nationalgrid

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Senior Environmental Engineer
Environmental Department

July 31, 2008

Mr. Charles Post
Engineering Geologist
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7014

Re: ***Watertown (Anthony St.) Former MGP***
Site #: V00473-6
Final Remedial Investigation Work Plan

Dear Mr. Post:

This letter presents the final Remedial Investigation (RI) Work Plan for National Grid's Non-Owned former Manufactured Gas Plant (MGP) site located at J.B. Wise Place (formerly known as Anthony Street) in Watertown, New York. This RI Work Plan was prepared in accordance with the New York State Department of Environmental Conservation's (NYSDEC's) March 30, 2007 comments on the February 2007 draft Site Characterization Report (SC Report) and the conclusions presented in the final SC Report submitted to NYSDEC on April 30, 2007. This RI Work Plan also incorporates the NYSDEC-requested changes to the RI scope of work as documented in National Grid's July 8, 2008 letter which provided responses to the NYSDEC's comments on the March 3, 2008 draft RI Work Plan.

As discussed in the SC Report, data collected during the SC suggest that the former MGP has not had significant affect on overburden soil and ground water quality beneath the site. MGP-related affects (trace amount of tar) were only observed near the apparent floor of former Holder 1 which underlies Empsall Plaza (Figure 1). Elevated cyanide was detected in groundwater sampled from MW-1 located northeast from former Holder 3. The total cyanide analyses consisted of free cyanide and total cyanide. Total cyanide is comprised of strong acid dissociable (SAD) cyanide and weak acid dissociable (WAD) cyanide components. The results indicate that approximately 99% of the cyanide detected in groundwater consisted of total cyanide (SAD and WAD cyanides), which are the non-toxic forms of cyanide. The free cyanide (toxic form) detected was detected at trace levels well below New York State drinking water standards.

The primary goal of the RI will be to further define the extent of potential affects in the overburden and identify any potential affects in the bedrock that are associated with the former MGP. As a component of the RI, a Human Health Exposure Evaluation (HHEE) and a Fish and Wildlife Resource Impact Analysis (FWRIA) and will also be conducted to assess the potential

influences of the former MGP on human health and the environment. The proposed RI scope of work is presented below.

Monitoring Well Installation, Groundwater Sampling, and Hydraulic Testing

The goals of the RI will be to:

- further characterize groundwater flow direction in the overburden;
- characterize the general groundwater-flow direction in the bedrock;
- assess the hydraulic characteristics and physical properties of the overburden and bedrock;
- assess the nature and extent of potential MGP-related constituents in overburden soils at concentrations exceeding applicable Part 375 Recommended Soil Cleanup Objectives; and
- assess the nature and extent of potential MGP-related constituents dissolved in groundwater at concentrations exceeding NYSDEC Class GA Standards.

These goals will be attained through the installation, hydraulic testing, and groundwater sampling from five bedrock monitoring wells (MW-3R, MW-4R, MW-5R, MW-6R, and MW-7R) and one additional overburden monitoring well (MW-7). The following table presents the location and rationale for proposed new monitoring wells and the proposed locations of the new wells are shown on Figure 1.

Location	Action/Rationale
MW-3R	Install bedrock monitoring at a location between the purifier house and retorts and the Black River and near existing overburden monitoring well MW-3. Information collected at this location will be used to evaluate: • hydraulic gradient between the overburden and bedrock in this area; • whether MGP-related affects are present in bedrock downgradient from the purifiers and retorts; • physical properties of the bedrock (e.g., degree of fracturing, openness of fractures, rock type, weathering, etc.); and • groundwater-flow direction, quality, and hydraulic characteristics of the bedrock.
MW-4R	Install bedrock monitoring well inside former holder #3 footprint and near existing overburden monitoring well MW-1. Information collected at this location will be used to evaluate: • vertical extent of cyanide detected in overburden groundwater collected from MW-1; • hydraulic gradient between the overburden and bedrock in this area; • whether MGP-related affects are present in overburden and bedrock below the former holder #3 foundation; • bedrock groundwater quality below former holder #3; • physical properties of the bedrock (e.g., degree of fracturing, openness of fractures, rock type, weathering, etc.); and • groundwater-flow direction, quality, and hydraulic characteristics of the bedrock.

