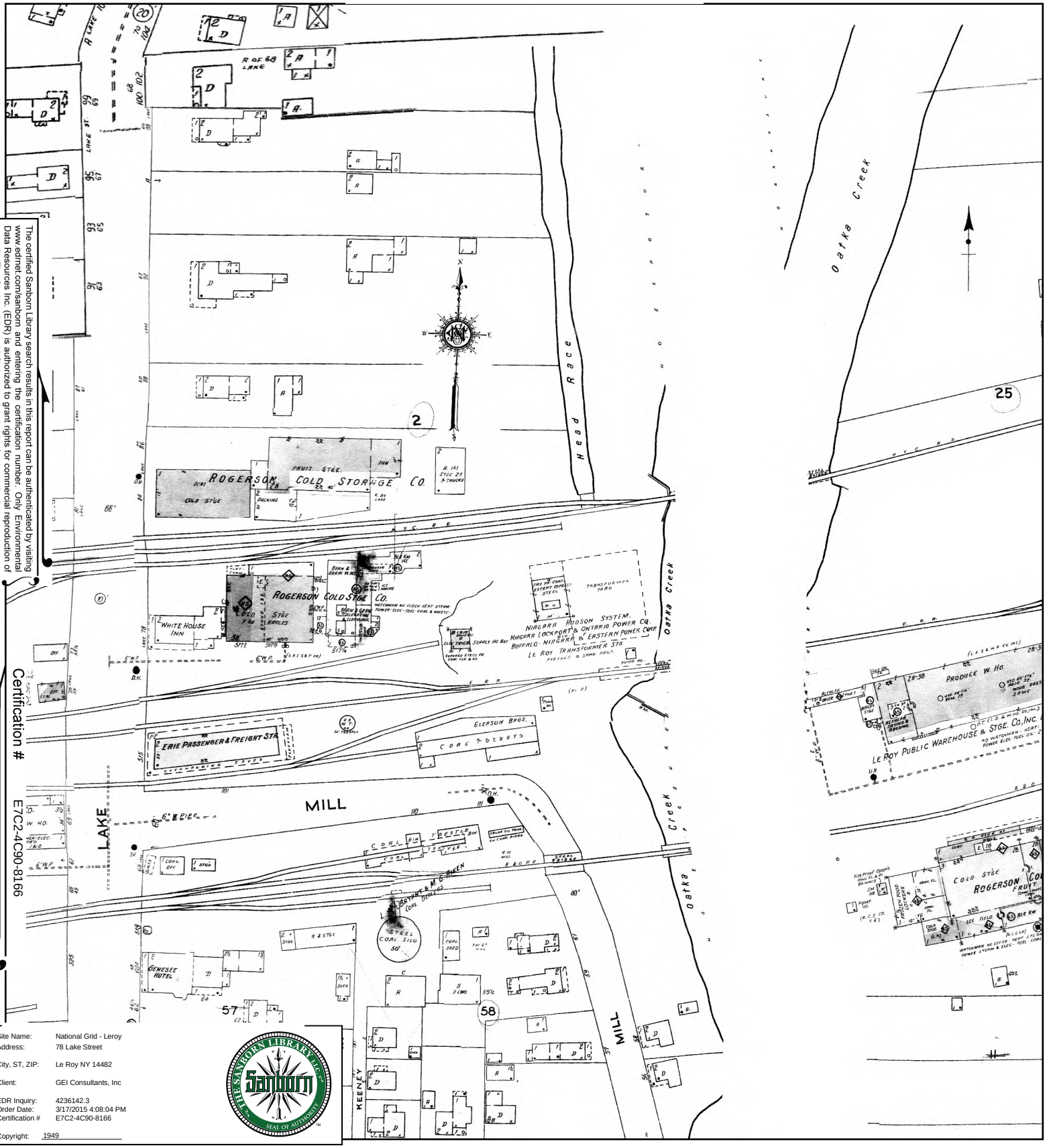


Volume 1, Sheet 3



Volume 1, Sheet 2

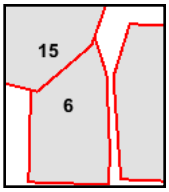
1949 Certified Sanborn Map



Certification # E7C2-4C90-8166

Site Name:	National Grid - Leroy
Address:	78 Lake Street
City, ST, ZIP:	Le Roy NY 14482
Client:	GEI Consultants, Inc
EDR Inquiry:	4236142.3
Order Date:	3/17/2015 4:08:04 PM
Certification #	E7C2-4C90-8166
Copyright:	1949

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.



Volume 1, Sheet 6
Volume 1, Sheet 15

0 Feet 150 300 600

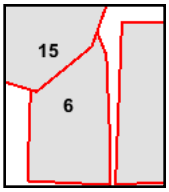
1927 Certified Sanborn Map

The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

Certification # E7C2-4C90-8166

Site Name:	National Grid - Leroy
Address:	78 Lake Street
City, ST, ZIP:	Le Roy NY 14482
Client:	GEI Consultants, Inc
EDR Inquiry:	4236142.3
Order Date:	3/17/2015 4:08:04 PM
Certification #	E7C2-4C90-8166
Copyright:	1927

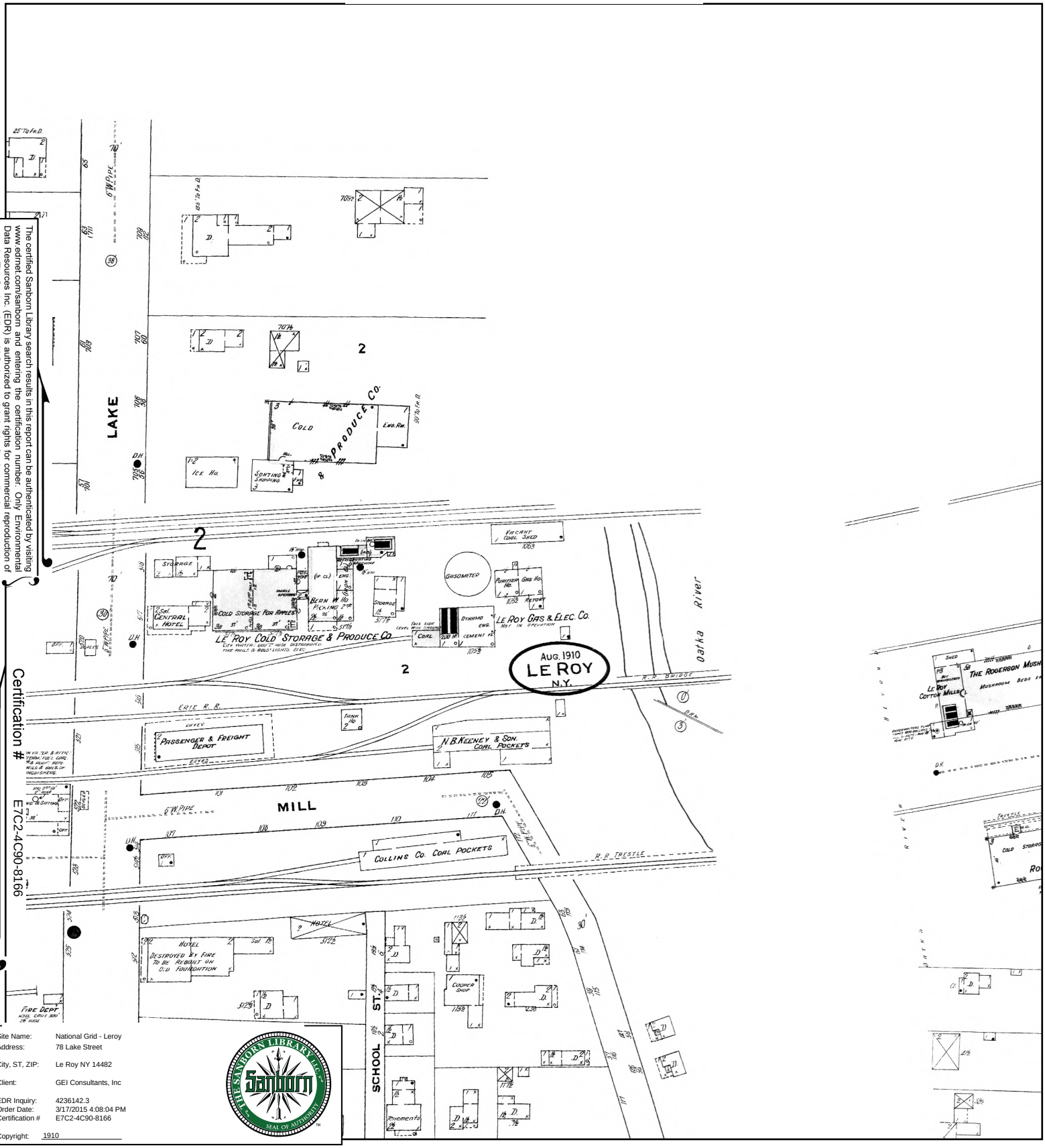
This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.



Volume 1, Sheet 6
Volume 1, Sheet 15

0 Feet 150 300 600

1910 Certified Sanborn Map



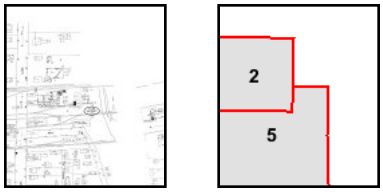
The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

Certification # E7C2-4C90-8166

Site Name:	National Grid - Leroy
Address:	78 Lake Street
City, ST, ZIP:	Le Roy NY 14482
Client:	GEI Consultants, Inc
EDR Inquiry:	4236142.3
Order Date:	3/17/2015 4:08:04 PM
Certification #	E7C2-4C90-8166
Copyright:	1910

This Certified Sanborn Map combines the following sheets. Outlined areas indicate map sheets within the collection.

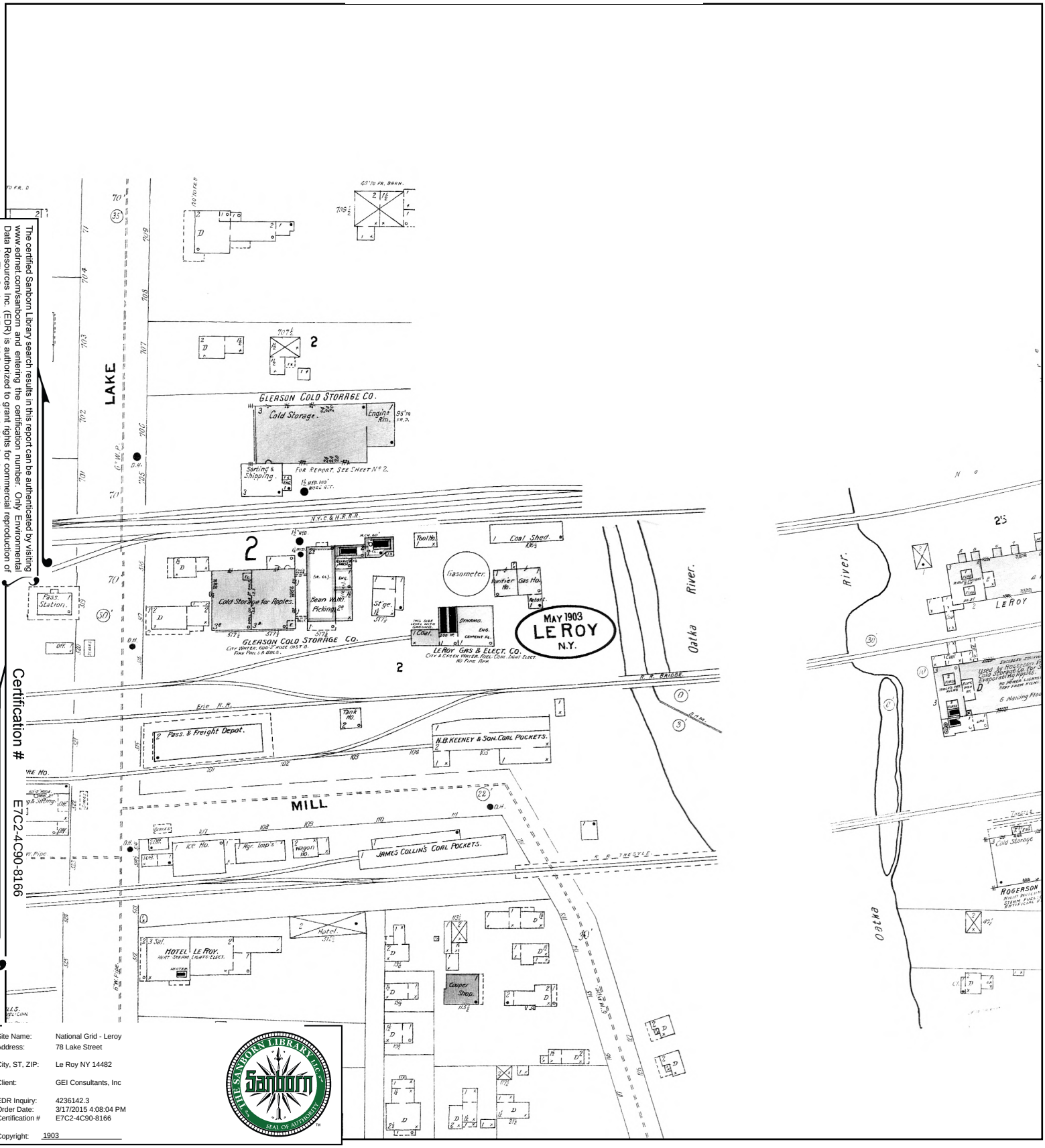
0 Feet 150 300 600



Volume 1, Sheet 5
Volume 1, Sheet 2

N

1903 Certified Sanborn Map



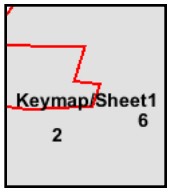
The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

Certification # E7C2-4C90-8166

Site Name:	National Grid - Leroy
Address:	78 Lake Street
City, ST, ZIP:	Le Roy NY 14482
Client:	GEI Consultants, Inc
EDR Inquiry:	4236142.3
Order Date:	3/17/2015 4:08:04 PM
Certification #	E7C2-4C90-8166
Copyright:	1903

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600

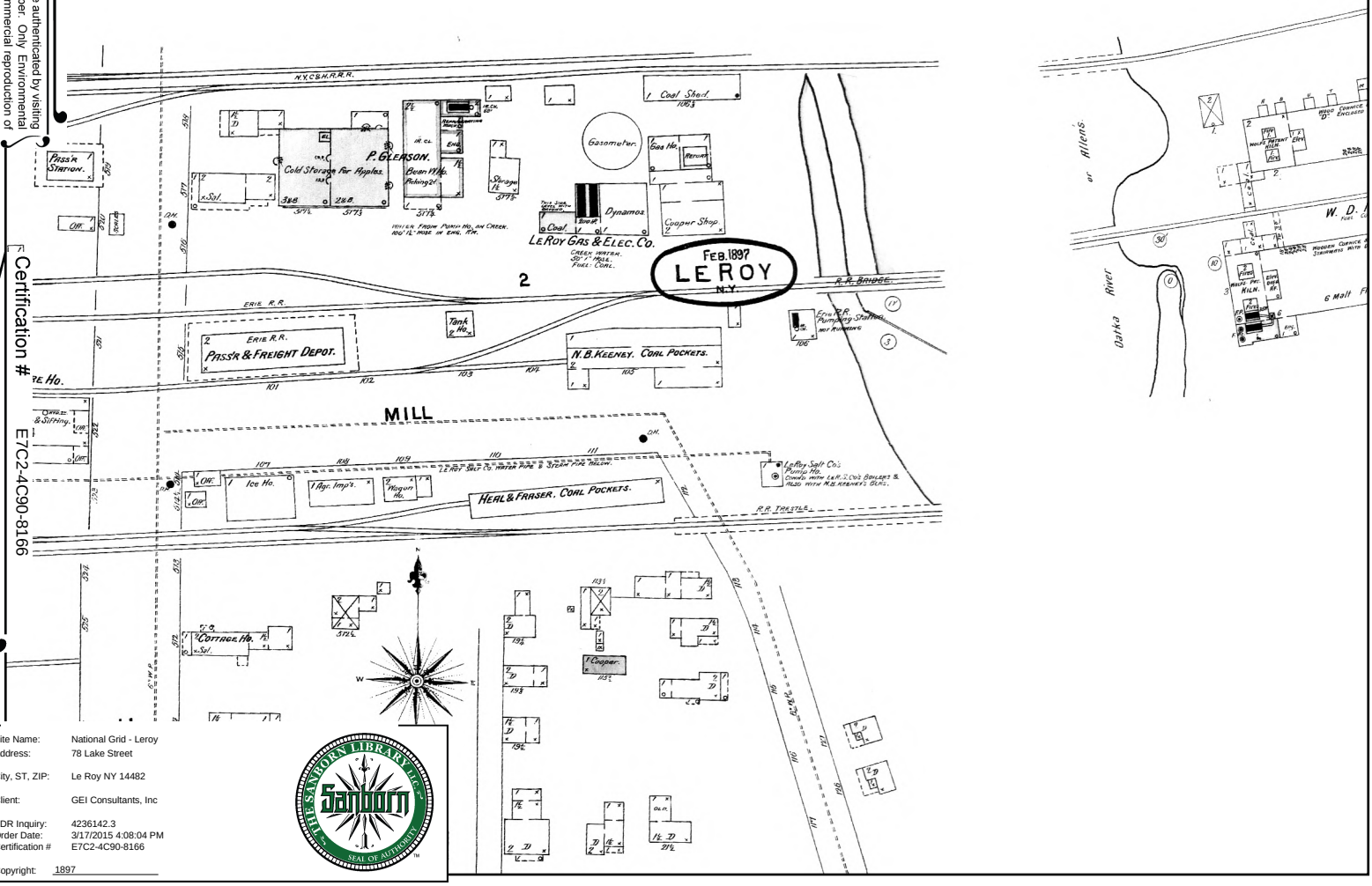


Volume 1, Sheet 6
Volume 1, Sheet 2
Volume 1, Sheet Keymap/Sheet1

N

1897 Certified Sanborn Map

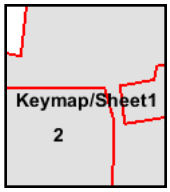
Certification # E7C2-4C90-8166



Site Name:	National Grid - Leroy
Address:	78 Lake Street
City, ST, ZIP:	Le Roy NY 14482
Client:	GEI Consultants, Inc
EDR Inquiry:	4236142.3
Order Date:	3/17/2015 4:08:04 PM
Certification #	E7C2-4C90-8166
Copyright:	1897

This Certified Sanborn Map combines the following sheets. Outlined areas indicate map sheets within the collection.

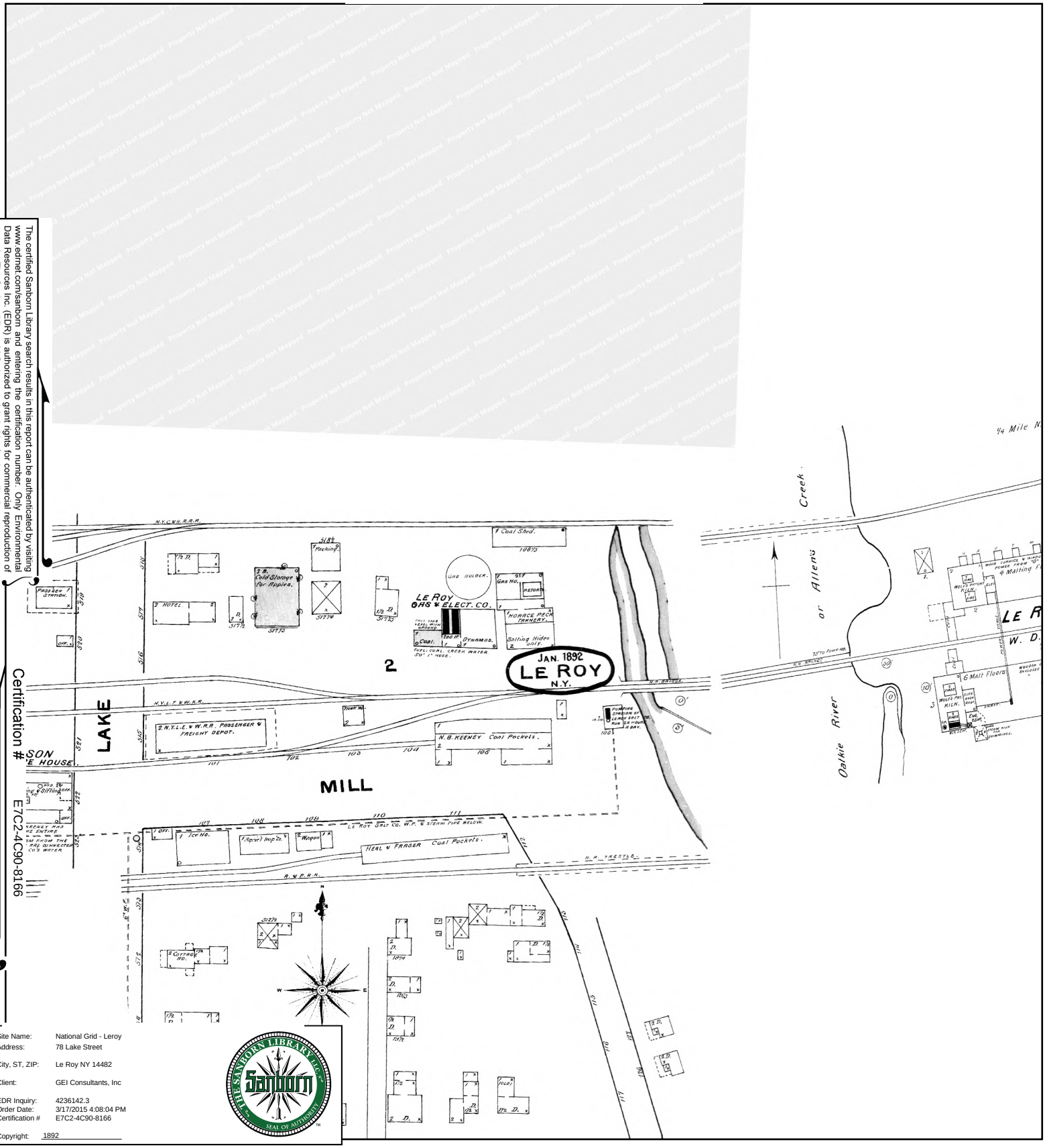
0 Feet 150 300 600



Volume 1, Sheet Keymap/Sheet1
Volume 1, Sheet 2

N

1892 Certified Sanborn Map

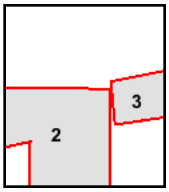


Certification # E7C2-4C90-8166

The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

Site Name:	National Grid - Leroy
Address:	78 Lake Street
City, ST, ZIP:	Le Roy NY 14482
Client:	GEI Consultants, Inc
EDR Inquiry:	4236142.3
Order Date:	3/17/2015 4:08:04 PM
Certification #	E7C2-4C90-8166
Copyright:	1892

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.