Location	Action/Rationale
MW-5R	Install bedrock monitoring well inside former holder #2 footprint and near existing overburden monitoring well MW-2. Information collected at this location will be used to evaluate: • vertical extent of benzene detected in overburden groundwater collected from MW-2; • hydraulic gradient between the overburden and bedrock in this area; • whether MGP-related affects are present in overburden and bedrock below the former holder #2 foundation; • bedrock groundwater quality below former holder #2; • physical properties of the bedrock; and • groundwater-flow direction, quality, and hydraulic characteristics of the bedrock.
MW-6R	Install bedrock monitoring well northeast of former holder #1 footprint. The assumed groundwater flow direction in the overburden and bedrock is to the northeast, in the direction of the Black River. As such, this bedrock well will be installed between former holder # 1 and the river, as near as possible to Empsall Plaza. For reasons explained in the SC Report (i.e., access limitations), a bedrock well cannot be installed inside of Empsall Plaza and above former holder #1. Information collected at this location will be used to evaluate: • downgradient extent of MGP-related affects observed at approximately 8 to 10 feet below grade inside the footprint of former holder #1; • bedrock groundwater quality in an assumed downgradient direction from former holder #1; • physical properties of the bedrock; and • groundwater-flow direction, quality, and hydraulic characteristics of the bedrock.
MW-7	Install overburden monitoring well in the assumed downgradient direction (northeast) from existing monitoring well MW-1. Information collected from this location will be used to evaluate: • whether cyanide concentrations detected at MW-1 are present in the assumed downgradient direction in the overburden from MW-1; • groundwater flow direction and quality in the overburden; • permeability of the overburden; and • physical properties of the overburden.
MW-7R	Install bedrock monitoring at a location between the former holder 3 2 and 3 and the Black River and near new overburden monitoring well MW-7. Information collected at this location will be used to evaluate: • hydraulic gradient between the overburden and bedrock in this area; • whether MGP-related affects are present in bedrock downgradient from these former holders; • physical properties of the bedrock (e.g., degree of fracturing, openness of fractures, rock type, weathering, etc.); and • groundwater-flow direction, quality, and hydraulic characteristics of the bedrock.

The new overburden well (MW-7) will be installed on the top of bedrock. Bedrock was generally observed at approximately 9 to 10 feet below grade during the SC work. As such, this well will likely be installed with a 5-foot screen to facilitate installation of an appropriate surface seal and curb-box.

Bedrock monitoring wells will be installed in the upper approximately 10 to 15 feet of saturated bedrock. The depth of the bedrock monitoring wells will be largely based on field observations. We anticipate using various methods to determine the depth to water in the bedrock. Such a method would be leaving the corehole open for an extended period and gauging the water level,

then deciding whether to drill deeper or set a well. Based on a review of historical information and geologic publications for the area, there is a potential for the bedrock beneath the site to contain large fractures, voids, and/or caves caused by solution-widening. As such, the depth at which groundwater is encountered in bedrock beneath the site is unpredictable. We anticipate that bedrock monitoring wells will be installed no deeper than approximately 40 to 50 feet below grade – this depth corresponds with the elevation of the Black River which is located approximately 400 feet northeast of the site. As detailed below, bedrock wells will be constructed with 10-foot long screens.

Groundwater will be collected from existing monitoring wells and new monitoring wells using low-flow sampling procedures. Groundwater samples collected from all wells will be analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), TCL semi-VOCs (SVOCs), and total and free cyanide. Assuming low-flow pumping rates are within the flow rates needed and sufficient saturated thickness is present in each monitoring well, specific-capacity data will be collected at each well during groundwater sampling. Specific capacity data will be evaluated to estimate the hydraulic conductivity of the saturated material surrounding the wells screens. If flow rates during sampling are not appropriate, additional pumping will be completed on each monitoring well to collect specific-capacity data.

Two comprehensive, synoptic rounds of fluid levels will be measured at new and existing monitoring wells and at two staff gauges to be installed in the Black River. If possible, the measurement rounds will be conducted during a relatively wet and dry period to evaluate whether groundwater flow direction/gradients change during high or low groundwater levels. These fluid-level rounds will be conducted no more that three months apart. The NYSDEC will be notified if NAPL is encountered during the fluid-level rounds and a NAPL gauging and removal program will be developed based on discussions with the NYSDEC.

Soil Borings

Six soil borings (SB-3 through SB-8; see Figure 1) will be drilled to the top of bedrock during the RI. Soil borings SB-3 and SB-4 will be drilled through the foundation of former holders 2 and 3, respectively, until bedrock is reached. Information from these borings will be used in combination with the overburden information from MW-4R and MW-5R (also installed through the holder foundations) to assess whether MGP-related affects are present above and below the floor of each former holder.

Soil borings SB-5, SB-6, SB-7, and SB-8 will be installed in the parking areas surrounding the site (Figure 1). Information from these borings will be used in combination with the overburden information from monitoring wells MW-3R, MW-6R, MW-7, and MW-7R to evaluate whether MGP-related affects are present in overburden in areas around the site.

As discussed below, soil samples will be collected from each of the soil boring and monitoring well locations for laboratory analysis.

Soil Sampling

Up to two soil samples will be collected at each of the new monitoring well and soil boring locations. Soil samples will be analyzed for TCL VOCs, TCL SVOCs, and total and free cyanide. Samples will be selected for laboratory analysis based on headspace screening results and/or observation of potential issues (i.e., NAPL, sheen, staining, odor) in the soil. In the event that subsurface impacts are not observed, samples will be collected near the water table and/or immediately above the bedrock surface. The results of these samples will be used to evaluate the potential presence of MGP-related constituents in soils on and around the site.

River Probing and Reconnaissance

River probing and reconnaissance will be conducted during the RI to assess whether MGP-related constituents may be present on the riverbank and edge of the river near the site. The area of the river targeted for this work is shown on Figure 2. The components of the probing and reconnaissance are summarized below:

- Continuously probe the river shoreline in the area shown on Figure 2. The probed area along this stretch will include the bank material and approximately five feet of river bed material (from the waterline to approximately five feet into the river, as water depth and safety permits). Probing of the bank material will include manually overturning rocks and cobbles to assess the potential presence of MGP-related materials beneath these objects. Measure and record sediment and water depths and characteristics of sediment and bank material (including observations of potentially MGP-containing material). Photo-document as necessary.

- Attempt to delineate (dependent on access and safety) sediments containing potentially MGP-related materials (as denoted by sheen, oil, tar, odor, staining) by probing outward from any detected area in a concentric manner. If any of these areas are detected, then document the size and shape of these areas.

NYSDEC and National Grid walked the Veteran's Memorial Parkway (the paved road located on top of the southwest side of the gorge that leads to the public gazebo) on July 3, 2007. During this walk NYSDEC and National Grid observed an island near the center of the river gorge that appeared to contain dark colored material resembling tar. Based on this observation, National Grid and ARCADIS conducted a river gorge walk on August 28, 2007 to observe whether potential MGP-related residuals are present in the river gorge (see attached memorandum). Based upon direct observations and information subsequently gathered, the dark colored material is comprised primarily of slag that originated from a smelting operation located on nearby

Beebee Island. National Grid and ARCADIS also inspected other areas of the river gorge for the potential presence of MGP-related materials. MGP-related materials were not observed; however, several other urban/industrial-type inputs to the river were noted.

Karst Evaluation

National Grid has conducted a preliminary evaluation of the presence of caves in the site area by reviewing the following information:

- Sanborn Fire Insurance Maps;
- Historical Atlases;
- Geologic Maps;
- Aerial photographs;
- Internet search;
- Scientific journals; and
- Collegiate publications (e.g., theses).

Unfortunately, there isn't a lot of information available regarding caves in the site area. A 1949 Sanborn Map shows an underground tunnel in the parking area to the east of the site. Personnel from the City's Engineering office have indicated that this tunnel was an enlarged tunnel in the bedrock that passengers used to board the trains in that area. This tunnel is shown on Figure 1. We conducted a Ground Penetrating Radar (GPR) investigation in this area to evaluate the presence of the cave during the Site Characterization (SC) phase of investigation, but the results of the GPR work did not reveal its presence.

Perhaps the most substantial information regarding the presence of caves in the site area is the existence of an apparent abandoned cave opening along the southern Black River gorge face to the north of the site. This cave opening is observed along Veteran's Memorial Parkway approximately 400 to 500 feet north of the site. The apparent cave opening has been sealed-off with stone blocks and mortar. An 1864 Atlas of Jefferson County also shows an "Ice Cave" on the southern Black River gorge face several hundred feet down river from the site, in the approximate area of the apparent cave opening. This could be the abandoned cave we have observed.

RI fieldwork will include a more thorough investigation of the southern Black River gorge face to observe the potential presence of additional caves/solution-widened structures in the site area. The investigation will consist of walking the gorge face using appropriate safety gear and photo-documenting potential caves/solution-widened structures in the bedrock. The area of the investigation will coincide with the sediment probing and reconnaissance area shown on Figure 2. Caves/solution-widened structures will be surveyed and plotted on site map(s) that will be presented in RI data summary package (discussed below). The results of the gorge face observations and literature review will be compiled into a technical memorandum that will be attached to the RI data summary report (discussed below).

Survey

All new wells, soil borings, river gauges, river probing locations, and structures identified during the gorge face observation will be located by a licensed land surveyor. Information measured will include the horizontal location, and elevation of the top of the protective casing, the top of the inner casing, and the ground surface adjacent to/at the well/boring. The survey data will provide the information necessary to determine groundwater, surface water, and top of bedrock elevations, elevation of lithologic changes (if encountered/identified), fractures, and potential solution features encountered in the bedrock.

Fish and Wildlife Resource Impact Analysis

A Fish and Wildlife Resource Impact Analysis (FWRIA) through Step IIB will be conducted for the site. The analysis will be conducted in accordance with the NYSDEC guidance documents entitled "Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites" (October, 1994) and "Draft DER-10 Technical Guidance for Site Investigation and Remediation" (December, 2002). The objectives of the FWRIA are to identify fish and wildlife resources that exist on and near the site, and to evaluate the potential for exposure of these resources to site-related constituents in environmental media.

As established in the guidance, Step IA of the FWRIA will involve the development of a covertype map for the site and surrounding areas within a 0.5-mile radius of the site. Significant ecological resources (e.g., surface water bodies, wetlands) within a 2-mile radius of the site will also be identified. Step IB will involve identifying fish and wildlife resources in the vicinity of the site. In addition, the New York Natural Heritage Program and U.S. Fish and Wildlife Service (USFWS) will be contacted to determine if any threatened or endangered species are known to exist in the vicinity of the site. Step IC will involve a qualitative assessment of fish and wildlife resource values, and Step ID will include the identification of applicable fish and wildlife regulatory criteria.