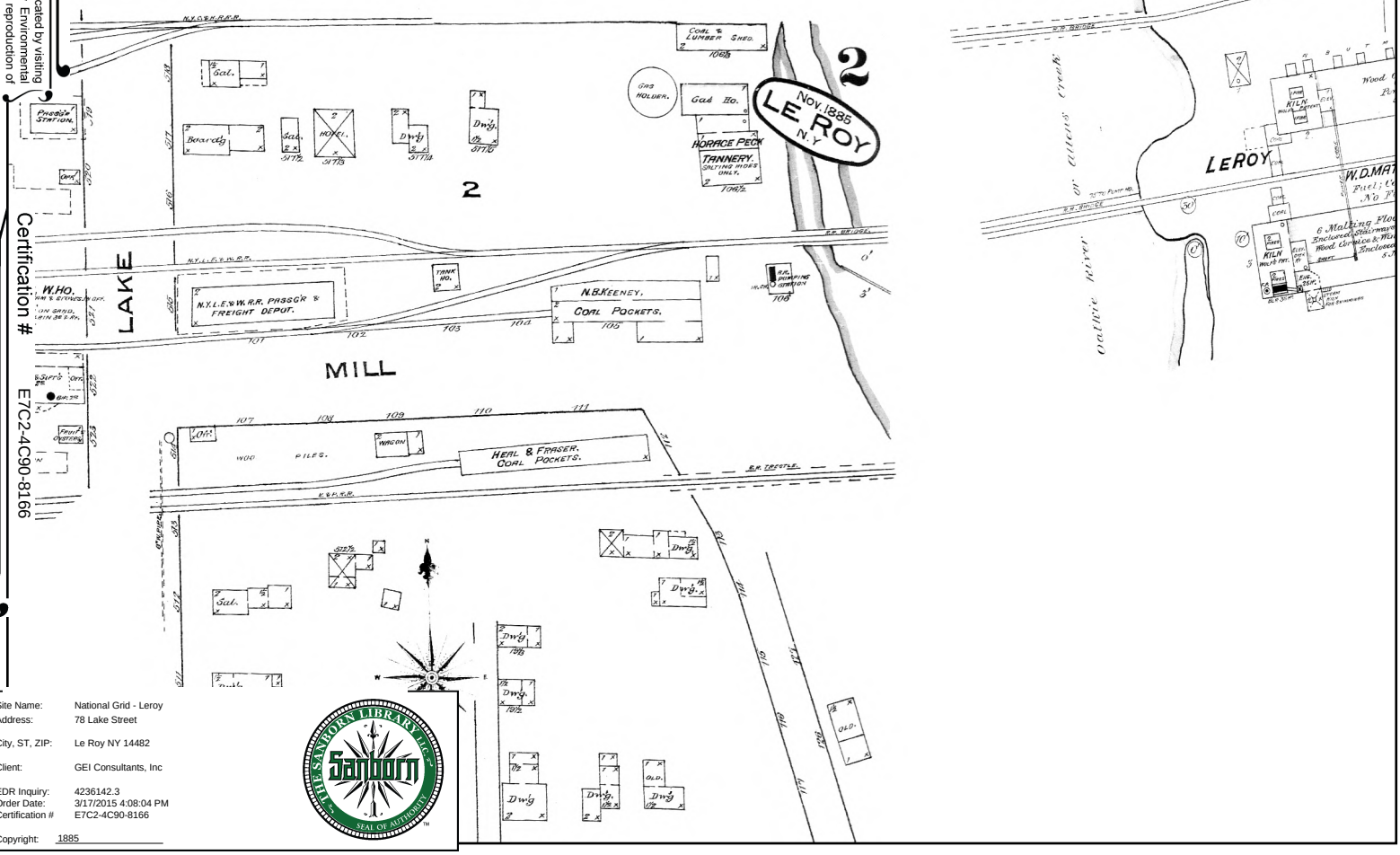
Volume 1, Sheet 3
Volume 1, Sheet 2

0 Feet 150 300 600

N

1885 Certified Sanborn Map

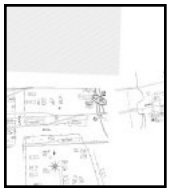
Certification # E7C2-4C90-8166

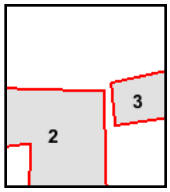


Site Name:	National Grid - Leroy
Address:	78 Lake Street
City, ST, ZIP:	Le Roy NY 14482
Client:	GEI Consultants, Inc
EDR Inquiry:	4236142.3
Order Date:	3/17/2015 4:08:04 PM
Certification #	E7C2-4C90-8166
Copyright:	1885

This Certified Sanborn Map combines the following sheets. Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600





Volume 1, Sheet 3
Volume 1, Sheet 2

N

Documents and Photographs from National Grid

CONCRETE DRIVE

BOTTOM OF GRADE

CONCRETE DRIVE

42'-2"

28'-0"

Concrete walk.

SIDEWALK

STATION BUILDING

RETAINING WALL

24'-0"

32'-8"

14'-0"

8'-0"

23'-4"

16'-0"

48'-0"

12'-0"

32'-0" fence

8'-2" 10'-0" 10'-4"

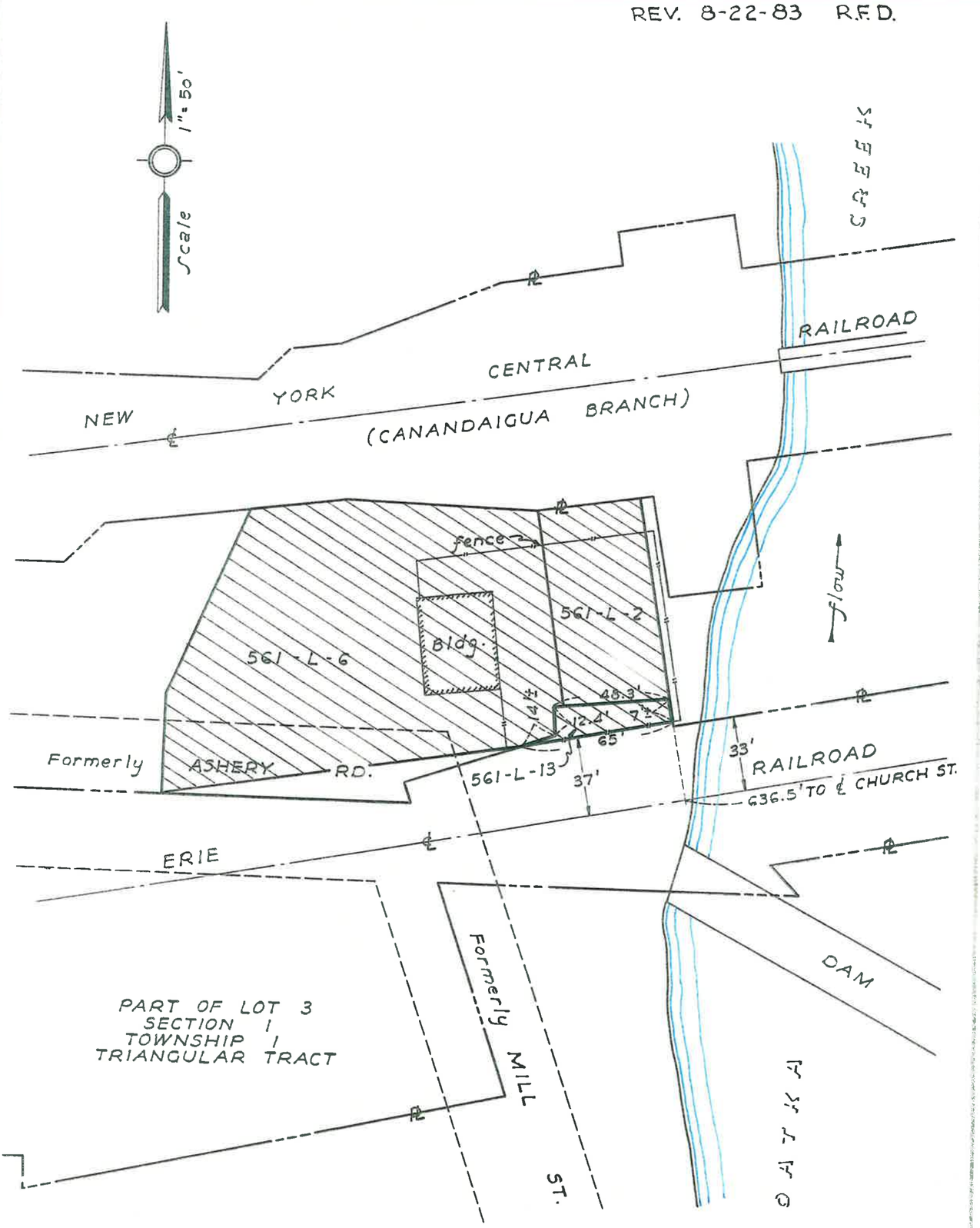
88'-0"

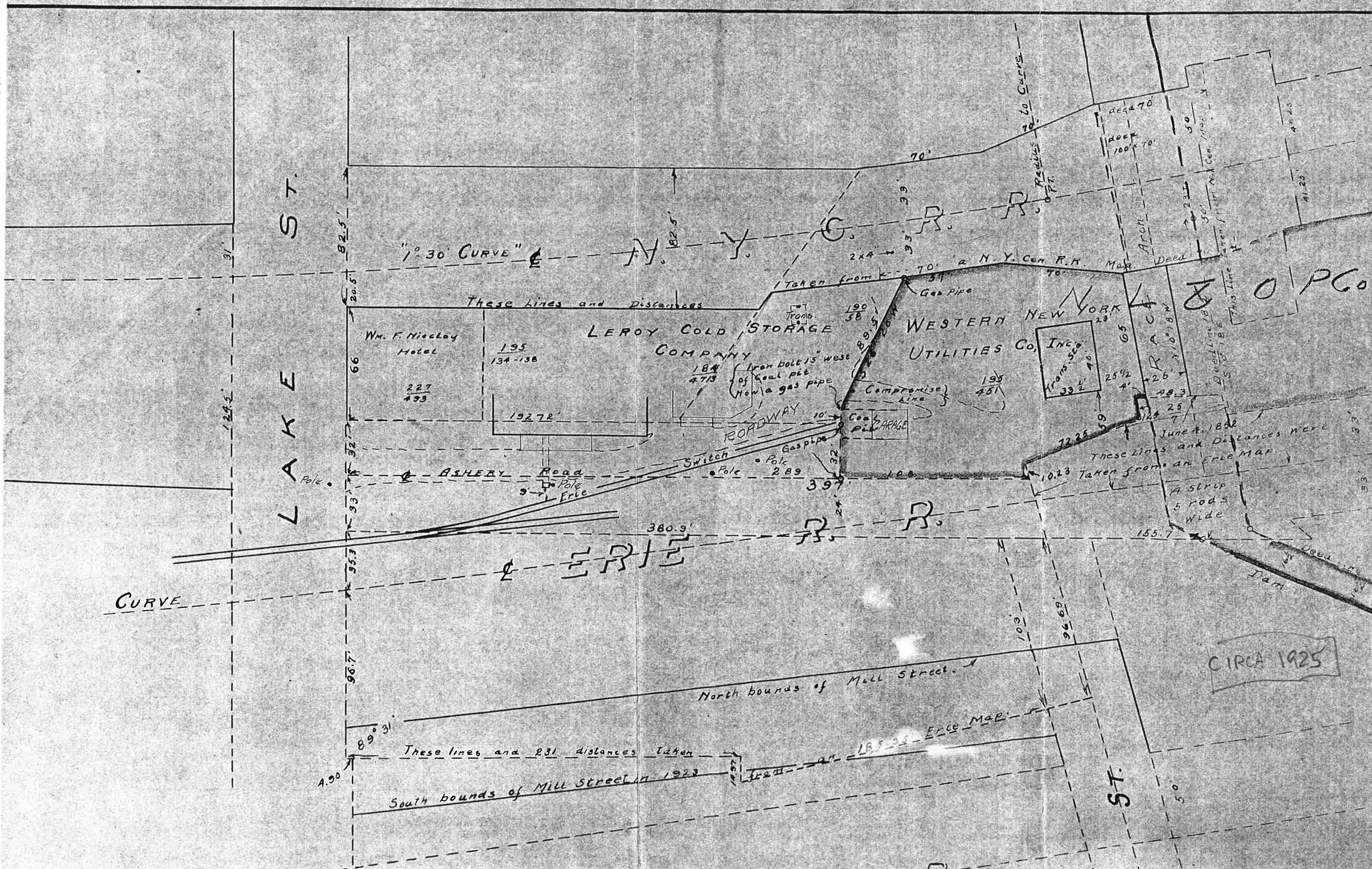
SPAN 110.9'

OATKA CREEK

COMPANY NIAGARA MOHAWK POWER CORP.	PARCEL NO. 561 - L - 13
COUNTY GENESEE TOWN LEROY	VILLAGE LEROY
GRANTOR ERIE RAILROAD COMPANY	DEED AREA 600 SQ. FT.
GRANTEE NIAGARA MOHAWK POWER CORP.	MEASURED AREA 0.014 AC.
SURVEY BY DATE	DRAWN BY R.H.R. DATE 2-11-54
PURPOSE LEROY SUBSTATION	APPROVED BY
REMARKS	DRAWING NO. 8-2845-W
	INDEX NO. 21 - G1.10

REV. 8-22-83 R.F.D.





LAKE ST.
"1°30' CURVE" ℄ N. Y. C. R. R.
Taken from a N. Y. Cen R.R. Map Deed
These Lines and Distances
LEROY COLD STORAGE COMPANY
Hotel
WESTERN NEW YORK UTILITIES Co. INC.
Gas Pipe
Compromise Line
Coal Pit
GARAGE
ROADWAY
Switch
℄ ASHERY Road
Pole
Erie
380.9'
℄ ERIE R. R.
CURVE
North bounds of Mill Street.
These lines and 231 distances taken from an Erie Map
South bounds of Mill Street in 1923
ST.
to Curve
Radius Pt.
Arch
June 4, 1862
These Lines and Distances were Taken from an Erie Map.
A Strip 5 rods wide
155.7
Dam
CIRCA 1925

ESTIMATE OF EXPENDITURE
FORM 970-39 R9-83D

Retirement
Major ORDER No. 2015

DESCRIPTION OF ITEMS (CLASSIFY BY ACCOUNT AND RETIREMENT UNITS OF PROPERTY)	ESTIMATE			
	QUANTITY	MATERIAL & OTHER COSTS	COMPANY LABOR	TOTAL

INTERNAL CORRESPONDENCE
FORM 1134 R 82-60 56-01-013

NIAGARA MOHAWK

FROM Department of Land & Right of Way
Law Department - Buffalo
DISTRICT Buffalo

TO Concerned Parties
DATE March 23, 1983
FILE CODE

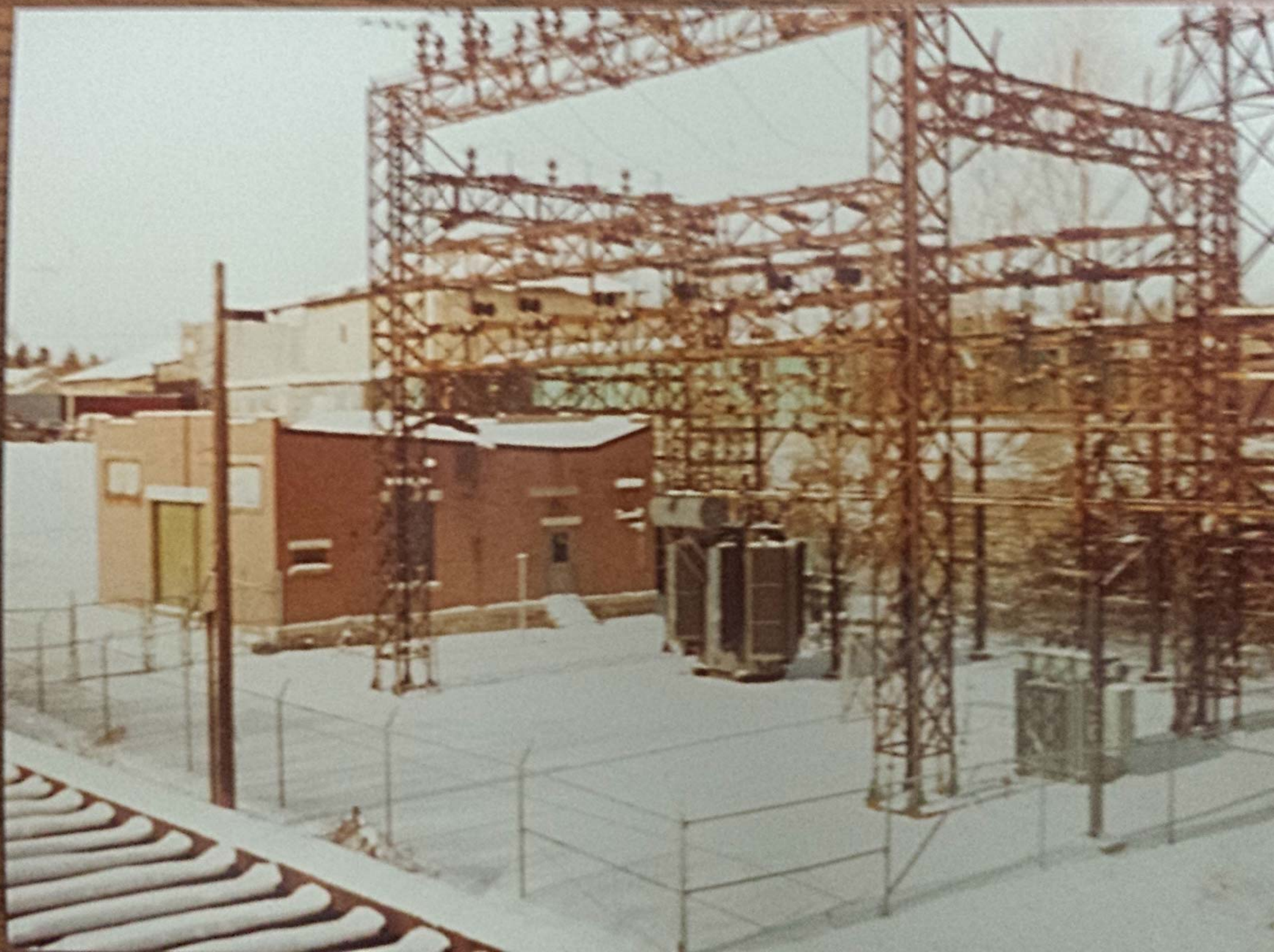
SUBJECT Retirement of Former Leroy Station #02

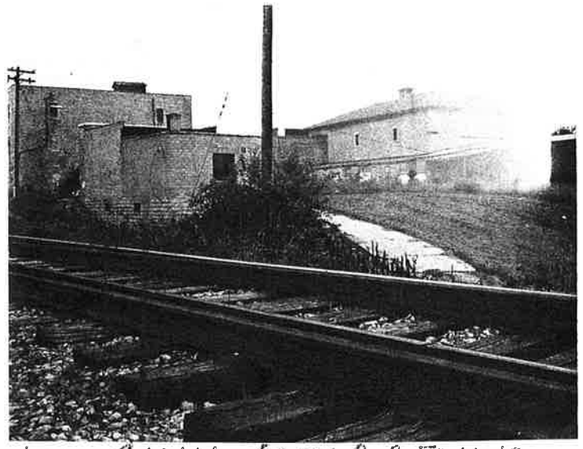
The Genesee Region Operating and Planning Department has determined that Leroy Substation #02 is no longer necessary for electric utility operations. The 4.8 KV distribution system in this area is being replaced by 13.2 KV distribution supplied from the North Leroy Substation.

Major retirement order No. 1714-50, dated October 14, 1982, authorizes demolition of the existing brick and concrete building, foundations and appurtenances, and preparation of site for resale. The estimated cost of demolition and site cleanup set forth on said order is $25,000. The Genesee Region Station Supervisor has received a written estimate of demolition totaling $10,850, which includes removal of existing fence and steel structure, demolition of building and removal of rubble from site and final grading and cleanup. A separate order calls for removal of two steel transmission towers located partly on the station site and partly on abutting railroad lands.

Most of the real estate that forms the present substation site, consisting of 0.513 of an acre of land, has been dedicated to utility operations since the turn of the century. The station site is located 300 feet away from the nearest public street and lies between two railroad rights of way. Access to the station site by utility vehicles over the past many years has been accomplished by driving over railroad lands and a portion of a parking area serving the premises next northerly to the railroad. No formal legal right of access by express grant has ever been conveyed to the utility, nor has any verbal or written license or permit been granted.

The present transaction is the product of a negotiation with one of the bidding demolition contractors who has a temporary business need for inside storage space and is willing to risk the absence of no legal right of access. The consideration for a transfer of title to the purchaser is a nominal $1,000 to cover the direct expense of transfer of title. The principal and obvious benefit to the utility is avoidance of the cost of demolition, bid in the sum of $10,850, which would result in a parcel of vacant land to be marketed (if access rights could be procured) for a very limited value. The parcel would most likely be useful only to the abutting owner. The purchaser will assume the additional expense of tower and steel structure removal.



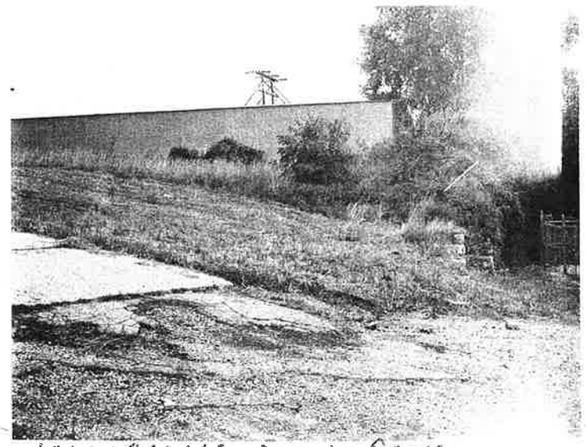


LEROY GARAGE - FROM R.R. TRACKS

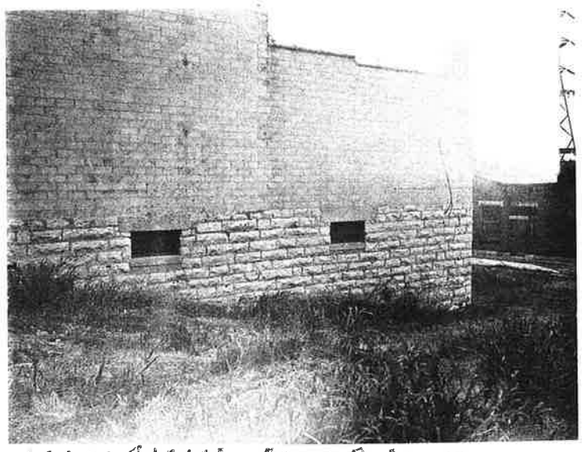
LEROY GARAGE - FROM STR.

LEROY GARAGE - EXIST. CONC. DRIVE

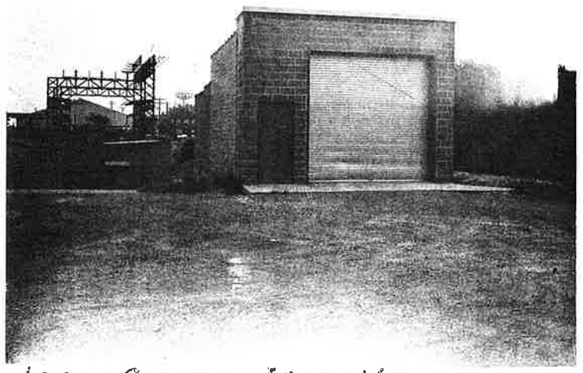
LEROY GARAGE - FROM R.R. TRACKS



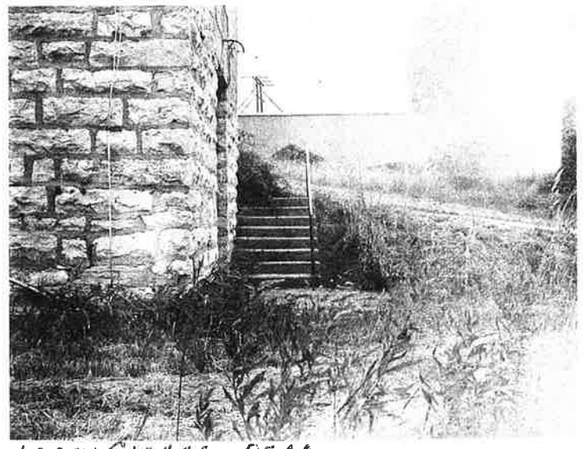
LEROY GARAGE - END OF DRIVE



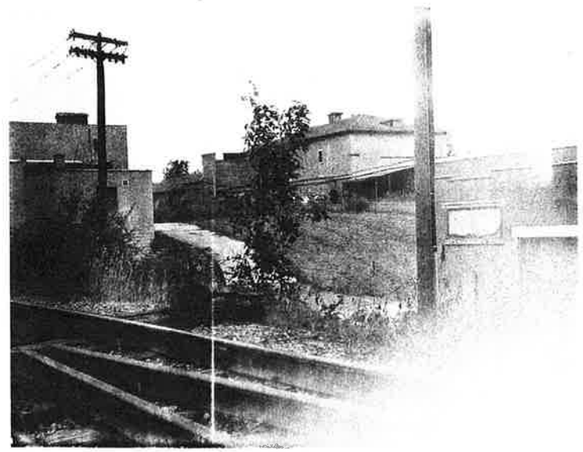
LEROY GARAGE - FROM R. FRONT



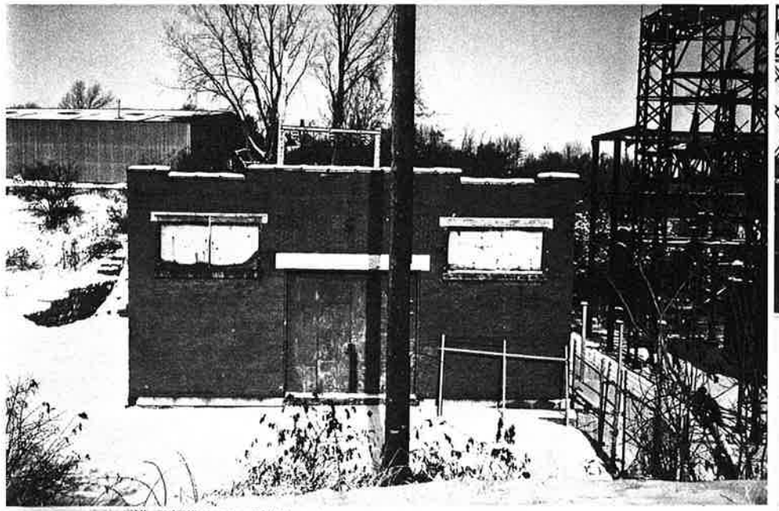
LEROY GARAGE - FRONT VIEW

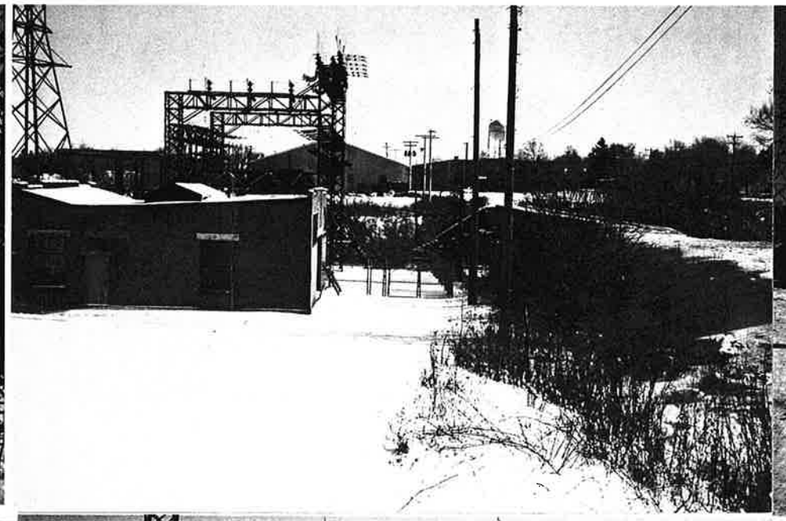


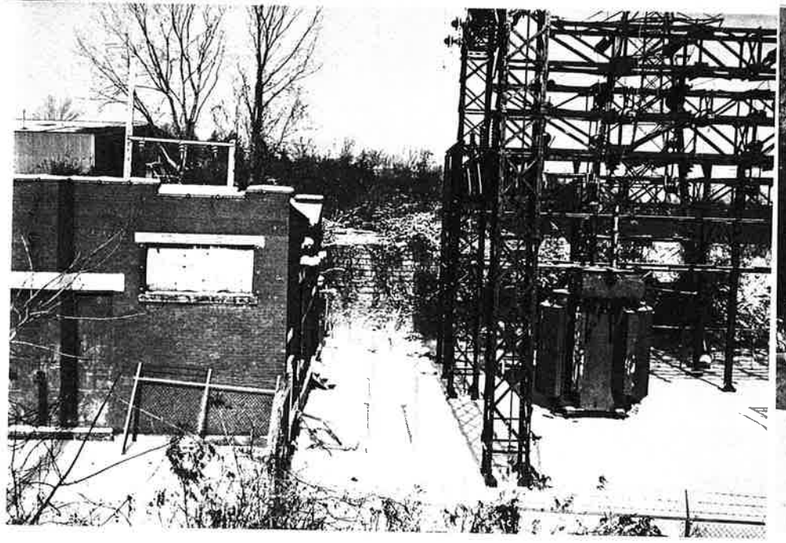
LEROY GARAGE - REAR

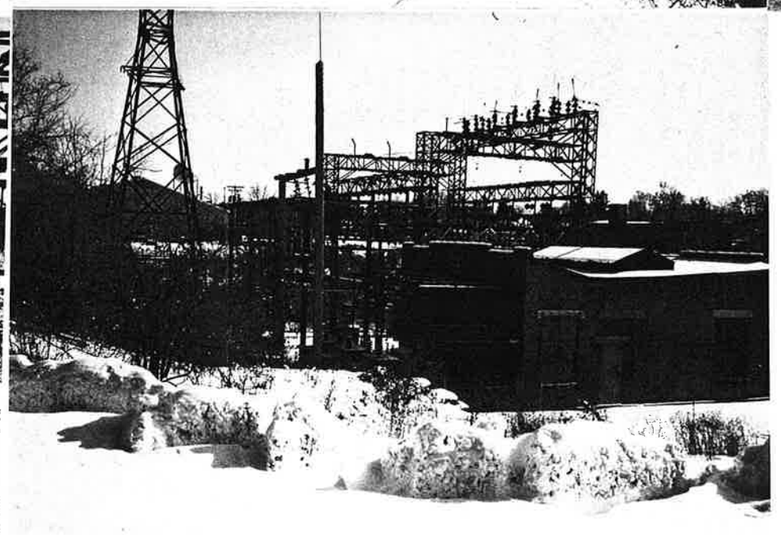


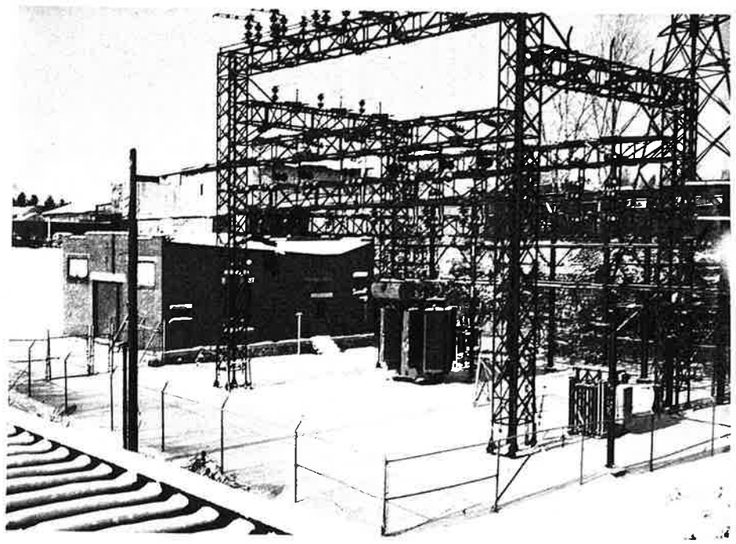
LEROY GARAGE











History Associates - Phase II Report - May 7, 2010

History Associates INC.
THE BEST COMPANY IN HISTORY®

300 N. Stonestreet Ave, Rockville, Maryland 20850
T 301.279.9697 F 301.279.9224
www.HistoryAssociates.com

Privileged and Confidential/
Work Product Protection

May 7, 2010

Ed Neuhauser
Principal Environmental Engineer
National Grid USA
300 Erie Boulevard West
Syracuse, NY 13202

Dear Ed:

History Associates Incorporated is pleased to submit the following Phase II report on our targeted historical research conducted on behalf of National Grid USA (National Grid) into sites potentially associated with manufactured gas production, storage, and other gas operations in select areas of Upstate New York. Below we summarize our research methodology and key findings.

SCOPE OF WORK

Building upon the background materials you provided and information from our Phase I effort, we performed targeted historical research into the location, extent, operational duration, and corporate associations of gas operations in the following New York communities: Albany, Batavia, Hoosick Falls, and Le Roy. For the Albany and Le Roy sites, you directed us to trace gas operations at two specific properties—the corner of Broadway and DeWitt Streets in Albany and the corner of Lake and Mill Streets in Le Roy. Batavia and Hoosick Falls required a comprehensive records review for references to the Consolidated Gas & Electric Company and the Fidelity Gas Company, with a focus on historical corporate connections and gas operations for each.

Additionally, you requested that History Associates collect all available Sanborn Fire Insurance Maps (Sanborn Maps) of Troy, Utica, and Waterford for the following sites: North Fourth Street and House Avenue and 405 and 407 River Street in Troy; Noyes and Mulberry Streets in Utica; and between Middle and South Streets in Waterford.

As discussed in our September 18, 2009, proposal, History Associates combined findings from Phase I with local records research in both the Albany and Batavia areas. In addition to repositories at local government offices and libraries, Albany afforded

access to the New York State Library and Archives, which allowed us to review New York Public Service Commission (NYPSC) records, historical newspapers, and other relevant documents. The Batavia area offered access to the Genesee County Historian's and Clerk's Offices, the Richmond Memorial and Woodward Memorial Libraries, and the Le Roy Historical Society, all of which contained relevant deeds, newspapers, maps, and local histories. Prior to undertaking travel to these locations, History Associates made targeted inquiries to identify potentially relevant documents at each repository.

Review of Local Records in Albany, Troy, and Hoosick Falls

History Associates began its research in the Albany area by traveling to the Rensselaer County Historical Society and Rensselaer County Clerk's office for cartographic and deed records. Using the deed index at the county clerk's office, we searched for references to the Fidelity Gas Company and any other gas or electric companies associated with Hoosick Falls. History Associates then reviewed the historical society's collections for local histories, directories, and maps that may have contained information on gas production. We also traveled to the Hoosick Township Historical Society in Hoosick Falls to review directories, maps, and local histories.

The next phase of the Albany research involved a review of local records housed at the Albany County Hall of Records. This repository contained deeds, maps, and tax assessments related to the DeWitt Street property. To reinforce this effort, we traveled to the Albany Public Library and reviewed the *Pruyn Local History Collection* for local histories.

Finally, we concluded our Albany efforts with a review of Public Service Commission records and historical newspapers at the New York State Library and Archives. Corporate returns to the Public Service Commission revealed annual operations and property holdings for gas companies beginning in 1906, while the New York State Library's collection of historical newspapers included issues from Hoosick Falls, Albany, and Batavia.

Review of Local Records in Batavia and Le Roy

After our research at the New York State Library and Archives, History Associates traveled to Batavia and Le Roy to conduct local records review. The Genesee County Clerk's office housed deeds and articles of incorporation for gas companies in both Batavia and Le Roy, while the Genesee County Historian's office contained subject files, photographs, and cartographic records of utilities in the two towns. History Associates then reviewed the Richmond Memorial Library's well-indexed collection of the Batavia Daily News and available local histories for references to gas operations in both Le Roy and Batavia. Finally, we traveled to the Woodward Memorial Library, which maintained a microfilm collection of the *Le Roy Gazette*, and to the Le Roy Historical Society, which had several subject files relating to utilities in the town.

Sanborn Maps
As outlined in the proposal, History Associates traveled to the Library of Congress and collected Sanborn Fire Insurance Maps showing the following sites: North Fourth and House Avenue in Troy subsequent to 1885; 405 and 407 River Street in Troy subsequent to 1887; Noyes and Mulberry Streets in Utica subsequent to 1868; and Middle and South Streets in Waterford subsequent to 1860.

PHASE II KEY RESEARCH FINDINGS

For ease of transmittal and use, History Associates has digitized all documents contained in the deliverable, which is available via FTP site. The site can be accessed by following the instructions attached in a separate document entitled "HAI FTP Site Guide". The username for the site is "Upstate" and the password is "MGPS" (please note that username and password are case-sensitive). If needed, we can also send you a CD containing the documents as well. The documents are organized first into folders according to locality, and then by their respective repository where we found them. The exceptions are the Public Service Commission Annual Abstracts of Reports of Corporations, which often contain information on multiple sites and are therefore organized into their own folder entitled "New York State Library – PSC Abstracts of Reports of Corporations." Citations appear as "Locality folder: Repository folder: Title of document." Documents are named according to the following scheme:

- Newspapers: Date of issue (year, month, day), name of newspaper, name or description of article.
- Maps: Date, author or publisher.
- Deeds: Date, Deed of Sale from [grantor] to [grantee].
- Public Service Commission Reports: Name of company, date of report.
- Local Histories: Date published, author, title, pages.
- Sanborn Maps: City, year, volume, sheet.
- All other documents: Date, brief description.

We have also maintained paper copies of all documents, which we will gladly supply to you if necessary.

Below are summaries focused on the guidelines for each site set out in our Phase II proposal. Albany focused on the corporate connections of the Albany Gas Light Company and its site on DeWitt Street, which appeared as a gas works in an 1857 map. Le Roy involved researching the corporate associations of the area around Lake and Mill Streets, which housed the Le Roy Gas and Electric Company in 1876. In Batavia we focused on learning more about the gas operations and corporate connections of the Consolidated Gas and Electric Company. Gas operations and corporate associations were also the focus of research on the Fidelity Gas Company of Hoosick Falls. Finally, we summarized our analysis of Sanborn maps for the Troy, Utica, and Waterford sites.

ALBANY

History Associates conducted research on historical gas operations in the vicinity of DeWitt Street in Albany. Albany's first gas utility company, Albany Gas Light,

incorporated on March 29, 1823.[1] This company foundered, however, and gas operations did not begin in earnest until March 27, 1841, when Thomas W. Olcott, James Stevenson, Henry L. Webb, and Joel Rathbone incorporated another company also called Albany Gas Light.[2] Gas from the Albany Gas Light Company's works on Arch and Grand Streets, which furnished 50,000 cubic feet (cu. ft.) of gas per day, first lit the streets of Albany in 1845.[3]

On May 1, 1848, the Albany Gas Light Company acquired "land situated lying and being on the southerly side of DeWitt Street" for the sum of $2,750.[4] An 1857 atlas from our Phase I research denoted this site as a "gas works" with a gas holder. In 1871, the Albany tax assessor listed a "gasometer" owned by the "Gas Co." at 32 DeWitt Street with a street frontage of 100 feet.[5] By 1872, Albany Gas Light Company was competing with a new rival, the People's Gaslight Company, and the companies divided the city in two—Albany Gas Light's territory consisted of everything south of Steuban Street, while the People's Gaslight Company serviced customers north of that thoroughfare.[6] As part of this agreement, the Albany Gas Light Company transferred "the Gas meter boiler and all other machinery and implements and fixtures" on DeWitt Street to the People's Gaslight Company on August 1, 1873.[7]

The People's Gaslight Company continued gas operations on the DeWitt Street property and maintained a "gasometer office" there in 1875.[8] The company ran into financial trouble due to its investment in a {ask Matthew} massive gas works near North Albany on the Troy Road that was "much larger than [were] required for the share of the business which fell to the lot of the new company."[9] As a result, the People's Gaslight Company went into foreclosure, was purchased by its mortgagees, and was re-formed as the People's Gas Company in October 1879.[10]

In 1885 the Municipal Gas Company of Albany incorporated, purchased the Albany Gas Light Company, and received the franchise of the People's Gas Company.[11] The property that Municipal Gas Company acquired in 1886 included "all that certain piece or parcel

[1] Albany: New York State Library: 1823 Laws of the State of New York, p. 89-90.
[2] Albany: New York State Library: 1841 Laws of the State of New York, p. 45.
[3] Albany: Albany Public Library: 1886 Howell & Tenney - History of the County of Albany From 1609 to 1886, p. 515-516.
[4] Albany: Albany County Hall of Records: 1848 Deed of Sale from John Van Ness Jr. to Albany Gas Light Company. For a view of the gas holder on DeWitt St., please see Albany: Library of Congress: 1868 C. W. Weeks – Albany.
[5] Albany: Albany County Hall of Records: 1871 City of Albany Eighth Ward Tax Assessment.
[6] Albany: Albany Public Library: 1881 Phelps – The Albany Hand-book, p. 56-57.
[7] Albany: Albany County Hall of Records: 1873 Deed of Sale from Albany Gas Light Company to Peoples Gas Light Company. The "gas meter boiler" is taken verbatim from the source.
[8] Albany: Albany County Hall of Records: 1875 City of Albany Eighth Ward Tax Assessment. Please see "Albany: Albany County Hall of Records: 1876 Busch Atlas Albany" for a visual depiction of the site in 1876.
[9] Albany: Albany Public Library: 1881 Phelps – The Albany Hand-book, p. 57.
[10] Albany: Albany Public Library: 1881 Phelps – The Albany Hand-book, p. 57.
[11] Albany: New York State Archives: Municipal Gas Co. (Jan-June) 1907; New York State Library - PSC Abstracts of Reports of Corporations: 1914 Eighth Annual Report of the Public Service Commission – Abstracts of Reports of Corporations (historical), p. 23.

of land on the south side of DeWitt Street in the City of Albany together with the buildings, machinery and gas meters thereupon," which was the same property formerly owned by Albany Gas Light and later People's Gas Company.[12] The Municipal Gas Company continued to use this site until 1907 but did not install any production equipment such as purifiers or condensers.[13]

By 1891 electricity was the sole source of street lighting in Albany, and in 1894 the Municipal Gas Company acquired all the property of Albany's two electric companies.[14] Construction of a new 2,000,000 cu. ft. gas holder at the company's main Broadway Street production plant in 1907 caused the company to abandon its DeWitt Street gas holder, which only had a capacity of 200,000 cu. ft.[15] Sanborn maps from 1908 denote the gas holder as "not used," though still under Municipal Gas Company ownership.[16] In 1918 the Municipal Gas Company and its gas holder were no longer listed in the city tax assessment of DeWitt Street, and by 1934 the holder was dismantled and the property had converted to a construction company.[17] The holder's most active period was between 1848 and 1907, after which major gas-related operations at the site ceased.

LE ROY

Although Le Roy is a small village, the history of its gas production is somewhat convoluted. In July 1860 the Le Roy Gas Light Company incorporated with $25,000 capital and began furnishing gas to the town.[18] The company only lit twelve street lamps at first, but this number later grew to 48 in 1885 and 122 in 1890, when it also added an electric light plant.[19] An 1876 atlas of Le Roy shows gas works occupying land at the corner of Lake and Mill Streets near the railroad tracks and river.[20] The site remained small and consisted of only a "gas holder" and "gas house" in 1885, when it was physically connected to the Horace Peck Tannery (the tannery appeared to be "salting hides only").[21] Between 1892 and 1897 the Le Roy Gas Light Company, owned by Charles F. Bissell, operated and expanded the works to include dynamos, retorts, and a coal shed.[22] The Le Roy Hydraulic Electric Company incorporated on April 1, 1895, but

[12] Albany: Albany County Hall of Records: 1886 Deed of Sale from Brady Family to Municipal Gas Company.
[13] Albany: Sanborns: Albany++1892,+Sheet+17; Albany: Albany County Hall of Records: 1900 City of Albany Tax Assessment.
[14] Albany: Albany Public Library: 1891 Albany Illustrated - Commerce, Trade and Industries, p. 96; Albany: New York State Archives: Municipal Gas Co. (Jan-June) 1907.
[15] Albany: New York State Archives: Municipal Gas Co. (Jan-June) 1907, p. 49; Albany: New York State Archives: Municipal Gas Co. 1907, p. 45.
[16] Albany: Library of Congress: Albany++1908-1909+vol.+1,+1908,+Sheet+15.
[17] Albany: Albany County Hall of Records: 1918 City of Albany Ninth Ward Tax Assessment; Albany: Sanborns: Albany++1934-1935+vol.+1,+1934,+Sheet+29.
[18] Le Roy: Le Roy Historical Society: 1976 07 02 Le Roy Produced All Kinds of Things; Le Roy: New York State Library: 1890 F.W. Beers - Gazetteer and Biographical Record of Genesee County, p. 500. The Le Roy Gas Light Company also appears in the sources as the Le Roy Gas and Electric Company, and the two seem to be the same company.
[19] Le Roy: New York State Library: 1890 F.W. Beers - Gazetteer and Biographical Record of Genesee County, p. 500.
[20] Le Roy: Library of Congress: 1876 Everts, Ensign and Everts - Genesee County.
[21] Le Roy: Sanborns: Le+Roy+Nov.+1885,+Sheet+2.
[22] Le Roy: Genesee County Historian: 1892 Burleigh Lithography Company Le Roy Map; Le Roy:

does not appear to have begun operations until later.[23]

Controversy erupted in 1897 when the village, unhappy with current lighting service and desirous of its own electric plant, initiated condemnation proceedings against the Le Roy Gas and Electric Light Company. Realizing that a municipality with its own water works could also own an electric plant, the village Board of Trustees held a special election on March 30 in which Le Roy taxpayers voted in favor of the village pursuing ownership of an electric plant.[24] However, due to a misunderstanding of the law, the village was obligated to purchase the gas plant in addition to the electric plant.[25]

Condemnation proceedings continued, and examiners assessed the property's gas plants and two electric plants in June 1897.[26] Valued at $33,769, the gas plant consisted of a "brick building, engine, and boiler, with the appliances used in the manufacture of gas, such as purifiers, condensers, etc., 148 gas meters, 2 brass barrel drip pumps, 1 air bell pump, 32,330 feet of gas mains," and a half-acre of land.[27] On November 18, 1897, the village officially took control of the gas plant and operated it for about three months.[28] After taking possession, the village performed maintenance on the gas plant, which included cleaning the retorts, building a new lime house, repairing the coal shed, putting in new "crates" for purifiers, repairing and cleaning water gas generators, and putting in two radiators.[29]

In March 1898, the Supreme Court of Genesee County invalidated the Le Roy special election held to acquire the electric light plant and struck down the condemnation action.[30] A new Le Roy Gas and Electric Company incorporated on September 18, 1899, for the purpose of "manufacturing and supplying gas for lighting the streets and public and private buildings of the Village of Le Roy."[31] This company operated precariously until 1902 when it foreclosed on its mortgage.

Sanborns: Le+Roy+Jan.+1892,+Sheet+2; Le Roy: Sanborns: Le+Roy+Feb+1897+Sheet+2; Le Roy: Richmond Memorial Library: 1899 North - Our County and Its People...A Description and Biographical Record of Genesee County, p. 249.

[23] Le Roy: Genesee County Clerk: 1895 08 06 Certificate of Incorporation for Le Roy Hydraulic Electric Company.

[24] Le Roy: New York State Library: 1897 03 12 Batavia Daily News - Light Plant in Le Roy; Le Roy: New York State Library: 1897 03 31 Batavia Daily News - Le Roy Gets in Line.

[25] Le Roy: Woodward Memorial Library: 1897 03 31 Le Roy Gazette - Did We Buy Gas Plant Too.

[26] Le Roy: Woodward Memorial Library: 1897 06 30 Le Roy Gazette - For Municipal Lighting.

[27] Le Roy: Woodward Memorial Library: 1897 06 30 Le Roy Gazette - For Municipal Lighting.

[28] Le Roy: New York State Library: 1898 The Miscellaneous Reports - Cases Decided in the Courts of Record of the State of New York, p. 54.