Step IIA involves a pathway analysis, which utilizes the ecological receptor information generated in Step I and the location of site-related chemical constituents to determine if potentially complete ecological exposure pathways exist. As specified in the NYSDEC (1994; 2002) guidance, if no fish and wildlife resources or complete exposure pathways are identified, then potential impacts to ecological resources will be considered "minimal," and no further evaluation will be necessary.

Step IIB involves a criteria-specific analysis, and compares constituent levels in the environmental media to media-specific numerical criteria. This step is used as a screening step to evaluate the potential significance of ecological exposure and determine if further evaluation is warranted.

Human Health Exposure Evaluation

The RI will include a qualitative human health exposure evaluation (HHEE) that will be conducted in accordance with NYSDEC (2002) guidance. The HHEE will consist of characterizing the exposure setting (including the physical environment and potentially exposed human populations), identifying potential exposure pathways, and evaluating contaminant fate and transport. The exposure assessment will be based on site land use patterns, site-specific fate and transport mechanisms, and information regarding chemical constituents in various media. Information from the HHEE will be used, in part, in remedial decision-making.

RI Field Methods and Sampling Protocol

The RI field and sampling activities will be conducted in general accordance with the NYSDEC-approved *Generic Site Characterization/IRM Work Plan for Site Investigations at Non-Owned Former MGP Sites* and supporting appendices (Field Sampling Plan [FSP] and Quality Assurance Project Plan [QAPP]), dated November 2002.

As described in the QAPP, soil and groundwater samples will be submitted for laboratory analysis using United States Environmental Protection Agency (USEPA) SW-846 Methods as referenced in the most recent edition of the NYSDEC Analytical Services Protocol (ASP), with Category B analytical laboratory reports. Soil and groundwater samples will be analyzed for TCL VOCs, TCL SVOCs, total cyanide and free cyanide. Free cyanide analyses will be performed using the micro-diffusion method (ASTM-4285-95). A Data Usability Summary Report (DUSR) of the laboratory data packages will be prepared and the results of the DUSR will be incorporated into data tables prepared for the project.

The soil and groundwater sample(s) (including quality assurance/quality control [QA/QC] samples) will be collected, packaged, handled, and shipped in general accordance with the QA/QC protocols and the soil and groundwater sampling protocols presented in the FSP and QAPP.

Bedrock drilling and monitoring well installation will be conducted in accordance with Sections 5 and 6, respectively of the FSP. Specifically, bedrock will be drilled by installing a permanent 4-inch diameter steel casing into the upper approximately 3 feet (minimum) of bedrock at each drilling location. Permanent casings will be grouted in place and allowed to set at least 24 hours prior to coring bedrock at each location. Coreholes will be advanced using HQ-sized coring equipment (resulting in an approximately 3.8-inch corehole) from the top of bedrock to the total depth of the corehole. Retrieved bedrock core will be characterized in accordance with the procedures described in the FSP. Wells will be constructed using 2-inch diameter schedule 40 PVC material, 20-slot, 10-foot long screens, with 2-foot sumps grouted in place. The annular space between the well screen and corehole will consist of an appropriately sized silica sandpack installed to approximately 2-feet above the screen, followed by an approximately 5-foot

bentonite seal. The remainder of the annulus will be tremie-grouted to grade. Well surface completions will consist of a flush-mounted curb-box.

Schedule and Reporting

The proposed RI fieldwork will require approximately two months to complete. A tentative project schedule is shown in the table below.

Activity	Start/Submittal Date
Start RI Fieldwork	September 2, 2008
Finish RI Fieldwork	October 31, 2008
Receive DUSR	December 19, 2008
RI Data Summary to NYSDEC	January 16, 2009
Follow-Up Meeting with NYSDEC	Week of February 16, 2009

This proposed schedule is contingent upon NYSDEC written approval of this work plan and acquiring appropriate access agreements to allow for the fieldwork to be completed. In addition, for safety considerations and to obtain the most useable data, the proposed work in the river gorge will need to be conducted while the river is at a relatively low stage.

An RI data summary package (including SC data) will be prepared once field activities are completed and laboratory data are received and validated. If National Grid recognizes that additional work is warranted based on the results of the RI work proposed in this letter, National Grid will postpone submittal of the data summary package until the results of the additional RI work have been received and validated. The purpose of the data summary package will be to provide NYSDEC with the results of the RI work so that National Grid and NYSDEC can mutually agree on whether or not additional fieldwork is warranted to conclude the RI. The data package will include:

- subsurface logs;
- analytical data summary tables for all sampled media;
- table of calculated hydraulic conductivity values;
- groundwater contour maps for the overburden and bedrock (as appropriate);
- appropriate photographs;
- figures illustrating two geologic cross-sections; and
- figures showing the distribution of detected constituents in soil and groundwater.

National Grid proposes to hold a conference call or meeting with NYSDEC to discuss the results of the RI once NYSDEC has had an opportunity to review the data package. The results of the meeting/call will form the basis of a scope of work for completing the RI.