[29] Le Roy: Woodward Memorial Library: 1898 03 16 Le Roy Gazette - Water and Light Report. The term "crates" is used to describe the purifiers in the source.

[30] Le Roy: New York State Library: 1898 The Miscellaneous Reports - Cases Decided in the Courts of Record of the State of New York, p. 54-59; Le Roy: New York State Library: 1900 Reports of Cases Heard and Determined in the Appellate Division of the Supreme Court of the State of New York, p. 177-181. The condemnation was overturned because of a problem with the vote and ballot, unrelated to activities at the gas plant.

[31] Le Roy: Genesee County Clerk: 1899 09 18 Certificate of Incorporation for Le Roy Gas and Electric Company.

D. C. Howard Prentice, treasurer of the Le Roy Hydraulic Electric Company, acquired the property through the foreclosure proceedings on October 18, 1902.[32] By this time, hydroelectric power supplied lighting to the city, so gas was relegated to heating and cooking uses.[33] Prentice planned to install new retorts and a storehouse to enhance the quality of gas.[34] In May 1903 the plant consisted of a gasometer, a purifier house, a gas house, retorts, and a coal shed.[35] Le Roy Hydraulic Electric Gas Company (which added "gas" to its name) began furnishing gas to Le Roy on January 25, 1904, and Prentice formally transferred the deed to Le Roy Hydraulic Electric Gas Company on May 31 of that year.[36] From 1905 to 1906 the company's plant, which produced coal gas and had four retorts, consumed 345 tons of gas coal, 34 ¾ tons of boiler fuel, and 240 tons of lime.[37] The company had generated a total of 48 tons of coke and 6,517 gallons of coal tar by June 1906 but sold 5,317 gallons of its coal tar and all but one ton of its coke.[38] In 1907 the gas plant had a capacity of between 14,000 and 15,000 cu. ft. per day.[39] On March 1, 1907, the Le Roy Hydraulic Electric Gas Company had 750 tons of coke and 800 gallons of coal tar on hand.[40]

Tapping into natural gas sources in Western New York and Pennsylvania, the Pavilion Natural Gas Company organized on November 15, 1905, and began competing with the Le Roy Hydraulic Electric Gas Company.[41] The Village Board of Trustees granted the Pavilion Natural Gas Company a franchise on July 3, 1907, and the company began constructing gas pipes from its base in Pavilion, New York into Le Roy, which it completed on January 16, 1907.[42] Le Roy Hydraulic Electric Gas Company shut down its gas plant on September 15, 1908, and the plant appeared on a 1910 Sanborn map as "not in operation."[43] By 1919 the Gleason Cold Storage Company occupied the former gas works site at the corner of Lake and Mill Streets.[44] According to the obituary of

[32] Le Roy: Genesee County Clerk: 1902 10 18 Deed of Sale from Le Roy Gas and Electric Company to D. C. Howard Prentice.
[33] Le Roy: Woodward Memorial Library: 1902 10 22 Le Roy Gazette - Important Transaction.
[34] Le Roy: Woodward Memorial Library: 1902 10 22 Le Roy Gazette - Important Transaction.
[35] Le Roy: Sanborns: Le+Roy+May+1903,+Sheet+2. Please see "Le Roy: Genesee County Historian: 1904 New Century Atlas Genesee County" for another depiction of the site during this period.
[36] Le Roy: New York State Archives: Le Roy Hydraulic Electric Gas Co. (Jan-June 1906); Le Roy: Genesee County Clerk: 1904 05 31 Deed of Sale from D. C. Howard Prentice to Le Roy Hydraulic Electric Gas Company (2).
[37] Le Roy: New York State Archives: Le Roy Hydraulic Electric Gas Co. (Jan-June 1906), p. 21-22.
[38] Le Roy: New York State Archives: Le Roy Hydraulic Electric Gas Co. (Jan-June 1906), p. 21-22.
[39] Le Roy: New York State Archives: Le Roy Hydraulic Electric Gas Co. (Jan-June 1907), p. 21-22.
[40] Le Roy: New York State Archives: Le Roy Hydraulic Electric Gas Co. (Jan-June 1907), p. 22.
[41] Le Roy: Genesee County Clerk: 1905 11 15 Certificate of Incorporation for Pavilion Natural Gas Company.
[42] Le Roy: Woodward Memorial Library: 1906 07 04 Le Roy Gazette - Trustees Grant Franchise; Le Roy: Le Roy Historical Society: 1907 01 16 Le Roy Gazette - Natural Gas Company's Deal. The Pavilion Natural Gas Company struggled to supply enough natural gas to its customers throughout the late 1910s and into the 1930s and became the subject of several public complaints. Eventually, the company decided to construct a manufactured gas plant in Pavilion, New York to supplement its natural supply.
[43] Le Roy: New York State Archives: Le Roy Hydraulic Electric Gas Co. 1909, p. 23; Le Roy: Sanborns: Le+Roy+Aug.+1910,+Sheet+5. The company recorded no gas production on its annual returns to the Public Service Commission after 1908.
[44] Le Roy: Le Roy Historical Society: 1919 Worthington & Wood Le Roy Map.

C. F. Prentice, who served as president of Le Roy Hydraulic Electric Gas for most of its existence, the company ceased manufacturing gas after the advent of natural gas in Le Roy in 1907.[45] Le Roy Hydraulic Electric Gas Company merged with the Genesee Light and Power Company on April 23, 1923, and eventually morphed into Western New York Utilities Company.[46]

BATAVIA

The Batavia Gas Light Company formed in June 1855 with capital of $32,500 and furnished gas by November of that year.[47] Initially, the company constructed a plant with a 13,500 cu. ft. gas holder on Ellicott Street, but this holder was replaced with a 35,000 cu. ft. gas holder in 1878.[48] In 1884 the plant at the corner of Evans and Ellicott Street consisted of a gas holder, a coal shed, a lime house, a purifying house, a retort house, and a circular building under construction labeled as "to be used for petroleum gas works."[49] In 1885 the company constructed an electric light plant and in August 1888 it furnished light to 57 electric lamps.[50] In January 1890 the Batavia Gas Light Company plant on Evans Street consisted of a gasometer, a circular building labeled as a "gas works," a tar house, a lime house, a meter room, an underground oil tank, a Brush electric engine, and a purifier house.[51]

The Consumer's Electric Company formed in April 1889 to compete with the Batavia Gas Light Company.[52] This new company met with success and purchased the stock of the old gas company in February 1890 for $45,820.[53] After completing the merger, the companies formed a new firm called the Consolidated Gas and Electric Company of Batavia on March 13, 1890, with a total capital stock of $100,000.[54] Batavia citizens complained in 1891 of poor service from the new utility company.[55] Service continued to be poor and in September 1892 the Town Aldermen considered purchasing the Consolidated Gas and Electric Company plant for town use.[56]

---

[45] Le Roy: Le Roy Historical Society: 1917 05 23 Funeral of C. F. Prentice.

[46] New York State Library – PSC Abstracts of Reports to the Commission: 1923 Third Annual Report of the Public Service Commission - Abstracts of Reports of Corporations Vol. 2.

[47] Batavia: New York State Library: 1855 06 16 Batavia Daily News - Gas Company Organized; Batavia: New York State Library: 1890 F. W. Beers – Gazetteer and Biographical Record of Genesee County, p. 252; Batavia: New York State Library: 1855 12 15 Batavia Daily News - Give Us Light.

[48] New York State Library: 1890 F. W. Beers – Gazetteer and Biographical Record of Genesee County, p. 252-253.

[49] Batavia: Sanborns: Batavia+Oct.+1884,+Sheet+4.

[50] Batavia: Richmond Memorial Library: 1899 North - Our County and Its People...A Description and Biographical Record of Genesee County, p. 298; Batavia: Richmond Memorial Library: 1888 07 13 Batavia Daily News - Cost of Electric Lights; Batavia: Richmond Memorial Library: 1888 08 09 Batavia Daily News - Lights to Cost Just $5,000.

[51] Batavia: Sanborns: Batavia+Jan.+1890,+Sheet+2.

[52] Batavia: Richmond Memorial Library: 1889 04 24 Batavia Daily News - Being Organized Today.

[53] Batavia: Genesee County Historian: 1889-1890 Batavia Gas & Electric Co. Newspaper Clippings.

[54] Batavia: Genesee County Clerk: 1890 03 13 Articles of Incorporation Consolidated Gas and Electric Company; Batavia: Richmond Memorial Library: 1890 02 14 Batavia Daily News - Consummated the Sale.

[55] Batavia: Richmond Memorial Library: 1891 01 29 Batavia Daily News - More Light Demanded.

[56] Batavia: Richmond Memorial Library: 1892 09 17 Batavia Daily News - About Buying a Plant.

The question was put to a townwide vote on December 1, 1892, but Batavia voters decided against municipal ownership.[57]

By 1901 the Consolidated Gas and Electric Company plant on Evans Street consisted of a gasometer, a coke house, a tar house, a circular gas works that was "not used," a coal shed, a lime house, a Brush electric engine, an underground oil tank, and retorts.[58] In June 1902 the company planned major improvements to its plant, which included an electric plant "upwards of 600 horse power" and coke ovens that would "yield the highest grade of anthracite coke."[59] On January 8, 1904, a fire erupted in the generator house, which was "round and fifty feet in diameter," causing the interior of the building to be "badly gutted" and the floor damaged "beyond repair."[60] This fire did not significantly interrupt the manufacture of gas, however. In April 1904 the Consolidated Gas and Electric Company sought permission to shut down its plant due to low profits, and the Rochester Trust & Safe Deposit Company sold the plant under foreclosure to Seth W. Warren on August 29, 1904.[61]

Seth W. Warren formed the Batavia Light & Power Company to operate the plant on Ellicott and Evans Streets on January 11, 1905, and the deed formally transferred to that company on February 15, 1905.[62] Another concern, the Genesee Electric Light, Power and Gas Company, purchased the "powerhouse for the old Consolidated Gas & Electric Company" on December 11, 1906, for use as "a sub-station and offices."[63] Batavia acquired its own municipal electric plant in 1895, but the Batavia Light & Power Company still operated the Lowe Process water gas plant along with the 35,000 cu. ft. gas holder during 1906.[64] A 1907 company report noted that Batavia Light & Power was "not a consolidated company" but its plant "was owned before foreclosure by the Consolidated Gas & Electric Company of Batavia."[65] In 1907 the company also had a 167 kilowatt electrical generator.[66]

The Batavia Light & Power Company eventually dissolved in June 1908, as it was unable to compete with natural gas and the Genesee Electric Light, Power and Gas Company.[67]

---

[57] Batavia: Richmond Memorial Library: 1892 11 18 Batavia Daily News - In Taxpayer's Hands; Batavia: Richmond Memorial Library: 1892 12 02 Batavia Daily News - No Electric Light Plant.
[58] Batavia: Sanborns: Batavia+Sept.+1901,+Sheet+9.
[59] Batavia: Richmond Memorial Library: 1902 06 23 Batavia Daily News - Plans for Electric Plant.
[60] Batavia: Richmond Memorial Library: 1904 01 08 Batavia Daily News - Early Morning Fire at Batavia Gas House.
[61] Batavia: Richmond Memorial Library: 1904 04 01 Batavia Daily News - To Shut Down Gas Plant; Batavia: Richmond Memorial Library: 1904 08 29 Batavia Daily News - Consolidated Plant Sold Under Hammer.
[62] Batavia: Richmond Memorial Library: 1905 01 12 Batavia Daily News - New Electric Company Under Way.
[63] Batavia: Richmond Memorial Library: 1906 12 11 Batavia Daily News - Powerhouse Purchased.
[64] Batavia: Genesee County Historian: Batavia Board of Trade - Batavia - Its Manufacturing, Educational and Residential Advantages; Batavia: New York State Archives: Batavia Light and Power Co. 1906.
[65] Batavia: New York State Archives: Batavia Light and Power Co. 1907.
[66] Batavia: New York State Archives: Batavia Light and Power Co. 1907.
[67] Batavia: Richmond Memorial Library: 1908 06 18 Batavia Daily News - Voluntary Dissolution; 1908 06

On July 15 the *Batavia Daily News* announced that the old gas company's plant and equipment was to be sold as junk.[68] By 1912, the two former gas holders on the gas plant property had been converted to "general storage" and "barrel storage" for the Roberts Brothers' Flour Mill.[69] Maps from 1931 and 1948 show these structures being used as automobile and miscellaneous storage.[70]

HOOSICK FALLS

The Hoosick Falls Gas Light Company incorporated in July 1872 and received an exclusive franchise from the Village of Hoosick Falls in 1873.[71] The Wood Mowing and Reaping Company granted Hoosick Falls Gas Light the right to "take the requisite amount of water [from the Hoosick River] to manufacture gas at the works" of the company, which were located adjacent to the Hoosick River on Classic Street.[72] In 1876 the works occupied land on the bank of the river near the Iron Bridge Falls.[73] However, in 1879 the Hoosick Falls Gas Light Company sold its property to the Boston-Hoosac Tunnel Railway Co. and moved to a new site north of Nixon Street on the banks of the river.[74] This new site consisted of two circular "receivers," a coal shed, retorts, and a refining house between 1884 and 1897.[75] In 1888 the Hoosick Falls Water Power and Light Company incorporated and supplied hydroelectric power to the village until at least 1899. This company's plant occupied land one mile below the village on the bank of the river.[76]

In 1900 the Hoosick Falls Gas Light Company merged with the Fidelity Gas Company (Fidelity), which took over the works near Nixon Street.[77] Fidelity did not construct any buildings at the works between 1900 and 1910.[78] In 1906 the Fidelity plant had eleven retorts, three benches, and a daily capacity of 100,000 cu. ft.[79] It used 694 tons of gas

---

25 Batavia Daily News - Gas Company's Affairs. A potential reason for the company's demise was the advent of natural gas in Batavia supplied by the Alden-Batavia Natural Gas Company, which incorporated on October 11, 1901. This company, which is a corporate predecessor of National Fuel Gas Company, operated a gas holder on Genesee Street, but did not operate on the Evans and Ellicott Street property.

[68] Batavia: Richmond Memorial Library: 1908 07 15 Batavia Daily News - Old Gas Plant Stuff to Be Sold for Junk.

[69] Batavia: Sanborns: Batavia+Apr.+1912+Sheet+15.

[70] Batavia: Sanborns: Batavia+Mar.+1931,+Sheet+9; Batavia: Sanborns: Batavia+Mar.+1931-Oct.+1948,+Sheet+9.

[71] Hoosick Falls: Hoosick Falls Historical Society: 1883 Hoosick Directory; Hoosick Falls: New York State Archives: Fidelity Gas Co. 1906.

[72] Hoosick Falls: Rensselaer County Clerk: 1872 06 26 Deed of Sale from Wood Mowing and Reaping Co. to Hoosick Falls Gas Light Co.

[73] Hoosick Falls: Library of Congress: 1876 Beers - Rensselaer County.

[74] Hoosick Falls: Rensselaer County Clerk: 1879 09 01 Deed of Sale from Hoosick Falls Gas Light Co. to Boston-Hoosac Tunnel; Hoosick Falls: Rensselaer County Clerk: 1879 09 02 Deed of Sale from Gleason Family to Hoosick Falls Gas Light Co.

[75] Hoosick Falls: Sanborns: Hoosick+Falls+June+1884,+Sheet+4; Hoosick Falls: Sanborns: Hoosick+Falls+Oct.+1891,+Sheet+4; Hoosick Falls: Sanborns: Hoosick+Falls+Aug.+1897,+Sheet+2.

[76] Hoosick Falls: New York State Library: 1899 07 12 Hoosick Falls Democrat - Hoosick falls Water Power and Light Company.

[77] Hoosick Falls: New York State Archives: Fidelity Gas Co. 1906.

[78] Hoosick Falls: Sanborns: Hoosick+Falls+Sept.+1904,+Sheet+2; Hoosick Falls: Sanborns: Hoosick+Falls+Dec.+1910,+Sheet+2.

[79] Hoosick Falls: New York State Archives: Fidelity Gas Co. 1906.

coals and 400 bushels of iron oxide to produce 7,438,600 cu. ft. of coal gas, 462 tons of coke, and 6,000 gallons of tar that year.[80] The plant's two gasometers held 10,000 cu. ft. and 20,000 cu. ft. of gas, respectively.[81] In 1913, Fidelity's last full year of operation, the gas plant consisted of three recently installed Gautier benches, one exhauster, one condenser, one scrubber, three purifiers, and two holders, with a daily capacity of 50,000 cu. ft.[82] The Twin State Gas and Electric Company began competing for Hoosick Falls' business in 1906 and merged with the Hoosick Falls Illuminating Company, which then operated an electric plant in the town.[83] Fidelity struggled financially and was unable to produce enough to supply the town.[84] By the end of 1915 the company had gone out of business.[85] Later Sanborn maps show that the gas plant had been completely dismantled by 1945.[86]

The following items rely mainly on cartographic records in the form of atlases and Sanborn maps. In addition to the Sanborn maps, we provided other maps in the deliverable file that may be of interest to you.

TROY

405 and 407 River Street: In 1885 this site appeared as "vacant."[87] Maps from 1903 label this site as the "Royal Theatre."[88] The site was a store in 1951 and 1955.[89]

North Fourth Street and House Avenue near Orrs Street: In 1885 this site was labeled as Citizen's Gas Light Works and appeared active.[90] However, in 1903 it was labeled as "ruins," and the map indicated only a foundation of a gas holder there.[91] By 1951 and 1955 Orrs Street had been extended through this site.[92]

UTICA

Noyes and Mulberry Streets: An 1883 map of Utica showed this site as "Utica Gas Light Company" with a gasometer.[93] The Sanborn Company, however, did not map this section of Utica in 1884 or 1888.[94] Another atlas from 1896 depicted the site as a gasometer, which was still there in 1899.[95] In 1925 and 1950-1951 the structure was

[80] Hoosick Falls: New York State Archives: Fidelity Gas Co. 1906. Please see reports from 1906-1914 for complete production figures during this period.
[81] Hoosick Falls: Sanborns: Hoosick+Falls+Dec.+1910,+Sheet+2.
[82] Hoosick Falls: New York State Archives: Fidelity Gas Co. 1913.
[83] Hoosick Falls: New York State Archives: Twin State Gas and Electric Company 1915.
[84] Hoosick Falls: New York State Library: 1915 05 08 Troy Record - Hoosick Falls.
[85] Hoosick Falls: New York State Library: 1915 05 08 Troy Record - Hoosick Falls.
[86] Hoosick Falls: Library of Congress: Hoosick+Falls+Dec.+1910-Aug.+1945,+Sheet+2.
[87] Troy: Sanborns: Troy+1885+vol.+2,+Sheet+27_b.
[88] Troy: Sanborns: Troy+1903-4+vol.+1,+1903,+Sheet+3.
[89] Troy: Sanborns: Troy+1903-Feb.+1951+vol.+1,+1903-Feb.+1951,+Sheet+3; Troy: Sanborns: Troy+1955+vol.+1,+Sheet+3.
[90] Troy: Sanborns: Troy+1885+vol.+2,+Sheet+36_a.
[91] Troy: Sanborns: Troy+1903-4+vol.+1,+1903,+Sheet+24.
[92] Troy Sanborns: Troy+1903-Feb.+1951+vol.+1,+1903-Feb.+1951,+Sheet+23; Troy: Sanborns: Troy+1955+vol.+1,+Sheet+23.
[93] Utica: Library of Congress: 1883 Hopkins – Utica.
[94] Utica: Sanborns: Utica+Apr.+1884,+Sheet+1; Utica: Sanborns: Utica+1888,+Sheet+1.
[95] Utica: Library of Congress: 1896 D. L. Miller – Utica; Utica: Library of Congress:

labeled as an automobile storage garage.[96]

WATERFORD

Between Middle and South Streets: In 1887 this site was labeled as "formerly occupied by gas works – vacant."[97] In the 1892 map this building was shown as a "machine shop," and in 1897 it was labeled as the "Bort building."[98] The building was not labeled in the 1902 map.[99] In the 1909 and 1914 maps this structure was labeled as "canoe storage."[100] By 1930 the building had been converted to general storage, and by 1945 it was in use as an automobile garage.[101]

We hope that the above research findings meet your needs. If there is any further research you require on these sites or any others, please do not hesitate to contact us. One possible avenue for further exploration might include tracking down the complete case file, assuming it survives, for the 1897 Village of Le Roy versus Le Roy Gas Light Company, which was found incomplete at the Genesee County Clerk's office. The Horace Peck Tannery, which appeared adjacent to the Le Roy gas plant in an 1885 Sanborn map, may warrant further investigation as well, since some tannery waste (e.g., chromium) may coincide with potential MGP waste. A final potential angle could be further researching the corporate successions and entities that we revealed for each site.

We would be happy to discuss these and other possible needs for further research with you at your convenience.

Sincerely,

Research Historian

Michael Reis
Vice President for Litigation Research

MM/nc

Utica+1899+Sheet+20.

[96] Utica: Sanborns: Utica+1925+vol.+2+and+3,+Sheet+220; Utica: Sanborns: Utica+1925-Feb.+1950+vol.+2+and+3,+1925-Feb.+1950,+Sheet+220; Utica+1925-1951 + Vol. 2 + Sheet 220.

[97] Waterford: Sanborns: Waterford+June+1887,+Sheet+2.

[98] Waterford: Sanborns: Waterford+July+1892,+Sheet+2; Waterford: Sanborns: Waterford+Sept.+1897,+Sheet+3.

[99] Waterford: Sanborns: Waterford+July+1902,+Sheet+3.

[100] Waterford: Sanborns: Waterford+Oct.+1909,+Sheet+2; Waterford: Sanborns: Waterford+May+1914,+Sheet+9.

[101] Waterford: Sanborns: Waterford+Sept.+1930,+Sheet+10; Waterford: Sanborns: Waterford+Sept.+1930-June+1945,+Sheet+10.

Documents and Photographs from National Grid

HARTGEN
archeological associates inc

PHASE IA ARCHEOLOGICAL INVESTIGATION

Former LeRoy National Grid Manufactured Gas Plant Site

78 ½ Lake Street
Village of LeRoy
Genesee County, New York

HAA # 5204-11
OPRHP 99PR99999

Submitted to:
GEI Consultants, Inc.
1301 Trumansburg Road, Suite N
Ithaca, New York 14850

Prepared by:
Hartgen Archeological Associates, Inc.

1744 Washington Avenue Ext.
Rensselaer, New York 12144
p +1 518 283 0534
f +1 518 283 6276
e hartgen@hartgen.com

www.hartgen.com

An ACRA Member Firm
www.acra-crm.org

January 2018

MANAGEMENT SUMMARY

SHPO Project Review Number: *n/a*
Involved State and Federal Agencies: *New York State Department of Environmental Conservation (DEC)*
Phase of Survey: *Phase IA*

LOCATION INFORMATION

Municipality: *Village of LeRoy*
County: *Genesee*

SURVEY AREA

Length: *90 ft*
Width: *50 ft*
Acres: *0.1 acre*

RESULTS OF RESEARCH

Archeological sites within one mile: *Fifteen*
Surveys in or adjacent: *One*
NR/NRE sites in or adjacent: *None*
Precontact Potential: *Low*
Historic Potential: *Moderate to High*

RECOMMENDATIONS

Archeological monitoring during soil remediation.

Report Authors: *Jennifer Geraghty and Andre Krievs*
Date of Report: *January 2018*

ABSTRACT

A Phase IA literature and archeological sensitivity assessment was completed for the LeRoy Manufactured Gas Plant (MGP) Site located in the Village of LeRoy, Genesee County, New York. The presence of buried structural remains indicates portions of the 19th century manufactured gas plant have survived 20th-century development. An archeological monitoring investigation is recommended for the soil remediation excavations to further document features related to the MGP site and the electric generating facility.

TABLE *of* CONTENTS

Map List

Photograph List

Table List

PHASE IA ARCHEOLOGICAL INVESTIGATION

1 Introduction

Hartgen Archeological Associates, Inc. (Hartgen) conducted a Phase IA archeological investigation for the proposed former LeRoy National Grid Manufactured Gas Plant Site remediation (Project) located in the Village of LeRoy, Genesee County, New York (Map 1). The Project requires approvals by the New York State Department of Environmental Conservation (DEC).

This investigation was conducted to comply with Section 14.09 of the State Historic Preservation Act and will be reviewed by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP). The investigation was conducted according to the New York Archaeological Council's *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections* (1994), which are endorsed by OPRHP. This report has been prepared according to OPRHP's *State Historic Preservation Office (SHPO) Phase I Archaeological Report Format Requirements* (2005).

2 Project Information

2.1 Project Location

The project area is located at 78 ½ Lake Street, in the Village of LeRoy, Genesee County, New York (Map 2).

2.2 Description of the Project

The project will include soil removal to varying depths within a 0.1 acre parcel. The exact location and depth of excavation to be determined. Description of the Area of Potential Effects (APE)

The area of potential effects (APE) includes all portions of the property that will be directly altered by the proposed undertaking. The APE encompasses less than 0.1 acre.

For the purpose of this study, the Project Area and APE are considered to be synonymous and the terms are used interchangeably.

3 Environmental Background

The environment of an area is significant for determining the sensitivity of the Project Area for archeological resources. Precontact and historic groups often favored level, well-drained areas near wetlands and waterways. Therefore, topography, proximity to wetlands, and soils are examined to determine if there are landforms in the Project Area that are more likely to contain archeological resources. In addition, bedrock formations may contain chert or other resources that may have been quarried by precontact groups. Soil conditions can provide a clue to past climatic conditions, as well as changes in local hydrology.

3.1 Present Land Use and Current Conditions

A site visit was conducted by Andre Krievs on December 20, 2017 to observe and photograph existing conditions within the Project Area. The area of potential effects (APE) is located adjacent to an operating equipment repair shop owned by Thomas McGinnis. The area south of the building is an asphalt-covered entrance road and parking lot (Map 2; Photo 1). The area east of the building contains a large concrete slab and an asphalt-covered parking area (Map 2; Photo 2). The area northeast of the building contains a metal structure constructed on concrete footings that was once part of an electrical substation (Map 2; Photos 3 and 4). The area north of the building is covered by weed patches and is used for storage (Map 2; Photo 5). It is bordered to the south by an L-shaped cut limestone retaining wall (Map 2: Photo 6). The area west of the building is grass covered and slopes down towards the building (Map 2: Photo 7).

3.2 Soils

Soil surveys provide a general characterization of the types and depth of soils that are found in an area. This information is an important factor in determining the appropriate methodology if and when a field study is recommended. According to the soil survey for Genesee County, the project area contains mostly Udorthents bordered by Ontario loam(United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS) 2006).

Table 1. Soils in Project Area

Symbol	Name	Depth	Textures	Slope	Drainage	Landform
Uf	Udorthents	0-15 cm (0-6 in) 15-152 cm (6-60 in)	Gv si Gv si	0-3%	Well drained	Fill deposits
OnB	Ontario loam	0-20 cm (0-8 in) 20-36 cm (8-14 in) 36-53 cm (14-21 in) 53-99 cm (21-39 in) 99-122 cm (39-48 in) 122-183 cm (48-72 in)	Lo Lo Lo Gv lo Gv lo Gv lo	3-8%	Well drained	Upland till plains

Key: Texture: Co-Coarse, Fi-Fine, Gv-Gravelly, Lo-Loam, Sa-Sand, Si-Silt, Vy-Very

3.3 Bedrock Geology

The underlying bedrock is part of the Hamilton Group consisting of Skaneateles Formation Levanna shale and Stafford limestone (Fisher, et al. 1970).

3.4 Physiography and Hydrology

Steeply sloped areas are considered largely unsuitable for human occupation. As such, the standards for archeological fieldwork in New York State generally exclude areas with a slope in excess of 12% from archeological testing (NYAC 1994). Exceptions to this rule include steep areas with bedrock outcrops, overhangs, and large boulders that may have been used by precontact people as quarries or rock-shelters. Such areas may still warrant a systematic field examination.

The project area is generally level with a rise along the north side that has been cut into and supported by a stone retaining wall. Oatka Creek passes along the east side of the property, flowing to the north.

4 Documentary Research

Hartgen conducted research using the New York State Cultural Resource Information System (CRIS), which is maintained by the New York SHPO and the Division for Historic Preservation DHP within OPRHP. CRIS contains a comprehensive inventory of archeological sites, State and National Register (NR) properties, properties determined eligible for the NR (NRE), and previous cultural resource surveys.

4.1 Archeological Sites

An examination of CRIS identified fifteen reported archeological sites within one mile (1.6 km) of the Project (Table 2). Previously reported archeological sites provide an overview of both the types of sites that may be present in the Project Area and relation of sites throughout the surrounding region. The presence of few reported sites, however, may result from a lack of previous systematic survey and does not necessarily indicate a decreased archeological sensitivity within the Project Area.

Table 2. Archeological sites within one mile (1.6 km) of the Project

OPRHP Site No.	NYSM Site No.	Site Identifier	Description	Proximity to Project Area
	3340	ACP GNSE 19	Precontact camp	2,400 feet northeast

OPRHP Site No.	NYSM Site No.	Site Identifier	Description	Proximity to Project Area
	3354	Tecahnowunnadaneo; ACP GNSE 32	Precontact camp	1,700 feet northeast
	3338	ACP GNSE 16	Precontact camp	2,300 feet southeast
	3349	ACP GNSE 27	Precontact camp	4,700 feet northwest
	8664	ACP GNSE NO #	Precontact trail	600 feet south
03709.000034		Dusen Balonek Site RMSC CDA 6B	Late Archaic camp	3,200 feet northeast
03709.000035		McGown Site (Follett F1)	Late Archaic/Early Woodland camp	4,700 feet southeast
03709.000037		North Street #1 Site (Follett F69)	Precontact village	3,200 feet northeast
03709.000038		Lake Street Site (Follette F78)	Precontact camp	4,500 feet northeast
03709.000052		North Street #2 Site (Follett F369)	Late Archaic camp	5,000 feet northeast
03741.000169		Spillway Site (Follett F180)	Precontact camp	2,900 feet south
03741.000170		Ta-Car-Na-Wun-Na-Da-Ne-O (Follett F244)	Precontact camp	1,900 feet southeast
03741.000171		Machpelah Cemetery Site (Follett F278)	Precontact camp	2,200 feet northeast
03741.000172		Oatka Creekside #1 (Follett F217A)	Precontact camp	5,200 feet southwest
03741.000448	3352	Parker Genesee Co. Site No. 30	Precontact camps	5,000 feet southwest

4.2 Historic Properties

An examination of CRIS identified no NR properties, no NRE properties, three properties previously determined to be ineligible, and one property of undetermined status within the Project Area (Table 3).

Table 3. Inventoried properties within the Project Area

USN	Property Name	Status	Description	Location and Proximity to Project Area
03741.000151	Dunn Storage	Undetermined	78 Lake Street; demolished?	10 feet west
03741.000152	Dunn Storage	Not eligible	80 Lake Street; Mickel's Nickels bottle and can redemption center	20 feet north
03741.000212	88 Lake Street	Not eligible	Residence	160 feet northwest
03741.000215	76 Lake Street	Not eligible	Katie's Ice Cream and Cookies Cafe	170 feet southwest

4.3 Previous Surveys

A review of CRIS identified one previous survey within the immediate vicinity of the Project (Table 4).

Table 4 Relevant previous surveys within or adjacent to the Project

Project/Phase	Summary	Citation
PIN 4005.11.101, NY 5 and NY 19 1998-1999 Highway Program	Project included pavement and side-walk replacement. Investigation included literature review and structure survey. No subsurface testing was recommended.	(Public Archaeology Facility 1999)

The NYS Routes 5 and 10 pavement and side-walk replacement project included a literature review and a structure survey. No subsurface testing was recommended.

5 Historical Map Review

To trace the development of the project area, a review of historical maps was conducted. The maps include 19th-century landowner maps, 19th- and 20th-century Sanborn maps, and 20th-century topographic maps. The maps are geo-referenced and the project area has been superimposed on each map. Structures in or adjacent to the APE are summarized in Table 5 and are numbered on the historical map series presented in Maps 4 and 5. The maps are discussed in chronological order.

The earliest landowner map examined is the 1854 Otley *Map of Genesee County, New York*. No structures are indicated within the limits of the project area (Map 4a).

The 1866 Beers *New Topographic Atlas of Genesee and Wyoming Counties, New York* shows a Gashouse and a Tannery (MDS 1 and 2) in the general vicinity of the project area (Map 4a). The two buildings are located west of Oatka Creek and between the New York Central and the New York and Erie Railroad tracks. The 1876 Evets Ensign *Combination Atlas Map of Genesee County, New York* indicates a gasholder and three adjacent buildings (MDS 1-4) identified as the gasworks (Map 4a).

The 1885 Sanborn *Insurance Map* (Map 4a) shows a gasholder and a gashouse, the Horace Peck Tannery (Salting Hides Only) south of the gashouse, and a coal and lumber shed north of the gashouse (MDS 1-4). The 1892 Sanborn *Insurance Map* (Map 4a) indicates an expansion of the gasworks with the addition of a coal-fired electric generating facility south of the gasholder (MDS 5). The complex is identified as the LeRoy Gas and Electric Company. The 1897 Sanborn *Insurance Map* (Map 4a) shows a similar group of buildings as indicated on the earlier Sanborn map. The Tannery building located south of the Gashouse has been converted to a Cooper shop. The 1903 and 1910 Sanborn *Insurance Maps* (Map 4b) show a railroad spur connecting to the coal shed located adjacent to electric generating facility. The Cooper shop located south of the gashouse is no longer present. The gashouse and gasholder are no longer present on the 1927 Sanborn *Insurance Map* (Map 4b). The facility is comprised of an electric supply house and a transformer station operated by the Niagara Lockport and Ontario Power Company (MDS 6).

No structures are evident within the project area on the mid-20th century topographic maps. By the time of the 1998 NYSDOT *LeRoy 7.5' Quadrangle,* a rectangular building is shown extending across the former MGP site footprint (MDS 7).

5.1 Map-Documented and Existing Structures

Each past or current structure within the Project Area is assigned a unique structure number. Map-documented structures—those structures that are depicted on one or more maps—are distinguished using the abbreviation "MDS" after the structure number (e.g. Structure 3 (MDS). They are identified on the historic maps (Maps 4a and 4b). Structures associated with the MGP site first appear c. 1866 and are evident within the project area until c. 1927. The building that exists today dates from the mid to late 20th century. Table 5 lists the structures identified on the earlier maps.

Table 5. Summary of map-documented and existing structures within the Project Area/APE

Structure #	Map 4a 1854	Map 4a 1866	Map 4a 1876	Map 4a 1885	Map 4a 1892	Map 4a 1897	Map 4b 1903	Map 4b 1910	Map 4b 1927	Map 4b 1998	Extant 2017
1		X	X	X	X	X	X	X			
2		X	X	X	X	X					
3			X	X	X	X	X	X			
4			X	X	X	X	X	X			
5					X	X	X	X	X		
6									X		
7										X	X

6 Archeological Sensitivity Assessment

The New York Archaeological Council provides the following description of archeological sensitivity:

> Archaeologically sensitive areas contain one or more variables that make them likely locations for evidence of past human activities. Sensitive areas can include places near known prehistoric sites that share the same valley or that occupy a similar landform (e.g., terrace above a river), areas where historic maps or photographs show that a building once stood but is now gone as well as the areas within the former yards around such structures, an environmental setting similar to settings that tend to contain cultural resources, and locations where Native Americans and published sources note sacred places, such as cemeteries or spots of spiritual importance (NYAC 1994:9).

6.1 Precontact Archeological Sensitivity

The precontact sensitivity of an area is based on proximity to previously documented precontact archeological sites, known precontact resources (e.g. chert outcrops), and physiographic characteristics such as topography and drainage. Generally, areas in the vicinity of streams and wetlands are considered to have elevated sensitivity for sites associated with Native American use or occupation because they presented potential food and water sources as well as transportation corridors.

An examination of CRIS identified fifteen (15) precontact sites within a mile of the project area. The site file data combined with the proximity to Oatka Creek suggest a high sensitivity for precontact cultural resources.

6.2 Historic Archeological Sensitivity

The historic sensitivity of an area is based primarily on proximity to previously documented historic archeological sites, map-documented structures, or other documented historical activities (e.g. battlefields).

The 19th-century property maps indicate development generally began after completion of the railroad with the earliest depiction of the manufactured gas plant found on the 1866 Beers Atlas showing a gasworks along the west side of Oatka Creek between the two railroad lines. The gasworks and subsequent electric generating facility are evident until c 1927. The project area is considered as having a moderate to high sensitivity for resources related to the 19th-century gasworks and the electric generating facility.

7 Archeological Potential

Archeological potential is the likelihood of locating intact archeological remains within an area. The consideration of archeological potential takes into account subsequent uses of an area and the impact those uses would likely have on archeological remains.

Historic development within the project area began during the mid-19th century and continued into the latter part of the 20th century. Historic development has significantly impacted the original landscape along with any precontact cultural resources that may have been present. Therefore, the project area has a low potential for yielding intact precontact cultural resources.

Exploratory excavations conducted by GEI Consultants identified the buried structural remains of the manufactured gas plant (Map 2; Photo 8). The photograph suggests the structure was constructed from brick and concrete. The presence of this feature indicates a moderate to high potential of yielding historic resources associated with the MGP and the electric generating facilities.

8 Recommendations

The presence of buried structural remains indicates portions of the 19th-century manufactured gas plant survived 20th-century development. An archeological monitoring investigation is recommended for the soil remediation excavations to further document features related to the MGP and the electric generating facilities.

9 Bibliography

Beers, S. N. and D. G. Beers
1866 *New Topographical Atlas of Genesee and Wyoming Counties, NY*. Stone and Stewart, Philadelphia.

Esri Inc.
2017 World Imagery. Esri, Inc., Redlands, California, http://services.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer.

Everts, Ensign, and Everts
1876 *Combination Atlas Map of Genesee County*. Everts, Ensign, and Everts, Philadelphia.

Fisher, Donald W., Yngvar W. Isachsen and Lawrence V. Rickard
1970 *Geologic Map of New York*. Map and Chart Series No. 15. New York State Education Department, Geological Survey, Albany, New York.

New York Archaeological Council (NYAC)
1994 *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State*. NYAC, n.p.

New York State Department of Transportation (NYSDOT)
1998 *LeRoy, New York NYSDOT Digital Raster Graphic (DRG) Quadrangle, 1:24,000 scale*. NYS GIS Clearinghouse, Albany, New York, http://gis.ny.gov/.

Office of Parks, Recreation and Historic Preservation (OPRHP)
2005 *New York State Historic Preservation Office (SHPO) Phase I Archaeological Report Requirements*. OPRHP, Waterford, New York.

Otley, J. W.
1854 *Map of Genesee County, NY*. John E. Gilette, Philadelphia.

Public Archaeology Facility
1999 *Cultural Resource Reconnaissance, 1998-1999 Highway Program, Architectural Report and Archaeological Assessment, PIN 4005.11.101, NY 5 and NY 19, Village of LeRoy, Genesee County, New York*. Submitted to The New York State Department of Transportation. On file at OPRHP, Waterford, NY, Cultural Resource Information System, http://cris.parks.ny.gov.

Sanborn-Perris Map Company
1892 *LeRoy, Genesee County, NY*. Sanborn-Perris Map Company, New York.

1897 *LeRoy, Genesee County, NY*. Sanborn-Perris Map Company, New York.

Sanborn Map & Publishing Company
1885 *LeRoy, NY*. Sanborn Map & Publishing Company, New York.

Sanborn Map Company
1903 *LeRoy, Genesee County, NY*. Sanborn Map Company, New York.

1910 *LeRoy, Genesee County, New York*. Sanborn Map Company, New York.

1927 *LeRoy, Genesee County, New York*. Sanborn Map Company, New York.

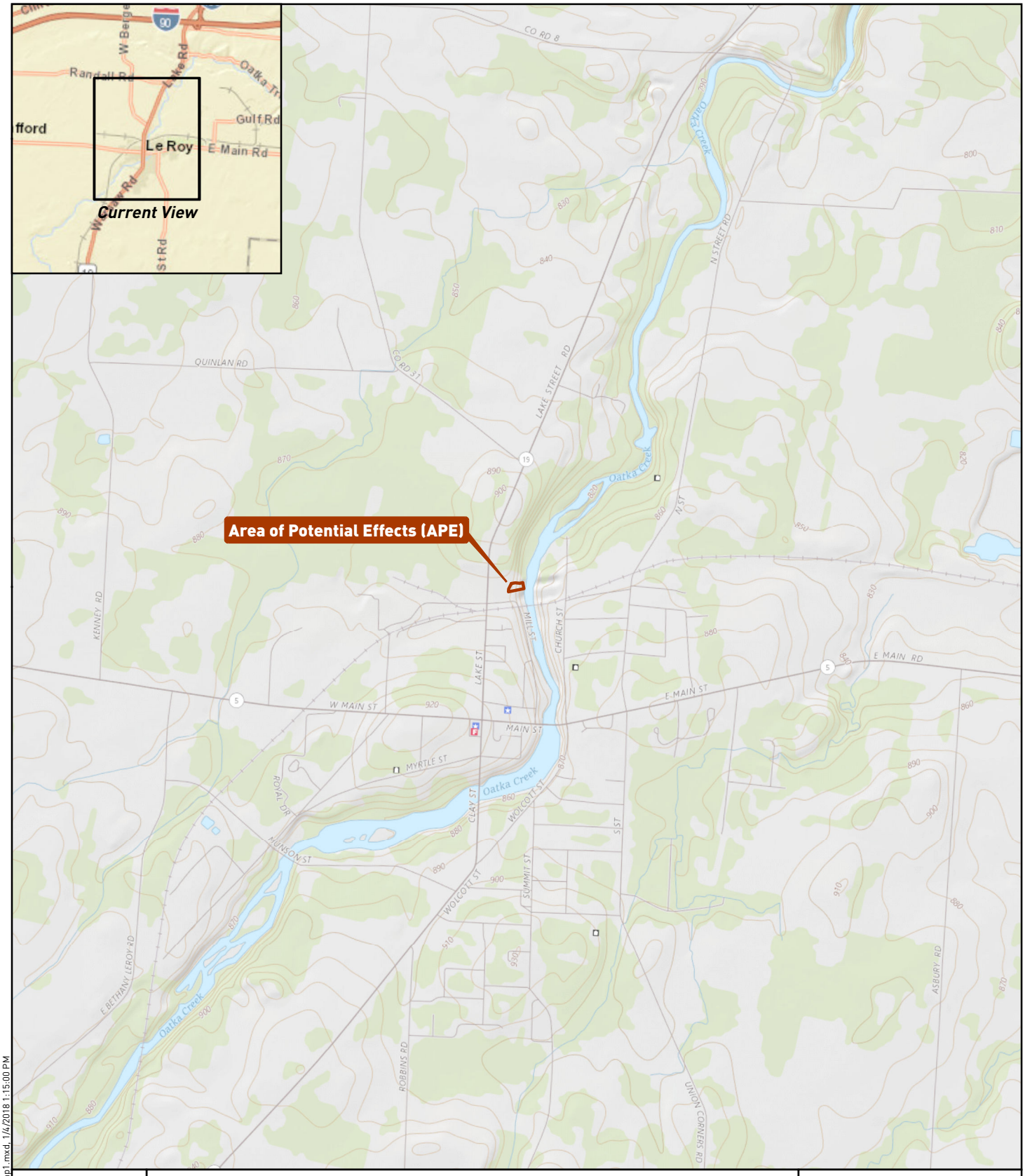
United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS)

2006 Soil Survey Geographic (SSURGO) Database for Genesee County, New York, Northern Part. USDA, NRCS. Electronic document, http://SoilDataMart.nrcs.usda.gov.

United States Geological Survey (USGS)

2016 USGS The National Map Topo Base Map - Small Scale. USGSTopo (MapServer), The National Map Seamless Server, USGS, Sioux Falls, South Dakota, http://basemap.nationalmap.gov/arcgis/rest/services/USGSTopo/MapServer.

Maps



1,000 0 1,000 2,000 Feet

300 0 300 600 Meters

Note: Contour interval is 10 feet.