Please feel free to contact me by phone at 315.428.5652 or by e-mail at Steven.Stucker@us.ngrid.com if you have any questions or comments.

Sincerely,

for

Steven P. Stucker
Environmental Department

Attachments

cc: Ian Ushe, NYSDOH
William Holzhauer, Esq., National Grid
Scott Powlin, ARCADIS

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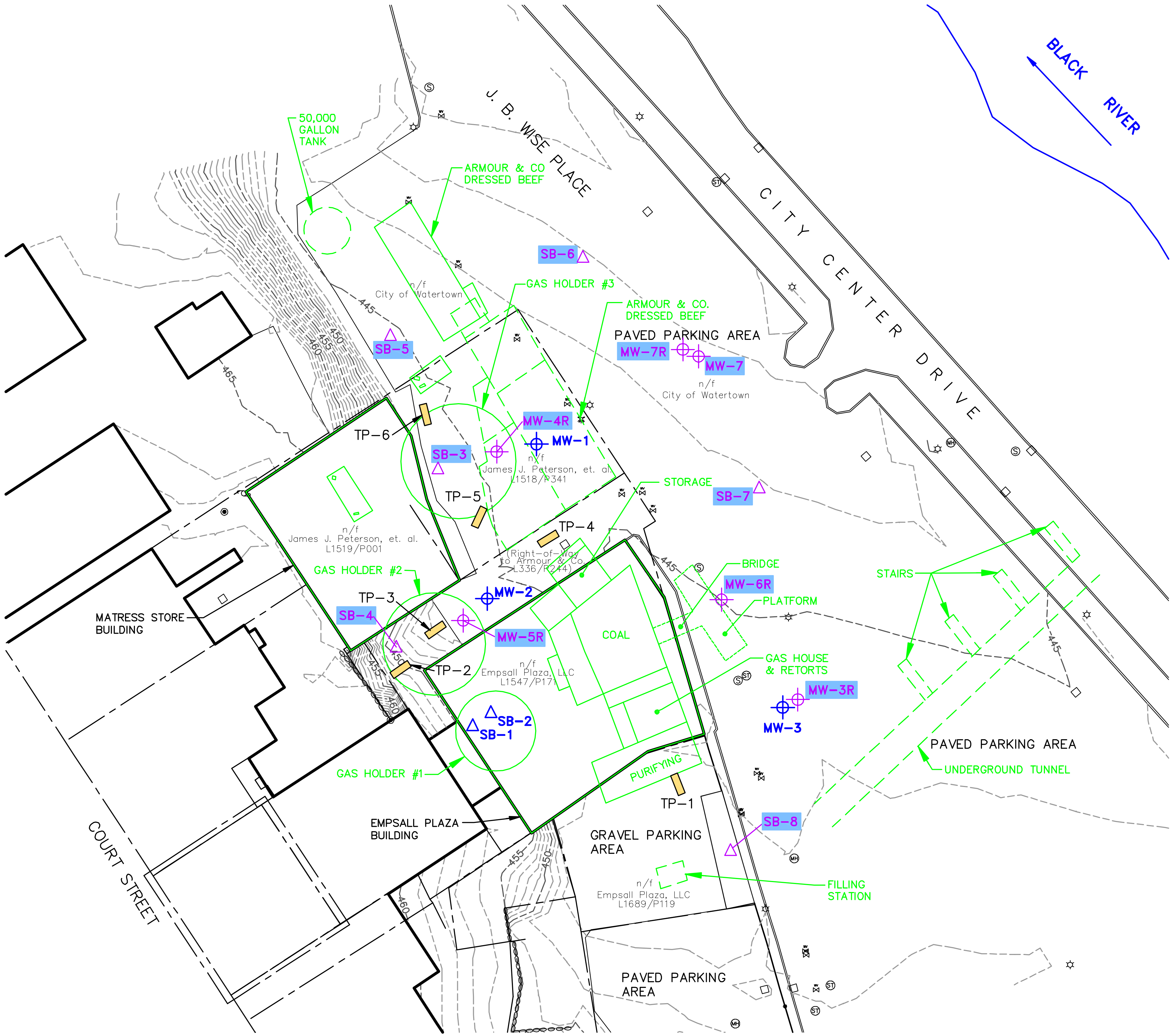

LEGEND:

- PROPOSED SOIL BORING
- PROPOSED MONITORING WELL
- SOIL BORING (COMPLETED OCTOBER 2005)
- OVERBURDEN MONITORING WELL (COMPLETED OCTOBER 2005)
- TEST PIT LOCATION (COMPLETED MAY 2004)
- CATCH BASIN
- MANHOLE (MAY BE SANITARY OR STORM)
- MANHOLE (STORM)
- MANHOLE (SANITARY)
- WATER VALVE
- LIGHT POLE
- FOUND IRON PIPE
- FIRE HYDRANT
- PROPERTY LINE
- STRUCTURES FROM 1902 AND 1949 SANBORN MAPS

NOTES:

1. ALL HISTORICAL FEATURES ARE FROM SANBORN MAPS PROVIDED BY THE SANBORN LIBRARY, LLC PRODUCED BY ENVIRONMENTAL DATA RESOURCES, INC. (EDR).
2. BASE MAP IS FROM A SURVEY DONE BY WCT SURVEYORS, P.C., CANTON, NEW YORK ON APRIL 5, 2004, FILE # 103–218.
3. ELEVATIONS SHOWN ARE BASED ON NAVD 88 DATUM AS DETERMINED FROM STATIC GPS OBSERVATIONS AS PROCESSED BY THE NATIONAL GEODETIC SURVEY OPUS PROGRAM.
4. LOCATIONS OF ALL HISTORICAL FEATURES ARE APPROXIMATE.