Project Location
(ESRI 2017; USGS 2015)

HARTGEN archeological associates inc

Map 1

G:\5204-11\GIS\Documents\Map1.mxd, 1/4/2018 1:15:00 PM

G:\5204-11\GIS\Documents\Map2.mxd, 1/4/2018 1:11:46 PM

N

25	0	25	50	Feet

6	0	6	12	Meters

Project Map
(Hartgen 2018; GEI 2015; ESRI 2018)

HARTGEN archeological associates inc

Map 2

G:\5204-11\GIS\Documents\Map3.mxd, 1/4/2018 1:21:53 PM

N

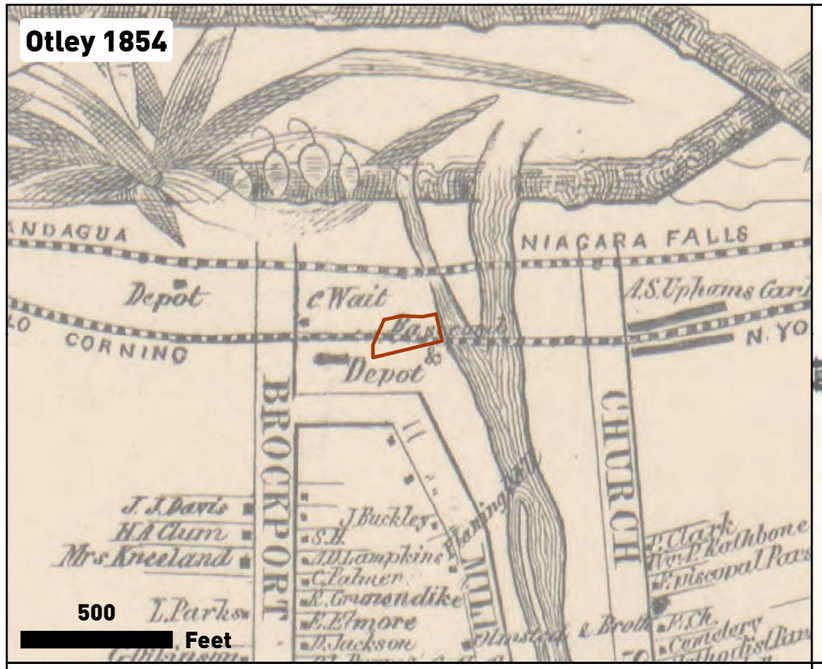
100 0 100 200 Feet

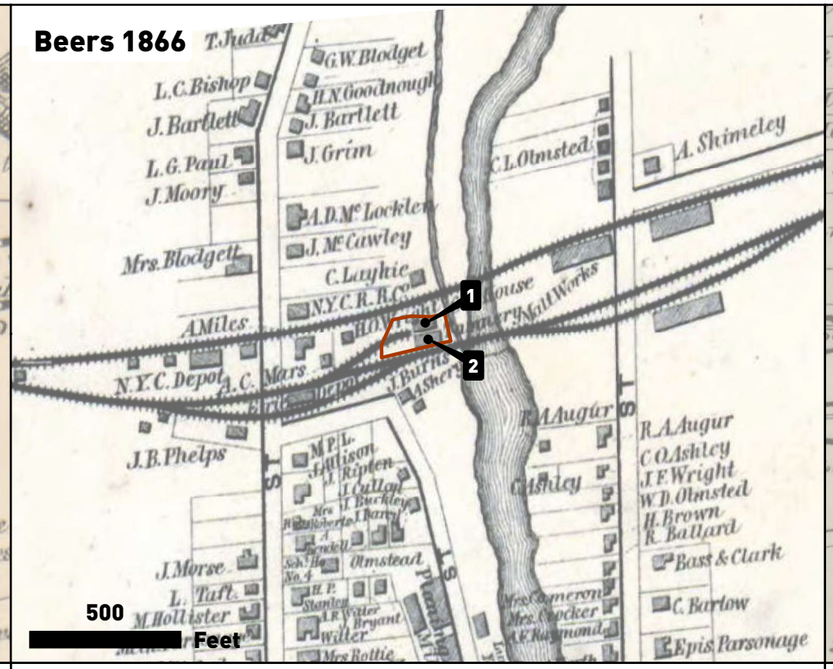
30 0 30 60 Meters

Soil Map
(USDA NRCS 2006, ESRI 2018)

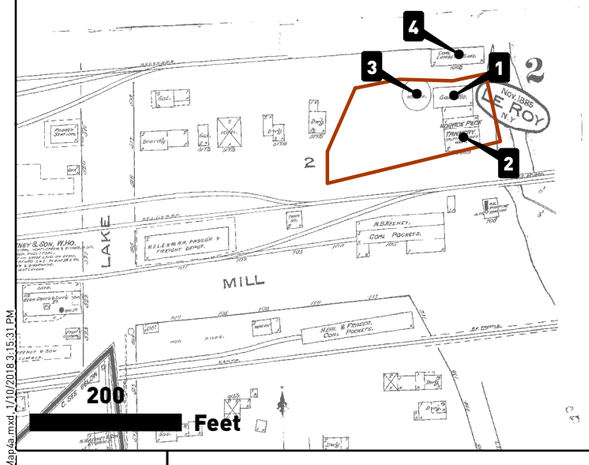
HARTGEN archeological associates inc

Map 3

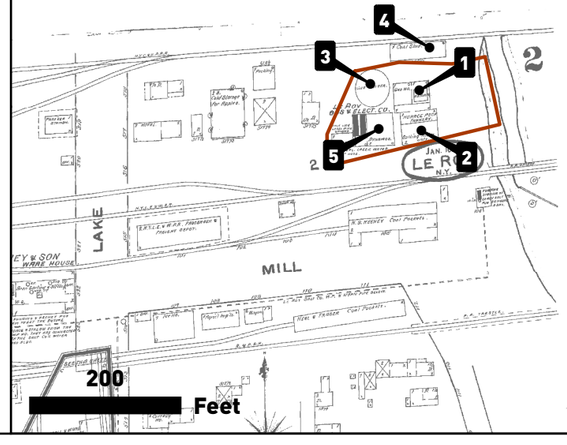




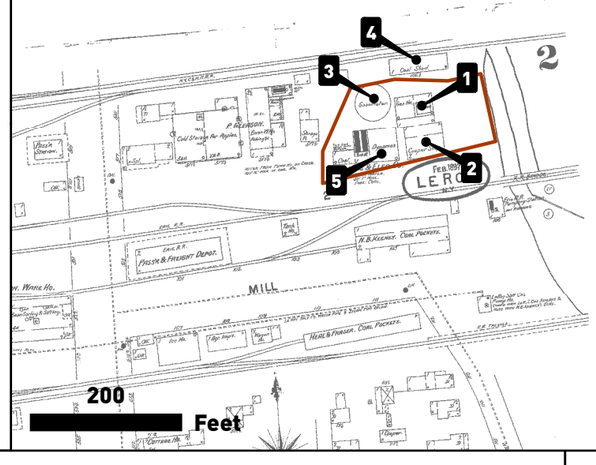
Sanborn 1885



Sanborn 1892



Sanborn 1897



Legend

- Map-Documented Structure
- Area of Potential Effects (APE)

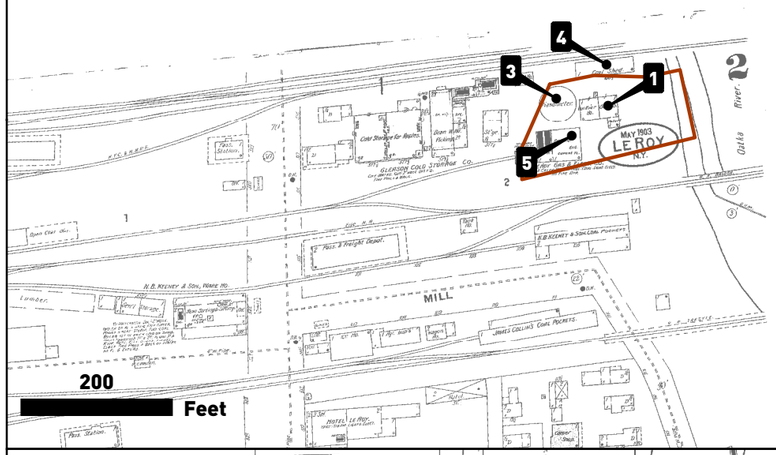
Historical Maps 1854-1897

HARTGEN archeological associates inc

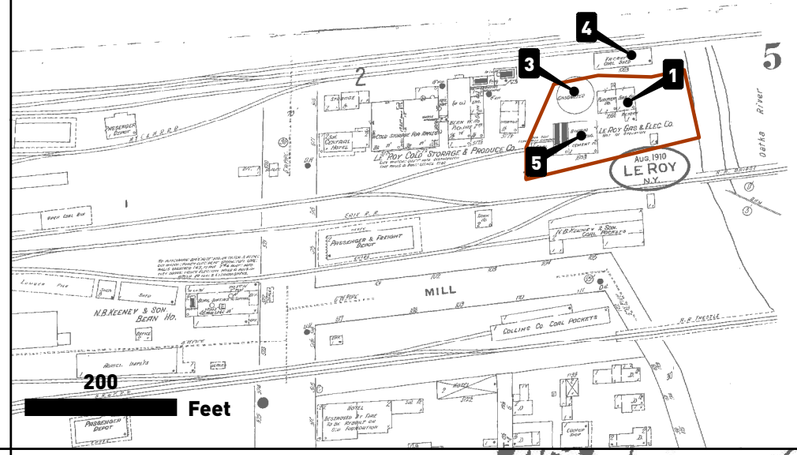
Map 4a

G:\5206-11\GIS\Documents\Map4a.mxd 1/10/2018 3:15:31 PM

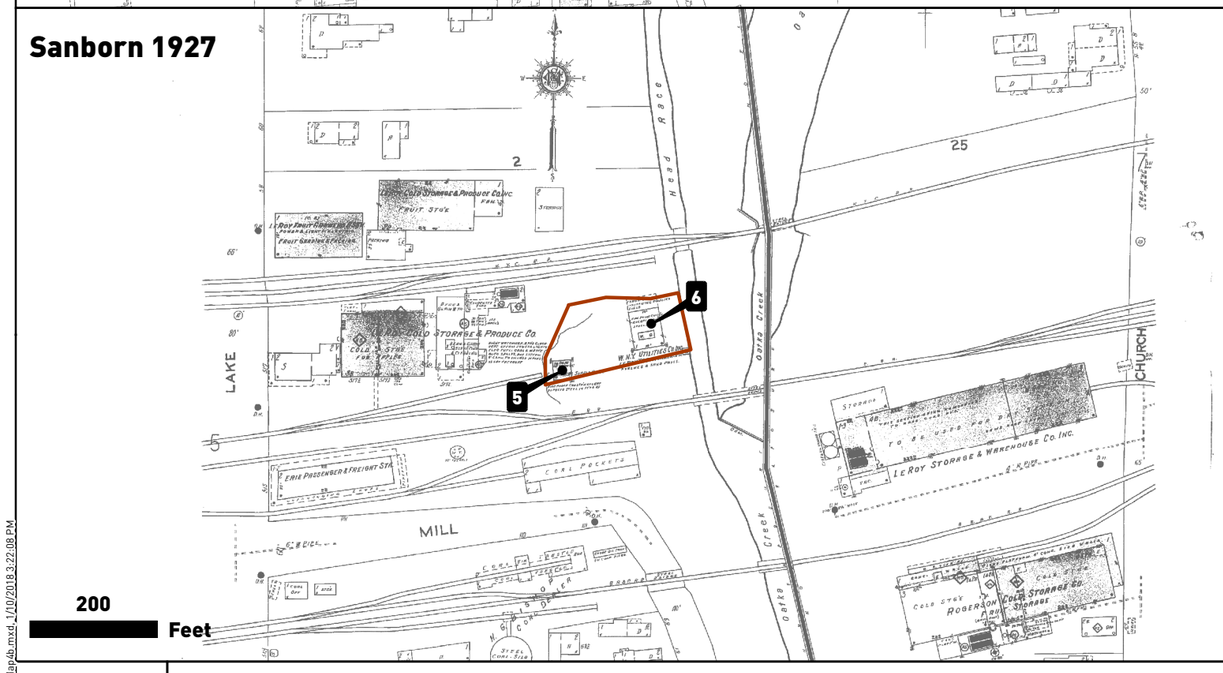
Sanborn 1903



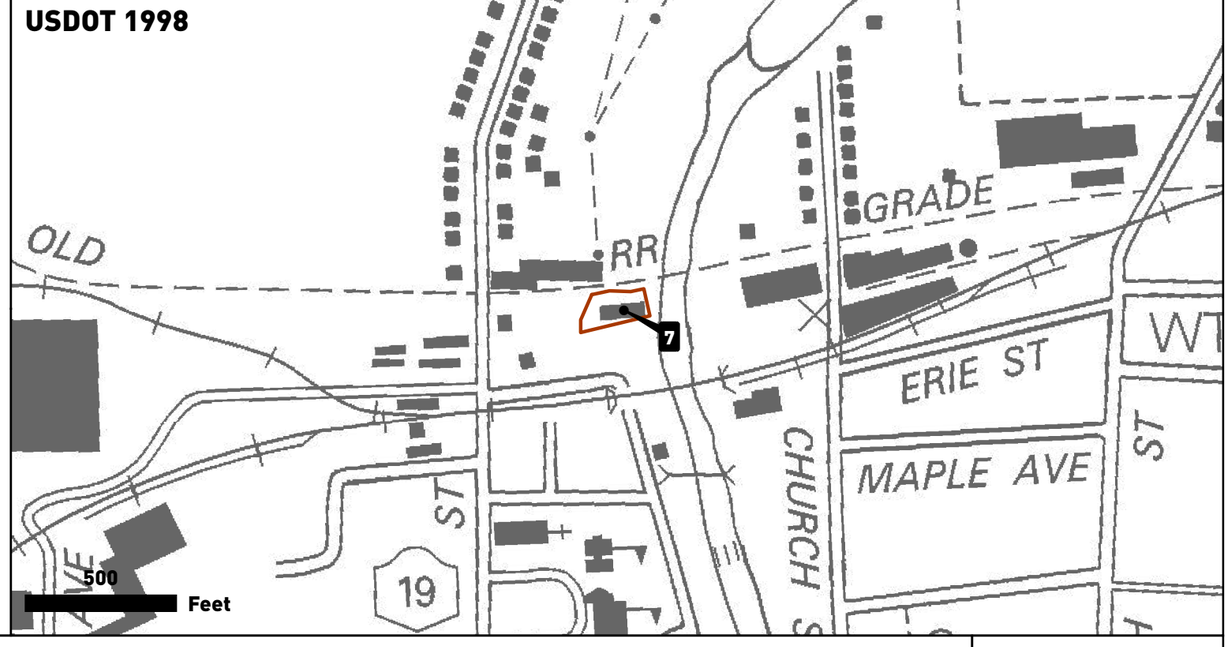
Sanborn 1910



Sanborn 1927



USDOT 1998



Legend

- Map-Documented Structure
- Area of Potential Effects (APE)

Historical Maps 1903-1998

HARTGEN archeological associates inc

Map 4b

Q:\5204-110\GIS\Documents\Map4b.mxd 1/10/2018 3:22:08 PM

Photographs

Photo 1. View north of the parking area located along the south side of the Thomas McGinnis auto and equipment repair shop.

Photo 2. View north of the equipment parking area located along the east side of the Thomas McGinnis auto and equipment repair shop.

Photo 3. View northeast of a concrete piling located along the northeast side of the building. The piling is likely associated with the electric generating facility.

Photo 4. View north of the metal structures associated with the electric power generating facility.

Photo 5. View southwest of the general surface conditions located along the north side of the building.

Photo 6. View northwest of a limestone retaining located north of the building.

Photo 7. View southeast of the lawn area situated along the west side of the building.

Photo 8. Buried structural remains associated with the manufactured gas plant.

Appendix B

Test Pit and Soil Boring/Monitoring Well Logs

Test Pit Logs

TEST PIT LOG

PROJECT	LeRoy Former MGP Site SC	**PG.** 1 **OF** 2	
LOCATION	LeRoy, NY	**LOCATION**	TP-1
CLIENT	National Grid		
CONTRACTOR	Nothnagle Drilling	**GROUND EL.**	
OPERATOR	Kevin Busch	**DATUM**	
EQUIPMENT	Backhoe	**PROJECT NO.**	1503890
WEATHER	Sunny, 40s	**TIME STARTED**	10:15 a.m.
GEI REP	G. Schmidt **DATE** 5/9/2016	**TIME COMPLETED**	15:30 p.m.

DEPTH OF LAYER CHANGE	SAMPLE NO. and TYPE	SAMPLE DEPTH (FT)	SOIL DESCRIPTION
			0-0.3': Topsoil.
1.0		PID 0-1' 0.0 ppm	0.3-1.0': SP-SM w/~80% fine sand, ~10% non-plastic fines, ~10% fine to coarse subangular gravel, dry, brown.
2.0		PID 1-2' 0.0 ppm	1.0-7.0': Top of wall at 1.1' bgs. Top of wall consists of brick and mortar, with a smooth light colored coating. Wall is approximately 1.2 feet thick. Fill consists of: many brick, ash, debris, fragments, glass insulators, ceramics, dry to moist, reddish-brown.
3.0		PID 2-3' 0.0 ppm	
4.0		PID 3-4' 0.0 ppm	
5.0		PID @ 4-5' 0.0 ppm	
6.0		PID @ 5-6' 0.0 ppm	
7.0	V	PID @ 6-7' 0.0 ppm	Groundwater encountered at 7.0 feet below ground surface. Groundwater was clear without odors.
			Bottom of Test Pit at 7.0 feet

NOTES:
Sample taken 6-7 feet below ground surface 13:00.

PIT DIMENSIONS (FT):

LENGTH	38'
WIDTH	2.5'
DEPTH	7'

GEI Consultants

TEST PIT LOG

PROJECT	LeRoy Former MGP Site SC	**PG.** 2 **OF** 2	
LOCATION	LeRoy, NY	**LOCATION**	TP-1
CLIENT	National Grid		
CONTRACTOR	Nothnagle Drilling	**GROUND EL.**	
OPERATOR	Kevin Busch	**DATUM**	
EQUIPMENT	Backhoe	**PROJECT NO.**	1503890
WEATHER	Sunny, 40s	**TIME STARTED**	10:15 a.m.
GEI REP	G. Schmidt **DATE** 5/9/2016	**TIME COMPLETED**	15:30 p.m.

DEPTH OF LAYER CHANGE	SAMPLE NO. and TYPE	SAMPLE DEPTH (FT)	SOIL DESCRIPTION
1.0 2.0 3.0 4.0 5.0 6.0 7.0			

Caption: View to the east of Test Pit 1.

NOTES:

PIT DIMENSIONS (FT):

LENGTH	38'
WIDTH	2.5'
DEPTH	7'

GEI Consultants

TEST PIT LOG

PROJECT	LeRoy Former MGP Site SC	**PG.** 1 **OF** 2	
LOCATION	LeRoy, NY	**LOCATION**	TP-2
CLIENT	National Grid		
CONTRACTOR	Nothnagle Drilling	**GROUND EL.**	
OPERATOR	Kevin Busch	**DATUM**	
EQUIPMENT	Backhoe	**PROJECT NO.**	1503890
WEATHER	Partly Sunny, 50s	**TIME STARTED**	7:30 a.m.
GEI REP	G. Schmidt **DATE** 5/10/2016	**TIME COMPLETED**	8:15 a.m.

DEPTH OF LAYER CHANGE	SAMPLE NO. and TYPE	SAMPLE DEPTH (FT)	SOIL DESCRIPTION
			0-0.3': Topsoil.
1.0		PID 0-1' 0.0 ppm	0.3-0.9': SP-SM w/~80% fine sand, ~10% non-plastic fines, ~10% fine to coarse subangular gravel, dry, brown.
2.0		PID 1-2' 0.0 ppm	0.9-5.5': Fill consists of: many bricks, ash, debris, piping, ceramics, dry to wet, reddish-brown.
3.0		PID 2-3' 0.0 ppm	
4.0		PID 3-4' 0.0 ppm	
5.0		PID @ 4-5' 0.0 ppm	
			Groundwater was not encountered during TP-2 excavation.
6.0			Bottom of Test Pit at 5.5 feet
7.0			

NOTES:
Sample taken at 4.5-6.5 feet below ground surface at 8:15.

PIT DIMENSIONS (FT):

LENGTH	8.10'
WIDTH	2.5'
DEPTH	5.5'

GEI Consultants

TEST PIT LOG

PROJECT	LeRoy Former MGP Site SC	**PG.** 2 **OF** 2	
LOCATION	LeRoy, NY	**LOCATION**	TP-2
CLIENT	National Grid		
CONTRACTOR	Nothnagle Drilling	**GROUND EL.**	
OPERATOR	Kevin Busch	**DATUM**	
EQUIPMENT	Backhoe	**PROJECT NO.**	1503890
WEATHER	Partly Sunny, 50s	**TIME STARTED**	7:30 a.m.
GEI REP	G. Schmidt **DATE** 5/10/2016	**TIME COMPLETED**	8:15 a.m.

DEPTH OF LAYER CHANGE	SAMPLE NO. and TYPE	SAMPLE DEPTH (FT)	SOIL DESCRIPTION
1.0			
2.0			
3.0			
4.0			
5.0			
6.0			
7.0			

Caption:
View to the southeast of the holder wall encountered in TP-2.

NOTES:
Sample taken at 4.5-5.5 feet below ground surface at 8:15.

PIT DIMENSIONS (FT):

LENGTH	8.10'
WIDTH	2.5'
DEPTH	5.5'

GEI Consultants

TEST PIT LOG

PROJECT	LeRoy Former MGP Site SC	**PG.** 1 **OF** 2	
LOCATION	LeRoy, NY	**LOCATION**	TP-3A
CLIENT	National Grid		
CONTRACTOR	Nothnagle Drilling	**GROUND EL.**	
OPERATOR	Kevin Busch	**DATUM**	
EQUIPMENT	Backhoe	**PROJECT NO.**	1503890
WEATHER	Partly Sunny, 50s	**TIME STARTED**	8:40 a.m.
GEI REP	G. Schmidt **DATE** 5/10/2016	**TIME COMPLETED**	9:15 a.m.

DEPTH OF LAYER CHANGE	SAMPLE NO. and TYPE	SAMPLE DEPTH (FT)	SOIL DESCRIPTION
			0-0.3': Topsoil with coarse subangular gravel.
1.0		PID 0-1' 0.0 ppm	0.3-1.4': Fill consists of: many bricks, ash, glass fragments.
2.0		PID 1-2' 0.0 ppm	1.4-6.0': SP-SM with ~80% fine sand, ~15% non-plastic fines, ~5% fine to coarse subangular gravel.
3.0		PID 2-3' 0.0 ppm	
4.0		PID 3-4' 0.0 ppm	
5.0		PID @ 4-5' 0.0 ppm	
6.0		PID @ 5-6' 0.0 ppm	Groundwater was not encountered during the excavation of TP-3.
7.0			Bottom of Test Pit at 6.0 feet

NOTES:
Sample taken at 5-6 feet below ground surface at 9:00.

PIT DIMENSIONS (FT):

LENGTH	11.0'
WIDTH	2.5'
DEPTH	6.0'

GEI Consultants

TEST PIT LOG

PROJECT	LeRoy Former MGP Site SC	**PG.** 2 **OF** 2	
LOCATION	LeRoy, NY	**LOCATION**	TP-3A
CLIENT	National Grid		
CONTRACTOR	Nothnagle Drilling	**GROUND EL.**	
OPERATOR	Kevin Busch	**DATUM**	
EQUIPMENT	Backhoe	**PROJECT NO.**	1503890
WEATHER	Partly Sunny, 50s	**TIME STARTED**	8:40 a.m.
GEI REP	G. Schmidt **DATE** 5/10/2016	**TIME COMPLETED**	9:15 a.m.

DEPTH OF LAYER CHANGE	SAMPLE NO. and TYPE	SAMPLE DEPTH (FT)	SOIL DESCRIPTION
1.0			
2.0			
3.0			
4.0			
5.0			
6.0			
7.0			

Caption:
View to the east of Test Pit 3A.

NOTES:
Sample taken from 5-6 feet below ground surface at 9:00.

PIT DIMENSIONS (FT):

LENGTH	11.0'
WIDTH	2.5'
DEPTH	6.0'

GEI Consultants

TEST PIT LOG

PROJECT	LeRoy Former MGP Site SC	**PG.** 1 **OF** 2	
LOCATION	LeRoy, NY	**LOCATION**	TP-3B
CLIENT	National Grid		
CONTRACTOR	Nothnagle Drilling	**GROUND EL.**	
OPERATOR	Kevin Busch	**DATUM**	
EQUIPMENT	Backhoe	**PROJECT NO.**	1503890
WEATHER	Partly Sunny, 50s	**TIME STARTED**	9:20 a.m.
GEI REP	G. Schmidt **DATE** 5/10/2016	**TIME COMPLETED**	

DEPTH OF LAYER CHANGE	SAMPLE NO. and TYPE	SAMPLE DEPTH (FT)	SOIL DESCRIPTION
			0-0.2': Topsoil.
1.0		PID 0-1' 0.0 ppm	0.2': Concrete slab - thickness unknown.
			Bottom of Test Pit at 0-2 feet
2.0			
3.0			
4.0			
5.0			
6.0			
7.0			

NOTES:

PIT DIMENSIONS (FT):

LENGTH	15.0'
WIDTH	7.0'
DEPTH	

GEI Consultants

TEST PIT LOG

PROJECT	LeRoy Former MGP Site SC	**PG.** 2 **OF** 2	
LOCATION	LeRoy, NY	**LOCATION**	TP-3B
CLIENT	National Grid		
CONTRACTOR	Nothnagle Drilling	**GROUND EL.**	
OPERATOR	Kevin Busch	**DATUM**	
EQUIPMENT	Backhoe	**PROJECT NO.**	1503890
WEATHER	Partly Sunny, 50s	**TIME STARTED**	9:20 a.m.
GEI REP	G. Schmidt **DATE** 5/10/2016	**TIME COMPLETED**	

DEPTH OF LAYER CHANGE	SAMPLE NO. and TYPE	SAMPLE DEPTH (FT)	SOIL DESCRIPTION
1.0 2.0 3.0 4.0 5.0 6.0 7.0			

Caption:
View to the west of TP-3B.