0 60' 120'

GRAPHIC SCALE

NATIONAL GRID
WATERTOWN (ANTHONY STREET) FORMER MGP SITE
REMEDIAL INVESTIGATION WORK PLAN

PROPOSED INVESTIGATION LOCATIONS

ARCADIS

FIGURE
1

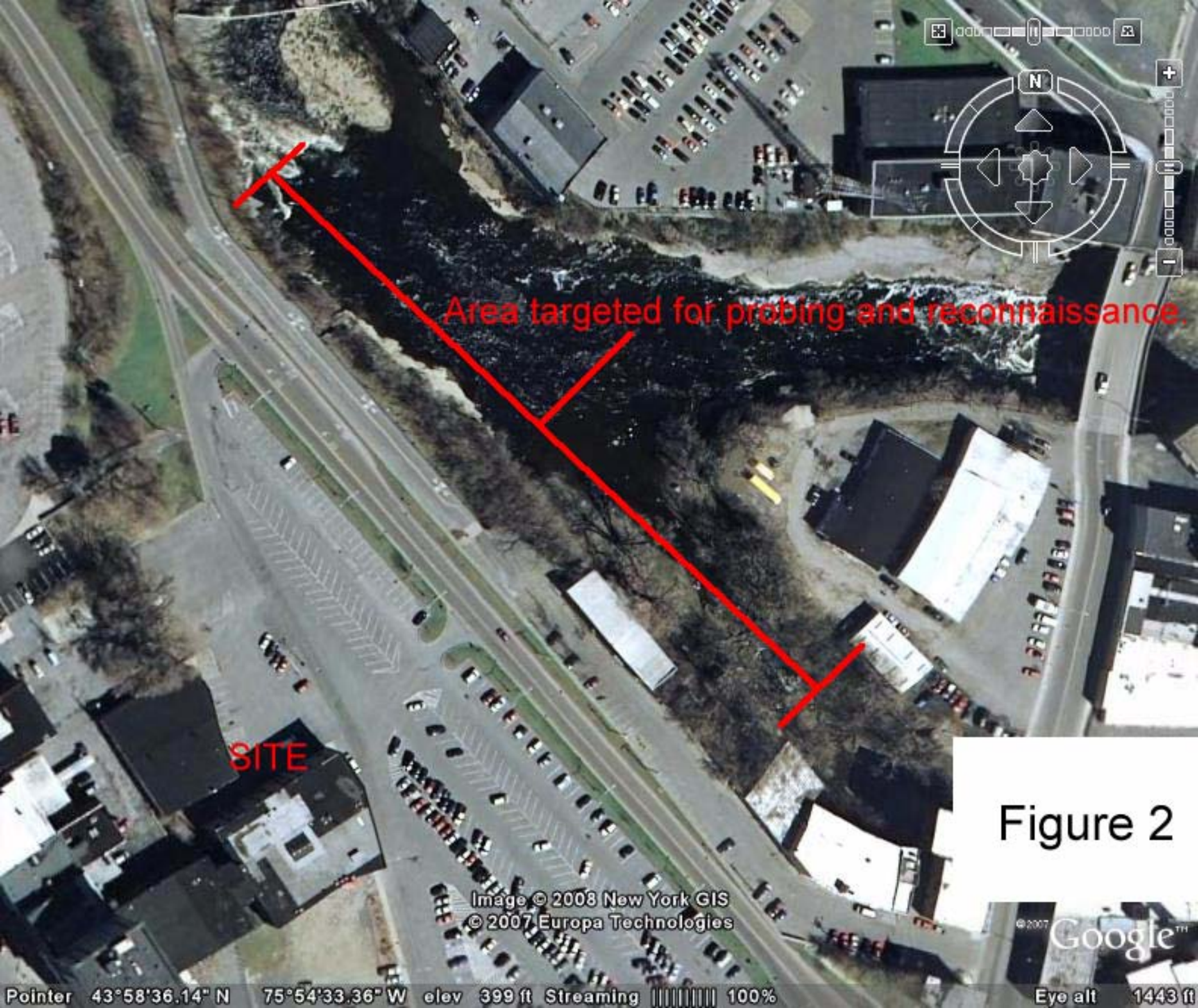
Area targeted for probing and reconnaissance.
SITE
Image © 2008 New York GIS
© 2007 Europa Technologies
Google
Pointer 43°58'36.14" N 75°54'33.36" W elev 399 ft Streaming 100%
Eye alt 1443 ft

Figure 2

Attachment

Memo: Observations of Black River Gorge Area – August 28, 2007

ARCADIS of New York, Inc.
6723 Towpath Road
P.O. Box 66
Syracuse
New York 13214-0066
Tel 315.446.9120
Fax 315.446.8053

MEMO

To:
Steven Stucker (National Grid)

Copies:
File

From:
Scott Powlin

Date:
September 21, 2007

ARCADIS BBL Project No.:
B0036638 #2.01

Subject:
Observations of Black River Gorge Area – August 28, 2007
Anthony Street Non-Owned former MGP site, J.B. Wise Place, Watertown, New York

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This memorandum provides a record of observations made and information learned during an August 28, 2007 field visit to the Black River gorge area located approximately 600 feet northeast of the Anthony Street former MGP site. The purpose of the visit was to access the river gorge area and observe whether potential MGP-related residuals are present in the river gorge near the site. The attached figure shows the Black River gorge area in relation to the site. Photographs are also attached to the memorandum to show several features observed during the visit.

Mr. Steve Stucker (National Grid) and Mr. Scott Powlin (ARCADIS BBL) conducted the visit on August 28, 2007. A guide service operated by Mr. Alex Atchie, called "The Lonely Angler", was contracted to help Mr. Stucker and Mr. Powlin safely access the areas of the gorge near the site. Mr. Atchie has lived in the Watertown area his entire life and has provided guide services along the Black River for tens of years. Mr. Atchie has wealth of knowledge pertaining to the history of the Black River.

Mr. Atchie provided a boat to maneuver up through the gorge area. The boat was launched near the gazebo at the Veteran's Memorial Walkway located along the southwest edge of the river gorge. Mr. Atchie guided Mr. Stucker and Mr. Powlin up river from this location, stopping at numerous locations along the way to allow for observations of the various features/structures located in the river gorge. The guided tour ended approximately 300 feet downriver from the waterfalls at the hydroelectric-plant dam. Based on the river gauging and flow provided on the USGS' Water Resources website[1] for the river gauge located at Vanduzee Street (approximately 1 mile down river from the gorge area), the river flow at the time of the visit was approximately 1,230 cubic feet per second.

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[1] http://waterdata.usgs.gov/nwis/uv?04260500

No evidence of potential MGP-related materials was observed in the river or along the banks of the river during the visit; however, the following observations were made:

- A large island of smelt-waste ("slag island") was observed in the middle of the river gorge (see attached figure). The smelt waste appeared to be slag-like with various forms of imbedded metal and other debris (bricks, concrete, stone, rock, glass; see attached photos). The slag that formed the island is flat (pancake-like), approximately one to three feet in thickness, and lies directly on the bedrock surface. The dimensions of the island are approximately 100 to 200 feet long (in the direction of river flow) by approximately 50 to 100 feet wide.

  This slag island was first observed at a distance (from the Veteran's Memorial Walkway) by National Grid and NYSDEC (Mr. Bill Ports and Mr. Charlie Post) during a July 3, 2007 site visit. From the walkway, the material comprising the slag island appeared to possibly resemble coal tar. This observation was the primary reason for the August 28 visit through the gorge. The August 28 visit confirmed that the material was a smelting waste product. Mr. Atchie confirmed that a smelting plant existed upriver from the smelt island. The smelting plant apparently existed on Bebe Island (attached figure). Additional sporadic deposits of the smelt waste were observed in the river and along the bank of the river upriver from the slag island. A large deposit of smelt waste was observed on the bank of Bebe Island which is located approximately 700 to 800 feet upriver from the slag island. Here, the slag material covers the bank of the river from the top of the bank down into the water (see attached photos). This location appears to be the apparent source of the smelt waste.

- An aboveground tank was observed at the top of the bank near the location of the apparent former smelting plant on Bebe Island. A garden hose was observed to be attached to the bottom of the tank and extending down the river bank toward the river. Nothing was observed to be discharging from the hose during the visit. A picture of the tank is attached.

- Piping and other garden hoses were also observed along the river bank at several locations extending from the bank toward the river. No fluids were observed to be discharging from these pipes/hoses during the visit.