NOTES:

PIT DIMENSIONS (FT):

LENGTH	15.0'
WIDTH	7.0'
DEPTH	

GEI Consultants

TEST PIT LOG

PROJECT	LeRoy Former MGP Site SC	**PG.** 1 **OF** 2	
LOCATION	LeRoy, NY	**LOCATION**	TP-3C
CLIENT	National Grid		
CONTRACTOR	Nothnagle Drilling	**GROUND EL.**	
OPERATOR	Kevin Busch	**DATUM**	
EQUIPMENT	Backhoe	**PROJECT NO.**	1503890
WEATHER	Partly Sunny, 50s	**TIME STARTED**	10:30 a.m.
GEI REP	G. Schmidt **DATE** 5/10/2016	**TIME COMPLETED**	

DEPTH OF LAYER CHANGE	SAMPLE NO. and TYPE	SAMPLE DEPTH (FT)	SOIL DESCRIPTION
			0-0.3': Topsoil.
1.0		PID 0-1' 0.0 ppm	0.3-3.2': Fill consists of: many bricks, glass, ash fragments with ~80% fine sand, ~15% non-plastic fines, ~5% fine to coarse subangular gravel, dry to moist
2.0		PID 1-2' 0.0 ppm	
3.0		PID 2-3' 0.0 ppm	
			3.2-3.5': Brick and hardened tar-like material, slight hydrocarbon-like odor, blackish-brown, moist.
4.0		PID 3-4' 0.0 ppm	3.5-5.0': SP-SM with ~75% fine sand, ~20% non-plastic fines, ~5% fine to coarse subangular gravel, moist, light brown
5.0		PID @ 4-5' 0.0 ppm	Groundwater was not encountered during TP-3C excavation.
			Bottom of Test Pit at 5.0 feet
6.0			
7.0			

NOTES:

PIT DIMENSIONS (FT):

LENGTH	8.0'
WIDTH	5.0'
DEPTH	5.0'

GEI Consultants

TEST PIT LOG

PROJECT	LeRoy Former MGP Site SC	**PG.** 2 **OF** 2	
LOCATION	LeRoy, NY	**LOCATION**	TP-3C
CLIENT	National Grid		
CONTRACTOR	Nothnagle Drilling	**GROUND EL.**	
OPERATOR	Kevin Busch	**DATUM**	
EQUIPMENT	Backhoe	**PROJECT NO.**	1503890
WEATHER	Partly Sunny, 50s	**TIME STARTED**	10:30 a.m.
GEI REP	G. Schmidt **DATE** 5/10/2016	**TIME COMPLETED**	

DEPTH OF LAYER CHANGE	SAMPLE NO. and TYPE	SAMPLE DEPTH (FT)	SOIL DESCRIPTION
1.0 2.0 3.0 4.0 5.0 6.0 7.0			

Caption:
View to the northeast of TP-3C.

NOTES:

PIT DIMENSIONS (FT):

LENGTH	8.0'
WIDTH	5.0'
DEPTH	5.0'

GEI Consultants

TEST PIT LOG

PROJECT	LeRoy Former MGP Site SC	**PG.** 1 **OF** 2	
LOCATION	LeRoy, NY	**LOCATION**	TP-4
CLIENT	National Grid		
CONTRACTOR	Nothnagle Drilling	**GROUND EL.**	
OPERATOR	Kevin Busch	**DATUM**	
EQUIPMENT	Backhoe	**PROJECT NO.**	1503890
WEATHER	Partly Sunny, 50s	**TIME STARTED**	11:30 a.m.
GEI REP	G. Schmidt **DATE** 5/10/2016	**TIME COMPLETED**	12:10 p.m.

DEPTH OF LAYER CHANGE	SAMPLE NO. and TYPE	SAMPLE DEPTH (FT)	SOIL DESCRIPTION
			0-0.2': Asphalt.
1.0		PID 0-1' 0.0 ppm	0.2-6.0': Fill consists of: many bricks, ash, glass fragments, with ~80% fine sand, ~15% non-plastic fines, ~5% fine to coarse subangular gravel, moist, dark brown.
2.0		PID 1-2' 0.0 ppm	
3.0		PID 2-3' 0.0 ppm	
4.0		PID 3-4' 0.0 ppm	
5.0		PID @ 4-5' 0.0 ppm	
6.0		PID @ 5-6' 0.0 ppm	
7.0		PID @ 6-7' 0.0 ppm	6.0-7.0': SP-SM with ~75% fine sand, ~20% non-plastic fines, ~5% fine to coarse subangular gravel, moist to dry, light brown. Groundwater was not encountered during TP-4 excavation.
			Bottom of Test Pit at 7.0 feet

NOTES:
Sample taken 6-7 feet below ground surface at 12:15.

PIT DIMENSIONS (FT):

LENGTH	14'
WIDTH	2.5'
DEPTH	7'

GEI Consultants

TEST PIT LOG

PROJECT	LeRoy Former MGP Site SC	**PG.** 2 **OF** 2	
LOCATION	LeRoy, NY	**LOCATION**	TP-4
CLIENT	National Grid		
CONTRACTOR	Nothnagle Drilling	**GROUND EL.**	
OPERATOR	Kevin Busch	**DATUM**	
EQUIPMENT	Backhoe	**PROJECT NO.**	1503890
WEATHER	Partly Sunny, 50s	**TIME STARTED**	11:30 a.m.
GEI REP	G. Schmidt **DATE** 5/10/2016	**TIME COMPLETED**	12:10 p.m.

DEPTH OF LAYER CHANGE	SAMPLE NO. and TYPE	SAMPLE DEPTH (FT)	SOIL DESCRIPTION
1.0			
2.0			
3.0			
4.0			
5.0			
6.0			
7.0			

Caption:
View to the west of TP-4.

NOTES:
Sample taken 6-7 feet below ground surface at 12:15.

PIT DIMENSIONS (FT):

LENGTH	14'
WIDTH	2.5'
DEPTH	7'

GEI Consultants

TEST PIT LOG

PROJECT	LeRoy Former MGP Site SC	**PG.** 1 **OF** 2	
LOCATION	LeRoy, NY	**LOCATION**	TP-5
CLIENT	National Grid		
CONTRACTOR	Nothnagle Drilling	**GROUND EL.**	
OPERATOR	Kevin Busch	**DATUM**	
EQUIPMENT	Backhoe	**PROJECT NO.**	1503890
WEATHER	Partly Sunny, 50s	**TIME STARTED**	13:40 p.m.
GEI REP	G. Schmidt **DATE** 5/10/2016	**TIME COMPLETED**	14:15 p.m.

DEPTH OF LAYER CHANGE	SAMPLE NO. and TYPE	SAMPLE DEPTH (FT)	SOIL DESCRIPTION
			0-0.2': Asphalt.
			0.2-0.4': Gravel, coarse.
1.0		PID 0-1' 0.0 ppm	0.4-6.2': Fill consists of: many bricks, ash, coal, debris fragments, with ~80% fine sand, ~15% non-plastic fines, ~5% fine to coarse subangular gravel, moist to wet, dark brown.
2.0		PID 1-2' 0.0 ppm	
3.0		PID 2-3' 13.1 ppm	
4.0		PID 3-4' 0.0 ppm	
5.0		PID @ 4-5' 0.0 ppm	
6.0		PID @ 5-6' 0.0 ppm	Groundwater was not encountered during TP-5 excavation.
			Bottom of Test Pit at 6.2 feet
7.0			

NOTES:
Sample taken at 5.2-6.2 feet below ground surface at 14:10.

PIT DIMENSIONS (FT):

LENGTH	8.0'
WIDTH	2.8'
DEPTH	6.2'

GEI Consultants

TEST PIT LOG

PROJECT	LeRoy Former MGP Site SC	**PG.** 2 **OF** 2	
LOCATION	LeRoy, NY	**LOCATION**	TP-5
CLIENT	National Grid		
CONTRACTOR	Nothnagle Drilling	**GROUND EL.**	
OPERATOR	Kevin Busch	**DATUM**	
EQUIPMENT	Backhoe	**PROJECT NO.**	1503890
WEATHER	Partly Sunny, 50s	**TIME STARTED**	13:40 p.m.
GEI REP	G. Schmidt **DATE** 5/10/2016	**TIME COMPLETED**	14:15 p.m.

DEPTH OF LAYER CHANGE	SAMPLE NO. and TYPE	SAMPLE DEPTH (FT)	SOIL DESCRIPTION
1.0			
2.0			
3.0			
4.0			
5.0			
6.0			
7.0			

Caption: View to the south of TP-5.

NOTES:
Sample taken at 5.2-6.2 feet below ground surface at 14:10.

PIT DIMENSIONS (FT):

LENGTH	8.0'
WIDTH	2.8'
DEPTH	6.2'

GEI Consultants

Site Characterization -
Monitoring Well and Soil Boring Logs

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

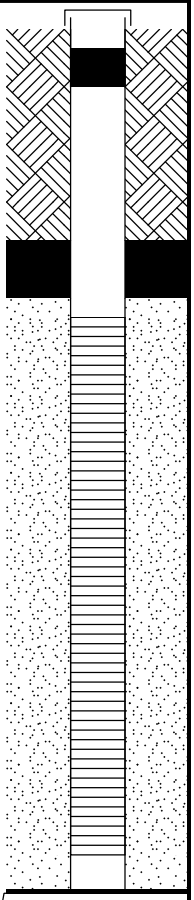
CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
MW1

GROUND SURFACE ELEVATION (FT): 847.6 **LOCATION:** LeRoy
NORTHING: 1087458.8 **EASTING:** 1306953.6 **TOTAL DEPTH (FT):** 11.50
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Garrett Schmidt **DATE START / END:** 5/13/2016 - 5/13/2016
DRILLING DETAILS: Direct Push / CME 55LC
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	4.0	2.1	3.4				(0'- 0.2') ASPHALT. (0.2'- 4') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~15% fines, non plastic, ~10% gravel, fine to coarse, subangular; moist, brown.
				0.4				
				0.0				
				0.0				
5	S2	4.0	1	0.0				(4'- 8') WELL GRADED GRAVEL WITH SILT AND SAND (GW-GM); ~90% gravel, fine to coarse, ~5% sand, fine, ~5% fines, non plastic; moist to wet, dark gray.
				0.0				
	S3	3.5	2.5	0.5				(8'- 11') WELL GRADED GRAVEL WITH SILT AND SAND (GW-GM); ~90% gravel, fine to coarse, subangular, ~5% sand, fine, ~5% fines, non plastic; wet, dark brown, moderate hydrocarbon-like odor.
10				1.0				
				0.9			MW1(10.5-11.5)	
				0.6				(11'- 11.5') dry, dark gray, rock (shale), hard, very slightly weathered joints. Bottom of borehole at 11.5 feet.

WELL CONSTRUCTION DETAILS



NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 8/3/16

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

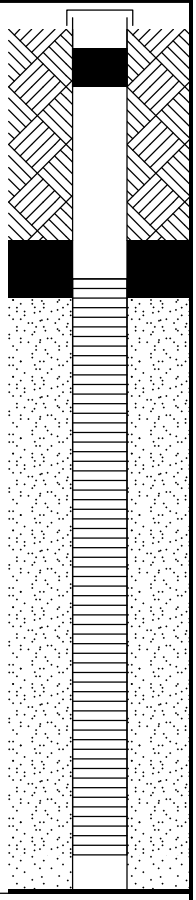
CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
MW2

GROUND SURFACE ELEVATION (FT): 848.2 **LOCATION:** LeRoy
NORTHING: 1087521.7 **EASTING:** 1306908.6 **TOTAL DEPTH (FT):** 11.50
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Garrett Schmidt **DATE START / END:** 5/11/2016 - 5/11/2016
DRILLING DETAILS: Direct Push / CME 55LC
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	2.0	1.4	NA				(0'- 0.2') TOPSOIL. (0.2'- 2.2') CONCRETE.
	S2	4.0	2.5	3.0 14.0 4.8 16.1				(2.2'- 6') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~80% sand, fine, ~15% fines, non plastic, ~5% gravel, fine to coarse, subangular; moist, brown, FILL, very slight hydrocarbon-like odor, few brick and coal fragments.
5	S3	4.0	2.4	67.4 238.9 306.8 299.5			MW2(8.5-9.5)	(6'- 10') (SP-SM); ~80% sand, fine, ~15% fines, non plastic, ~5% gravel, fine to coarse, subangular; wet, FILL, moderate hydrocarbon-like odor, sheens, brown-stained, grains coated with blackish-brown material.
10	S4	1.5	1.5	113.2 65.8 33.6			MW2(10.5-11.5)	(10'- 11.5') POORLY GRADED SAND WITH SILT (SP-SM); ~85% sand, fine, ~15% fines, non plastic; wet, light brown, slight hydrocarbon-like odor, brown-staining.
								Bottom of borehole at 11.5 feet.

WELL CONSTRUCTION DETAILS



NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 8/3/16

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

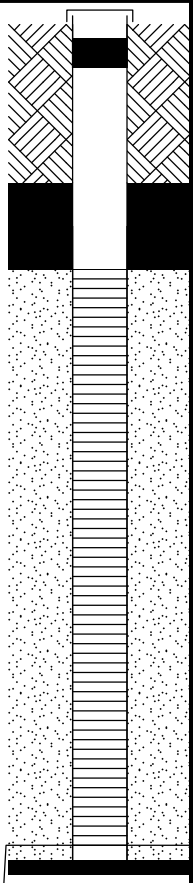
CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
MW3

GROUND SURFACE ELEVATION (FT): 852 **LOCATION:** LeRoy
NORTHING: 1087516.6 **EASTING:** 1306871.4 **TOTAL DEPTH (FT):** 14.50
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Garrett Schmidt **DATE START / END:** 5/11/2016 - 5/11/2016
DRILLING DETAILS: Direct Push / CME 55LC
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	4.0	1.8	3.7 0.0 0.0 0.0				(0'- 0.2') TOPSOIL. (0.2'- 7') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~20% fines, non plastic, ~5% gravel, fine to coarse, subangular; dry, brown, FILL, many brick, coal, and ash fragments.
5	S2	4.0	1.5	0.3 0.4 0.0 0.0				(7'- 8') POORLY GRADED SAND WITH SILT (SP-SM); ~80% sand, fine, ~20% fines, non plastic; dry to moist, light brown.
10	S3	4.0	3.1	163.3 46.7 43.0 8.0			MW3(8.5-9.5)	(8'- 12') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~20% fines, non plastic, ~5% gravel, fine to coarse, subangular; moist to wet, light brown, very slight hydrocarbon-like odor.
	S4	2.5	2.5	8.3 20.7 1.5 0.5			MW3(13.0-14.0)	(12'- 14.3') POORLY GRADED SAND WITH SILT (SP-SM); ~80% sand, fine, ~20% fines, non plastic; moist, light brown, till. (14.3'- 14.5') dark gray, rock, hard, very slightly weathered. Bottom of borehole at 14.5 feet.

WELL CONSTRUCTION DETAILS



NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 8/3/16

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

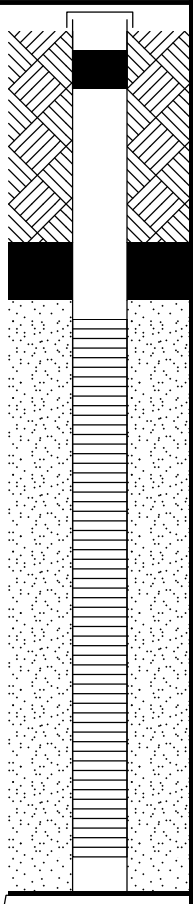
CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
MW4

GROUND SURFACE ELEVATION (FT): 847.3 **LOCATION:** LeRoy
NORTHING: 1087480.2 **EASTING:** 1306993.5 **TOTAL DEPTH (FT):** 11.50
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Garrett Schmidt **DATE START / END:** 5/13/2016 - 5/13/2016
DRILLING DETAILS: Direct Push / CME 55LC
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	SOIL / BEDROCK DESCRIPTION
0	S1	4.0	3.1	0.0			(0'- 0.4') TOPSOIL.
							(0.4'- 1.4') CONCRETE.
				0.0			(1.4'- 4') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~15% fines, non plastic, ~10% gravel, fine to coarse, subangular; dry to moist, brown, FILL, some brick, coal, glass and metal fragments.
				0.0			
				0.0			
5	S2	4.0	0	NA			(4'- 8') No Recovery.
	S3	3.5	3.5	0.0			(8'- 11') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~80% sand, fine, ~15% fines, low plasticity, ~5% gravel, fine to coarse, subangular; wet, brown.
				0.0			
10				0.0			
				0.0			(11'- 11.5') dry, dark gray, rock (shale), hard, very slightly weathered joints.
							Bottom of borehole at 11.5 feet.

WELL CONSTRUCTION DETAILS



NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 8/3/16

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
SB1

GROUND SURFACE ELEVATION (FT): 851.2 **LOCATION:** LeRoy
NORTHING: 1087485.4 **EASTING:** 1306866 **TOTAL DEPTH (FT):** 12.50
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Garrett Schmidt **DATE START / END:** 5/16/2016 - 5/16/2016
DRILLING DETAILS: Direct Push / CME 55LC
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	0.5	0.5					(0'- 0.5') CONCRETE.
	S2	3.5	3.2	0.0				(0.5'- 1.5') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~15% fines, non plastic, ~10% gravel, fine to coarse, subangular; dry to moist, brown, FILL, many bricks, coal, ash fragments.
				0.0				
				0.0				(1.5'- 8') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~80% sand, fine, ~15% fines, non plastic, ~5% gravel, fine to coarse, subangular; moist, light brown.
				0.0				
5	S3	4.0	3.1	0.0				
				0.0				
				0.0				
				0.0				
				0.0				
	S4	3.0	3	0.0				(8'- 12') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~15% fines, non plastic, ~10% gravel, fine to coarse, subangular; moist to wet, light brown.
				0.0				
10				0.0				
	S5	1.5	1.5	0.0			SB-1 (11.0-12.0)	
				0.0				(12'- 12.5') dry, dark gray, rock (shale), hard, very slightly weathered joints.
								Bottom of borehole at 12.5 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 7/13/16

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
SB2

GROUND SURFACE ELEVATION (FT): 856.1 **LOCATION:** LeRoy
NORTHING: 1087464.5 **EASTING:** 1306829.8 **TOTAL DEPTH (FT):** 16.40
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Garrett Schmidt **DATE START / END:** 5/13/2016 - 5/13/2016
DRILLING DETAILS: Direct Push / CME 55LC
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	SOIL / BEDROCK DESCRIPTION
0	S1	4.0	2.6	0.0			(0'- 0.2') ASPHALT. (0.2'- 0.9') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, ~15% fines, non plastic, ~10% gravel; dry, brown, TOPSOIL. (0.9'- 4.8') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~15% fines, non plastic, ~10% gravel, fine to coarse, subangular; dry to moist, brown, FILL, many coal, brick, ash, glass fragments.
				0.0			
				0.0			
				0.0			
	S2	4.0	3.4	0.0			
5				0.0			(4.8'- 8') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~80% sand, fine, ~15% fines, non plastic, ~5% gravel, subangular; moist, light brown.
				0.0			
				0.0			
	S3	4.0	3.5	0.0			(8'- 12') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~80% sand, fine, ~15% fines, non plastic, ~5% gravel, subangular; moist to wet, light brown.
10				0.0			
				0.0			
				0.0			
	S4	3.0	3	0.0			(12'- 16.2') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~80% sand, fine, ~15% fines, non plastic, ~5% gravel, fine to coarse, subangular; moist, light brown.
				0.0			
				0.0			
15	S5	1.4	1.4	0.0			
				0.0			
				0.0			(16.2'- 16.4') dry, dark gray, rock (shale), hard, very slightly weathered joints. Bottom of borehole at 16.4 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 7/13/16

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 2
SB3

GROUND SURFACE ELEVATION (FT): 862.6 **LOCATION:** LeRoy
NORTHING: 1087488.7 **EASTING:** 1306786.3 **TOTAL DEPTH (FT):** 26.50
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Garrett Schmidt **DATE START / END:** 5/12/2016 - 5/12/2016
DRILLING DETAILS: Direct Push / CME 55LC
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	4.0	3.2	0.0				(0'- 0.5') TOPSOIL.
				0.0				(0.5'- 1.5') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~15% fines, non plastic, ~5% gravel, fine to coarse, subangular; moist, brown, FILL, many brick, ash, coal fragments.
				0.0				(1.5'- 4') POORLY GRADED SAND WITH SILT (SP-SM); ~80% sand, fine, ~20% fines, non plastic; moist, light brown.
				1.2				
	S2	4.0	3.5	0.0				(4'- 8') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~15% fines, non plastic, ~5% gravel, fine to coarse, subangular; moist, light brown.
5				0.1				
				0.2				
				0.0				
	S3	4.0	4	0.0				(8'- 12') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~15% fines, non plastic, ~5% gravel, fine to coarse, subangular; moist, light brown.
				0.0				
10				0.0				
				0.0				
	S4	3.0	3	0.3				(12'- 15') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~20% fines, non plastic, ~5% gravel, fine to coarse, subangular; moist, light brown.
				0.3				
				0.0				
15				1.2				

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 7/13/16

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG

PAGE 2 of 2

SB3

DEPTH FT.	SAMPLE INFO TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
15	S5	2.0	2	0.3 0.3				(15'- 17') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~20% fines, non plastic, ~5% gravel, fine to coarse, subangular; moist, light brown.
	S6	1.0	1	0.9				(17'- 19') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~20% fines, non plastic, ~5% gravel, fine to coarse, subangular; wet, light brown.
	S7	1.0	1	0.0			SB-3 (18.0-19.0)	
	S8	2.0	2	1.0 0.5				(19'- 21') POORLY GRADED SAND WITH SILT (SP-SM); ~80% sand, fine, ~20% fines, non plastic; moist to wet, light brown, till.
20				2.4				
	S9	1.5	1.5	0.2 0.4 0.1				(21'- 26') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~80% sand, fine, ~15% fines, non plastic, ~5% gravel, fine to coarse, subangular; moist, light brown.
	S10	1.2	1.2	2.2 1.5				
	S11	2.0	2	6.3				
25				1.6 0.4				
	S12	0.5	0.5	0.0				(26'- 26.5') dry, dark gray, rock (shale), hard, very slightly weathered joints. Bottom of borehole at 26.5 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 7/13/16

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 2
SB4

GROUND SURFACE ELEVATION (FT): 862.6 **LOCATION:** LeRoy
NORTHING: 1087524.7 **EASTING:** 1306808.5 **TOTAL DEPTH (FT):** 25.50
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Garrett Schmidt **DATE START / END:** 5/12/2016 - 5/13/2016
DRILLING DETAILS: Direct Push / CME 55LC
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	4.0	3.2	0.0				(0'- 0.6') TOPSOIL.
				0.0				(0.6'- 1.3') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~20% fines, non plastic, ~5% gravel, fine to coarse, subangular; dry to moist, brown, FILL, some brick, coal, ash fragments.
				0.0				(1.3'- 12') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~15% fines, non plastic, ~10% gravel, fine to coarse, subangular; moist, light brown.
5	S2	4.0	4	0.0				
				0.0				
				0.0				
				0.0				
	S3	2.0	2	0.0				
				0.0				
10	S4	2.0	2	0.0				
				0.0				
	S5	2.0	2	0.0				(12'- 18') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~15% fines, non plastic, ~10% gravel, fine to coarse, subangular; moist to wet, light brown.
				0.0				
	S6	2.0	2	0.0				
15				0.0				

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 2/5/18

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG

PAGE 2 of 2

SB4

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
15				0.0				
	S7	2.0	2	0.0 0.0 0.0				
	S8	2.0	2	0.0 0.0 0.0			SB-4 (18.0-19.0)	(18'- 21.5') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~15% fines, non plastic, ~10% gravel, fine to coarse, subangular; moist to wet, light brown.
20	S9	1.5	1.5	0.0 0.0 0.0				
	S10	1.0	1	0.0 0.0				(21.5'- 25.3') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~80% sand, fine, ~15% fines, non plastic, ~5% gravel, fine to coarse, subangular; moist, light brown.
	S11	3.0	3	0.0 0.0 0.0				
25				0.0				(25.3'- 25.5') dry, dark gray, rock (shale), hard, very slightly weathered joints. Bottom of borehole at 25.5 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 2/5/18