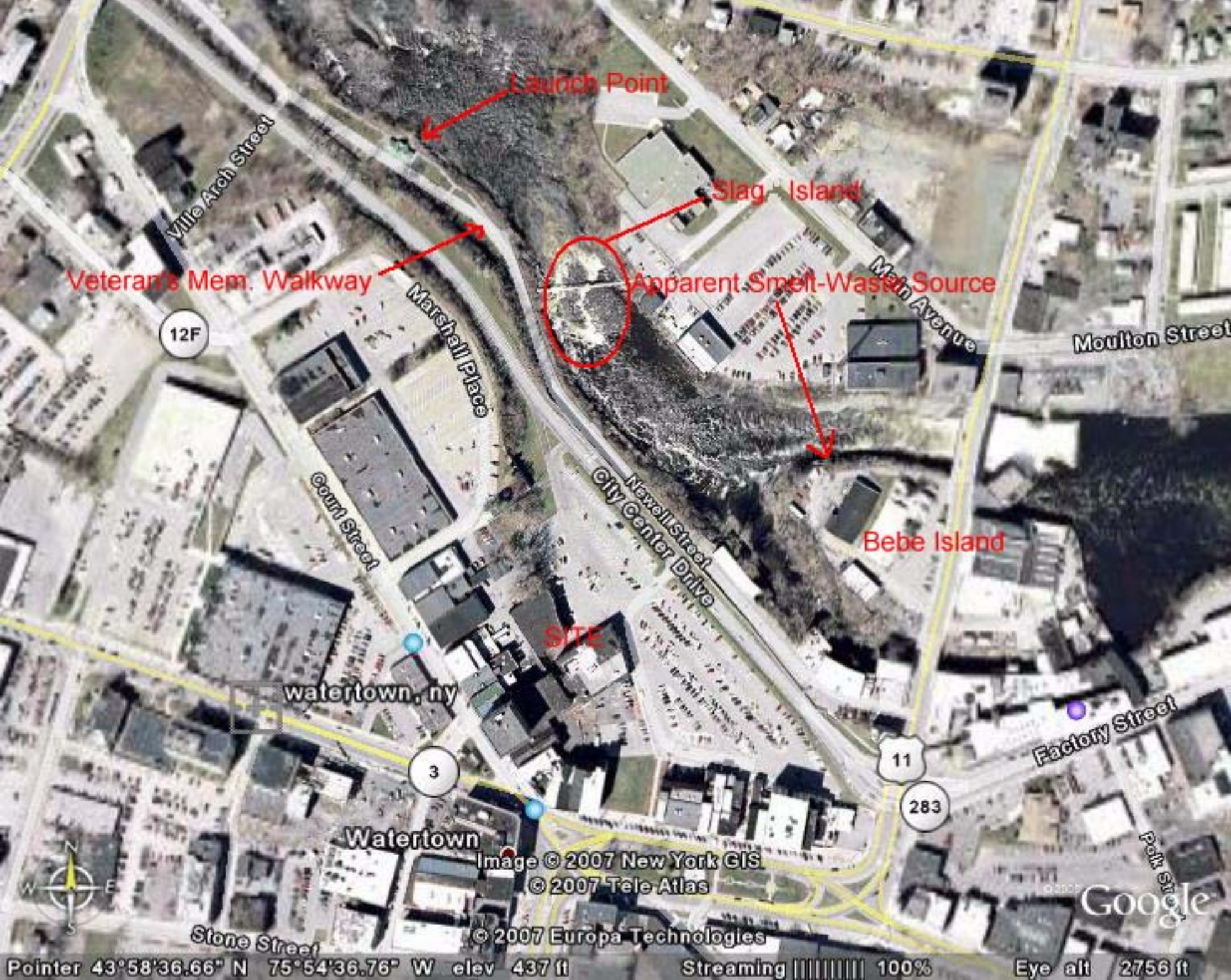
- Apparent roofing tar like material was observed at several locations on the riverbank, along both sides of the river.

- Various sorts of general refuse were observed in the river and along the river bank. Several sewer outfalls were also observed with various kinds of trash located at the end of the sewer pipes.

- An apparent cave was observed along the riverbank, a few feet above the river level. Mr. Atchie mentioned that vagrants frequently use the cave as shelter. The cave was located near the launch point adjacent to the gazebo and approximately 1,500 feet downriver from the former MGP site.

Based on the observations made during the visit in the gorge, it is apparent that this portion of the river/riverbank system receives various sorts of wastes, trash, and potentially hazardous fluids due to dumping or direct discharge into the river; however, obvious impacts potentially associated with the Anthony Street former MGP (now located on J.B. Wise Place) were not observed in the gorge area.

SAP/plf
Attachments


Launch Point
Slag Island
Veteran's Mem. Walkway
Apparent Smelt-Waste Source
Ville Arch Street
Marshall Place
Main Avenue
Moulton Street
12F
Court Street
Newell Street
City Center Drive
Bebe Island
SITE
watertown, ny
Factory Street
3
11
283
Watertown
Image © 2007 New York GIS
© 2007 Tele Atlas
© 2007 Europa Technologies
Stone Street
Polk Street
Google
Pointer 43°58'36.66" N 75°54'36.76" W elev 437 ft
Streaming 100%
Eye alt 2756 ft

Photograph of slag island, looking northwest.

Close photograph of slag Island, looking northwest.

Close-up picture of slag material. Notice imbedded debris.

Close-up picture of slag material.

Photograph of potential source area of smelt waste on Bebe Island. Pile of smelt waste extends from the top of the bank to the river.

Photograph of bedrock joint along Black River bank of Bebe Island. Notice metal pipes near top of bank.

Photograph of bedrock joint along Black River bank of Bebe Island. Notice tank on land surface, garden hose not visible in picture. Also notice apparent roofing tar spilled on bank.