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
SB5

GROUND SURFACE ELEVATION (FT): 850.8 **LOCATION:** LeRoy
NORTHING: 1087524.1 **EASTING:** 1306877.9 **TOTAL DEPTH (FT):** 13.60
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Garrett Schmidt **DATE START / END:** 5/11/2016 - 5/11/2016
DRILLING DETAILS: Direct Push / CME 55LC
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	4.0	1.8	24.1 61.2 2.2 0.8				(0'- 0.2') TOPSOIL. (0.2'- 4') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~20% fines, non plastic, ~5% gravel, fine to coarse, subangular; dry to moist, brown, FILL, many brick, coal, ash and debris fragments; very slight hydrocarbon-like odor.
5	S2	4.0	1.9	0.5 0.2 0.1 0.1				(4'- 8') POORLY GRADED SAND WITH SILT (SP-SM); ~80% sand, fine, ~20% fines, non plastic; moist, light brown.
10	S3	4.0	1.8	0.0 5.8 12.7 13.1			SB-5 (10.5-11.5')	(8'- 12') POORLY GRADED SAND WITH SILT (SP-SM); ~80% sand, fine, ~20% fines, non plastic; moist to wet, light brown, brownish-black staining, slight hydrocarbon-like odor, sheens, blebs.
	S4	1.6	1.3	5.6 2.0 1.1				(13.4'- 13.6') dark gray, rock (shale), hard, very slightly weathered. Bottom of borehole at 13.6 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 7/13/16

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
SB6

GROUND SURFACE ELEVATION (FT): 848 **LOCATION:** LeRoy
NORTHING: 1087527.1 **EASTING:** 1306922.8 **TOTAL DEPTH (FT):** 12.00
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Garrett Schmidt **DATE START / END:** 5/11/2016 - 5/11/2016
DRILLING DETAILS: Direct Push / CME 55LC
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	4.0	2.6	70.4 2.0 2.8 4.3				(0'- 7') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~20% fines, non plastic, ~5% gravel, fine to coarse, subangular; moist, brown, FILL, many brick, coal, ash and debris fragments; very slight hydrocarbon-like odor.
5	S2	4.0	1.8	12.1 1.4 5.0 18.5				(7'- 11') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~80% sand, fine, ~15% fines, non plastic, ~5% gravel, fine to coarse, subangular; moist to wet, light brown, FILL, few brick fragments; very slight hydrocarbon-like odor.
10	S3	4.0	3.2	5.4 108 33.8 226.6			SB-6 (11.0-12.0)	(11'- 11.5') POORLY GRADED SAND WITH SILT AND GRAVEL; FILL, wood fragments, few brick fragments; slight hydrocarbon-like odors, sheens. (11.5'- 12') dark gray, rock (shale), hard, very slightly weathered joints. Bottom of borehole at 12.0 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 7/13/16

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
SB7

GROUND SURFACE ELEVATION (FT): 854.6 **LOCATION:** LeRoy
NORTHING: 1087516.2 **EASTING:** 1306846.3 **TOTAL DEPTH (FT):** 9.00
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Garrett Schmidt **DATE START / END:** 5/12/2016 - 5/12/2016
DRILLING DETAILS: Direct Push / CME 55LC
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	4.0	2.8	7.5 374.3 263.1 18.6			SB-7 (1.0-2.0)	(0'- 0.5') TOPSOIL. (0.5'- 4') ~75% sand, fine, ~20% fines, non plastic, ~5% gravel, fine to coarse, subangular; moist, brown, FILL, many wood, brick, coal, ash, glass and ceramic fragments; slight hydrocarbon-like odor.
5	S2	4.0	1	20.5 21.8				(4'- 9') ~75% sand, ~20% fines, non plastic, ~5% gravel; wet, brown, FILL, many brick, coal, ash, glass, ceramic and wood fragments; moderate hydrocarbon-like odor, sheens.
	S3	1.0	0.3	11.8				
								Bottom of borehole at 9.0 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 7/13/16

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
SB8

GROUND SURFACE ELEVATION (FT): 857.5 **LOCATION:** LeRoy
NORTHING: 1087512.4 **EASTING:** 1306828.2 **TOTAL DEPTH (FT):** 12.80
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Garrett Schmidt **DATE START / END:** 5/12/2016 - 5/12/2016
DRILLING DETAILS: Direct Push / CME 55LC
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	4.0	2.6	121.3 33.6 9.3 0.8				(0'- 0.6') TOPSOIL. (0.6'- 8') ~75% sand, fine, ~20% fines, non plastic, ~5% gravel, fine to coarse, subangular; moist, brown, FILL, many brick coal, ash, and glass fragments.
5	S2	4.0	2.4	90.4 0.6 2.0 2.1				
10	S3	4.0	1	0.9 1.1			SB-8 (8.0-9.0)	(8'- 12') ~75% sand, fine, ~20% fines, non plastic, ~5% gravel, fine to coarse, subangular; moist, brown, FILL, many brick coal, ash, and glass fragments; slight hydrocarbon-like odor.
	S4	0.8	0.8					(12'- 12.8') ~75% sand, fine, ~20% fines, non plastic, ~5% gravel, fine to coarse, subangular; wet, brown, FILL, many brick, coal, ash and glass fragments; moderate hydrocarbon-like odor. Bottom of borehole at 12.8 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 7/13/16

Remedial Investigation - Monitoring Well and Soil Boring Logs

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

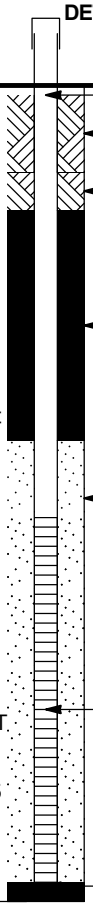
BORING LOG
PAGE 1 of 1
MW5

GROUND SURFACE ELEVATION (FT): 848.3 **LOCATION:** LeRoy RI
NORTHING: 1087546.2 **EASTING:** 1306883.9 **TOTAL DEPTH (FT):** 10.50
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Mike Cummings **DATE START / END:** 12/5/2017 - 12/5/2017
DRILLING DETAILS: Geoprobe Direct Push / Core Type: Macrocore
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	NA	4.0		NA				(0'- 4') FILL, Hand clear.
5	S1	4.0	1	0				(4'- 8') saturated, brown, FILL, fine sand with silt and little fine gravel; trace red bricks; loose.
10	S2	2.5	1.2	0			MW-5(9.5-10.5)	(8'- 10.5') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); saturated, brown gray, TILL, fine to medium sand with silt and some medium subangular gravel; stiff. Refusal at 10.5 bgs on bedrock.

Bottom of borehole at 10.5 feet.

WELL CONSTRUCTION DETAILS



NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 3/28/18

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

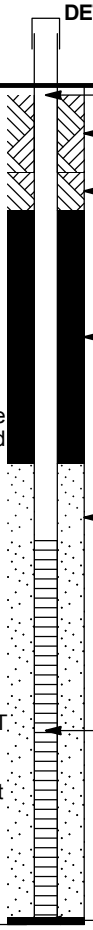
CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
MW6

GROUND SURFACE ELEVATION (FT): 847 **LOCATION:** LeRoy RI
NORTHING: 1087548.9 **EASTING:** 1306969 **TOTAL DEPTH (FT):** 10.80
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Mike Cummings **DATE START / END:** 12/5/2017 - 12/5/2017
DRILLING DETAILS: Geoprobe Direct Push / Core Type: Macrocore
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	NA	4.0		NA				(0'- 4') FILL, Hand clear.
5	S1	4.0	2.3	0.0				(4'- 8') saturated, brown to light brown, FILL, fine sand with silt, little ash-like material, cinders and slag, grading to light brown fine sand with silt and little cinder-like material. Saturated at ~7' bgs.
10	S2	2.8	2	0.0			MW-6(9.5-10.5)	(8'- 10.5') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); saturated, brown, ash-like material to ~ 0.5', grading to fine sand with silt and trace fine gravel. Sampler refusal at 10.8'.
								Bottom of borehole at 10.8 feet.

WELL CONSTRUCTION DETAILS



NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 3/28/18

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

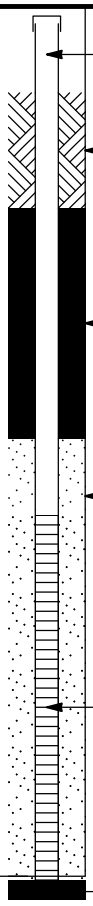
CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
MW7

GROUND SURFACE ELEVATION (FT): 847.4 **LOCATION:** LeRoy RI
NORTHING: 1087507.8 **EASTING:** 1306950.2 **TOTAL DEPTH (FT):** 11.20
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Mike Cummings **DATE START / END:** 12/4/2017 - 12/4/2017
DRILLING DETAILS: Geoprobe Direct Push / Core Type: Macrocore
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	NA	5.0		NA				(0'- 5') FILL, Hand clear. Wet at 2' bgs.
5	S1	4.0	1.9	0				(5'- 9') dry to moist, gray brown, FILL, fine to medium sand, limestone gravel; some silt/fine sand.
10	S2	2.2	1.8	45.7			MW-7(10-11.2)	(9'- 11.2') saturated, dark gray to black, FILL, fine to medium sand with silt and some fine angular gravel; loose; moderate sheen; NAPL staining below 10.5' bgs. Limestone bedrock fragments at 11.2' bgs.
								Bottom of borehole at 11.2 feet.

WELL CONSTRUCTION DETAILS



NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 3/28/18

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

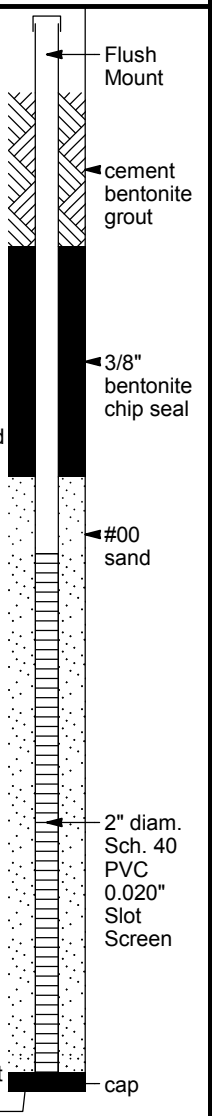
CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
MW8

GROUND SURFACE ELEVATION (FT): 850.5 **LOCATION:** LeRoy RI
NORTHING: 1087442.5 **EASTING:** 1306971 **TOTAL DEPTH (FT):** 14.00
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Mike Cummings **DATE START / END:** 12/4/2017 - 12/4/2017
DRILLING DETAILS: Geoprobe Direct Push / Core Type: Macrocore
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	NA	5.0		0.0				(0'- 5') FILL, Hand clear.
5	S1	4.0	1.3	0.0				(5'- 9') dry, brown to dark brown, FILL, crushed limestone gravel fill with poorly graded sand and silt; loose to firm.
	S2	4.0	1.6	0.0				(9'- 13') dry to moist, FILL, poorly graded sand with silt, little coarse angular gravel; loose.
10	S3	1.0	0.8	3.9			MW-8(13-14)	(13'- 14') saturated, black, FILL, fine to medium sand with little silt and gravel; very slight sheen on water with slight hydrocarbon odor, refusal at 14.
								Bottom of borehole at 14.0 feet.

WELL CONSTRUCTION DETAILS



NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 3/28/18

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
SB10

GROUND SURFACE ELEVATION (FT): 846 **LOCATION:** LeRoy RI
NORTHING: 1087541.1 **EASTING:** 1306942.3 **TOTAL DEPTH (FT):** 9.50
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Mike Cummings **DATE START / END:** 12/5/2017 - 12/5/2017
DRILLING DETAILS: Geoprobe Direct Push / Core Type: Macrocore
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	NA	4.0		NA				(0'- 4') FILL, Hand clear.
5	S1	4.0	1.8	0.0				(4'- 8') gray brown, FILL, fine to medium sand, silt, and medium to coarse limestone gravel; saturated at 7.0' bgs. Soft to loose throughout.
	S2	1.5	1.5	0.0			SB-10(8.0-8.6')	(8'- 8.6') FILL, As above, color grading to black and predominantly coarse limestone gravel, with little sand and silt. (8.6'- 9.5') FILL, weathered concrete; refusal at 9.5' bgs.
								Bottom of borehole at 9.5 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 3/28/18

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
SB11

GROUND SURFACE ELEVATION (FT): 849 **LOCATION:** LeRoy RI
NORTHING: 1087462.5 **EASTING:** 1306919.9 **TOTAL DEPTH (FT):** 13.90
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Mike Cummings **DATE START / END:** 12/4/2017 - 12/4/2017
DRILLING DETAILS: Geoprobe Direct Push / Core Type: Macrocore
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	NA	5.0		NA				(0'- 5') FILL, Hand clear.
5	S1	4.0	2	0.0 1.0 0.0				(5'- 12') dark brown to black, FILL, sand, silt, gravel, brick, coal slag; saturated at ~8.0' bgs; loose throughout.
10	S2	4.9	3.3	7.0 17.4 23.5			SB-11(13-13.9)	(12'- 12.5') dark brown to black, FILL, sand, silt, gravel, brick, coal slag, few wood pieces; saturated; loose throughout. (12.5'- 13.9') dark gray to black, FILL, fine to medium sand with angular bedrock gravel; moderate naphthalene-like odor with light to moderate sheen; saturated throughout.
								Bottom of borehole at 13.9 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 3/28/18

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
SB12

GROUND SURFACE ELEVATION (FT): 847.3 **LOCATION:** LeRoy RI
NORTHING: 1087479.6 **EASTING:** 1306956.7 **TOTAL DEPTH (FT):** 11.50
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Mike Cummings **DATE START / END:** 12/4/2017 - 12/4/2017
DRILLING DETAILS: Geoprobe Direct Push / Core Type: Macrocore
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	NA	5.0		NA				(0'- 5') FILL, Hand clear.
5	S1	4.0	2.7	0.0				(5'- 9') moist, red brown to dark black, FILL, fine to medium sand with silt and medium to coarse gravel (shale limestone).
	S2	2.5	2.5	155			SB-12(9.0-11.5)	(9'- 11.5') saturated, FILL, As above, with ash-like material; heavy NAPL staining.
10								Bottom of borehole at 11.5 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 3/28/18

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
SB13

GROUND SURFACE ELEVATION (FT): 846.6 **LOCATION:** LeRoy RI
NORTHING: 1087507.8 **EASTING:** 1306985.8 **TOTAL DEPTH (FT):** 10.70
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Mike Cummings **DATE START / END:** 12/4/2017 - 12/4/2017
DRILLING DETAILS: Geoprobe Direct Push / Core Type: Macrocore
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	NA	5.0		NA				(0'- 5') FILL, Hand clear.
5	S1	4.0	1.6	0.0				(5'- 9') brown to dark brown, FILL, fine sand with silt and gravel, red brick fragments, coal slag, trace ash-like material, grading to native SP-SM fine sand silt at ~8.0' bgs.
10	S2	1.7	1.1	3.4			SB-13(9.0-10.5)	(9'- 10.7') gray to mottled dark gray black, fine to medium sand with silt and trace shale bedrock fragments, weathered tar-like material with naphthalene-like odor, light sheen on bedrock fragments in bottom of sampler. Refusal at 10.7' bgs.
								Bottom of borehole at 10.7 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 3/28/18

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
SB14

GROUND SURFACE ELEVATION (FT): 846.8 **LOCATION:** LeRoy RI
NORTHING: 1087494.3 **EASTING:** 1306988.5 **TOTAL DEPTH (FT):** 11.00
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Mike Cummings **DATE START / END:** 12/4/2017 - 12/4/2017
DRILLING DETAILS: Geoprobe Direct Push / Core Type: Macrocore
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	NA	5.0		NA				(0'- 5') FILL, Hand clear with air knife/vacuum truck.
5	S1	4.0	2.6	0.0				(5'- 9') saturated, gray to brown, FILL, fine sand with silt, brick, trace ash-like material, shale bedrock fragments, firm.
10	S2	2.0	1.9	0.0			SB-14(9.0-11.0)	(9'- 11') (SP-SM); gray/olive gray, grading to brown, poorly graded sand with silt, firm throughout, native, undisturbed material below 9.0' bgs. Refusal at 11.0' bgs. Shale bedrock fragments in base of sampler.
								Bottom of borehole at 11.0 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 3/28/18

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
SB15

GROUND SURFACE ELEVATION (FT): 847.9 **LOCATION:** LeRoy RI
NORTHING: 1087548.2 **EASTING:** 1306910.3 **TOTAL DEPTH (FT):** 11.50
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Mike Cummings **DATE START / END:** 12/5/2017 - 12/5/2017
DRILLING DETAILS: Geoprobe Direct Push / Core Type: Macrocore
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	NA	4.0		NA				(0'- 4') FILL, Hand clear.
5	S1	4.0	2.1	0.0				(4'- 8') light brown grading to gray, FILL, poorly graded sand with silt, trace fine rounded gravel, saturated at 2.0' bgs, firm.
10	S2	3.5	2.3	0.0			SB-15(10.5-11.5)	(8'- 11.5') FILL, As above, few red brick fragments and wood pieces bottom 1' of sample, saturated. Refusal at 11.5' bgs. Shale bedrock fragments in bottom of sampler.
								Bottom of borehole at 11.5 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 3/28/18

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG
PAGE 1 of 1
SB16

GROUND SURFACE ELEVATION (FT): 847.5 **LOCATION:** LeRoy RI
NORTHING: 1087458.3 **EASTING:** 1306964.8 **TOTAL DEPTH (FT):** 11.30
DRILLED BY: Nothnagle Drilling **DATUM VERT. / HORZ.:** NAVD 88 / NAD 83
LOGGED BY: Mike Cummings **DATE START / END:** 12/6/2017 - 12/6/2017
DRILLING DETAILS: Geoprobe Direct Push / Core Type: Macrocore
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	NA	4.0		NA				(0'- 4') FILL, Hand clear. Fill: crushed limestone gravel, fine sand, silt.
5	S1	4.0	1.3	0.0				(4'- 10') dry to moist, brown, FILL, angular, coarse limestone gravel with fine sand and silt, loose.
	S2	3.3	2	4				
10				15.7			SB-16(10-11)	(10'- 11.3') (SP-SM); black fine sand with silt, trace fine angular gravel, slight naphthalene-like odor, saturated below 11' bgs, soft throughout, refusal at 11.3' bgs.
								Bottom of borehole at 11.3 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 3/28/18

GEI Consultants, Inc., P.C. 1301 Trumansburg Road Ithaca, NY 14850 (607) 216-8955	CLIENT: National Grid PROJECT: LeRoy Former MGP Site CITY/STATE: LeRoy, NY GEI PROJECT NUMBER: 1503890	BORING LOG PAGE 1 of 2 SB9

GROUND SURFACE ELEVATION (FT): 859.4 LOCATION: LeRoy RI
NORTHING: 1087538.3 EASTING: 1306839.6 TOTAL DEPTH (FT): 17.50
DRILLED BY: Nothnagle Drilling DATUM VERT. / HORZ.: NAVD 88 / NAD 83
LOGGED BY: Mike Cummings DATE START / END: 12/6/2017 - 12/6/2017
DRILLING DETAILS: Geoprobe Direct Push / Core Type: Macrocore
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0		4.0						(0'- 4') FILL, Hand clear.
	S1	4.0	3.1	0.0				(4'- 10.8') dry to moist, FILL, weathered concrete.
5								
	S2	4.0	2	0.0				
10								(10.8'- 12') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); saturated, brown fine sand with silt and trace fines, soft.
	S3	4.0	2.6	0.0				(12'- 16') POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); dry, light reddish brown, brown fine sand with silt and trace fines. Till with fine to medium rounded gravel becoming moist, hard.
15								

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 3/28/18

GEI Consultants

GEI Consultants, Inc., P.C.
1301 Trumansburg Road
Ithaca, NY 14850
(607) 216-8955

CLIENT: National Grid
PROJECT: LeRoy Former MGP Site
CITY/STATE: LeRoy, NY
GEI PROJECT NUMBER: 1503890

BORING LOG

PAGE 2 of 2

SB9

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
15								
	S4	1.5	1.5	0.0			SB-9(16.5-17.5)	(16'- 17.5') (SP-SM); dry, As above, Till , hard. Refusal at 17.5'.
								Bottom of borehole at 17.5 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

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

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

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR
HLO = HYDROCARBON LIKE ODOR
GLO = GASOLINE LIKE ODOR

ENVIRONMENTAL BORING LOG LEROY BORELOGS.GPJ GEI CONSULTANTS.GDT 3/28/18

Appendix C

Investigation Photographs

Photographic Record
GEI Consultants, Inc., P.C.

Project: National Grid – LeRoy MGP Site Characterization

Location: LeRoy, NY

Photographer: B. Coulombe
Date: 9/25/2015
Photo No.: 1
Direction: E

Comments:
View showing entrance to garage. Monitoring well MW8 was installed where the vehicles are parked at the right side of the photo.

Photographer: B. Coulombe
Date: 9/25/2015
Photo No.: 2
Direction: N

Comments:
Inside garage bay. Boring SB1 located at left side of photo between the two garage bays.

Photographic Record
GEI Consultants, Inc., P.C.

Project: National Grid – LeRoy MGP Site Characterization

Location: LeRoy, NY

Photographer: B. Coulombe
Date: 9/25/2015
Photo No.: 3
Direction: N

Comments:
Inside second garage bay.

Photographer: B. Coulombe
Date: 9/25/2015
Photo No.: 4
Direction: E

Comments:
Front of garage building, showing stained pavement. Entrance to the storage yard at the rear (east) of the building shown in background.

Photographic Record
GEI Consultants, Inc., P.C.

Project: National Grid – LeRoy MGP Site Characterization

Location: LeRoy, NY

Photographer: B. Coulombe
Date:
Photo No.: 5/17/16
Direction: N

Comments:
Oil-water separator located on north side of garage.

Photographer: G. Schmidt
Date: 12/12/2017
Photo No.: 6
Direction: E

Comments:
Former NY Central (now CSX-owned) railroad property along north side of site.

Photographic Record
GEI Consultants, Inc., P.C.

Project: National Grid – LeRoy MGP Site Characterization

Location: LeRoy, NY

Photographer: B. Coulombe
Date: 9/25/2015
Photo No.: 7
Direction: SW

Comments:
Location of former gas holder, showing northwest corner of the garage building, constructed over the former gas holder. Note equipment and vehicle storage on and around the site.

Photographer: B. Coulombe
Date: 9/25/2015
Photo No.: 8
Direction: SE

Comments:
View across rear of garage.

Photographic Record
GEI Consultants, Inc., P.C.

Project: National Grid – LeRoy MGP Site Characterization

Location: LeRoy, NY

Photographer: B. Coulombe
Date: 9/25/2015
Photo No.: 9
Direction: NE

Comments:
View of storage yard at the east side of the site. Note the abandoned steel framing for the substation transformers.

Photographer: B. Coulombe
Date: 9/25/2015
Photo No.: 10
Direction: NW

Comments:
Southeast corner of former substation building.

Photographic Record
GEI Consultants, Inc., P.C.

Project: National Grid – LeRoy MGP Site Characterization

Location: LeRoy, NY

Photographer: B. Coulombe
Date: 9/25/2015
Photo No.: 11
Direction: NA

Comments:
View of materials stored inside the former substation building.

Photographer: B. Coulombe
Date: 9/25/2015
Photo No.: 12
Direction: W

Comments:
View across back of garage and former substation building with assorted materials stored. Note that the garage oil-water separator is located in this area (central portion of photo).

Photographic Record
GEI Consultants, Inc., P.C.

Project: National Grid – LeRoy MGP Remedial Investigation

Location: LeRoy, NY

Photographer: G. Schmidt
Date: 5/17/2016
Photo No.: 13
Direction: N

Comments:
Oakta Creek looking downstream (north). Site is above the creek at the left side.

Photographer: G. Schmidt
Date: 5/17/2016
Photo No.: 14
Direction: S

Comments:
Oakta Creek looking upstream (south). Site is located to the right above the creek.

Appendix D

Data Usability Summary Reports (CD-ROM)

Appendix E

Groundwater Sampling Logs (CD-ROM)

Appendix F

Perimeter Air Monitoring Results (CD-ROM located at Appendix D tab)

Appendix G

Laboratory Analytical Data Reports (CD-ROM)