

DECISION DOCUMENT

NM - Troy Liberty St. MGP
Voluntary Cleanup Program
Troy, Rensselaer County
Site No. V00482
January 2014



Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - DECISION DOCUMENT

NM - Troy Liberty St. MGP
Voluntary Cleanup Program
Troy, Rensselaer County
Site No. V00482
January 2014

Statement of Purpose and Basis

This document presents the remedy for the NM - Troy Liberty St. MGP site, a voluntary cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and applicable guidance.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the NM - Troy Liberty St. MGP site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the remedy are as follows:

1. A remedial design program would be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation and site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gas and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Excavation and off-site disposal of on-site contaminant source areas, including grossly contaminated soils, defined as soils containing visible coal tar or PAHs exceeding 500 ppm, and soils that create a nuisance condition, as defined by Commissioners Policy CP-51, Soil Cleanup Guidance. Excavation and off-site disposal of site-related contamination in the Hill Street right-

of-way that exceeds the SCOs for commercial use. The excavation will extend to approximately 20 feet below ground surface, removing both the north and south tar well structures. The north excavation is estimated to be an area of 12 feet by 18 feet, and the south excavation is estimated to be an area of 40 feet by 45 feet. Approximately 1,400 cubic yards of soil will be removed. The removal of MGP-related source material and soil that exceeds the CP-51 criteria will reduce the potential future contribution of source materials to groundwater quality. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site.

3. A site cover currently exists, comprised of an asphalt surface, and will be maintained to allow for commercial use of the site. Any site redevelopment will maintain a site cover, which may consist either of the structures such as buildings, pavement, sidewalks comprising the site development, or a site cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

4. Imposition of an institutional control in the form of a Deed Restriction for the controlled property that:

- requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8(h)(3);
- allows the use and development of the controlled property for commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH;
- requires compliance with the Department approved Site Management Plan.

5. A Site Management Plan is required, which includes the following:

a) an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

- i. Institutional Controls: The Deed Restriction discussed in Paragraph 4 above;
- ii. Engineering Controls: The soil cover discussed in Paragraph 3. This plan

includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the deed restriction including any land use or groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provisions for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification;
- and the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

(b) a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan

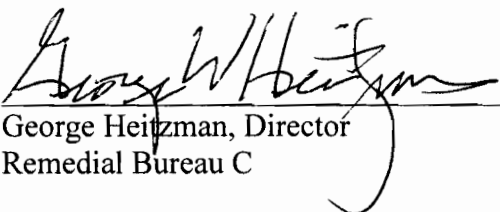
includes, but may not be limited to:

- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- monitoring for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed in item (a);
- a schedule of monitoring and frequency of submittals to the Department.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

January 3, 2014
Date


George Heitzman, Director
Remedial Bureau C

DECISION DOCUMENT

NM - Troy Liberty St. MGP
Troy, Rensselaer County
Site No. V00482
January 2014

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The Voluntary Cleanup Program (VCP) is a voluntary program. The goal of the VCP is to enhance private sector cleanup of brownfields by enabling parties to remediate sites using private rather than public funds and to reduce the development pressures on "greenfields." This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repository:

Troy Public Library
100 2nd Street
Troy, NY 12180
Phone: 518-274-7071

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and

Recovery Act Program. We encourage the public to sign up for one or more county listservs at <http://www.dec.ny.gov/chemical/61092.html>

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The Troy-Liberty Street former MGP site is located in an urban residential/light commercial area in Troy's "Little Italy" neighborhood. The site is bordered to the east by Fifth Avenue, to the south by Washington Street, to the west by Hill Street, and to the north by Liberty Street.

Site Features: The site is comprised mostly of an asphalt parking lot, with two small bocce courts at the south end. The courts are constructed on top of the existing asphalt surface. It is bordered by a metal fence with brick pillars on the western side and a chain link fence on the northern side.

Current Zoning/Use(s): The site is currently vacant, and is zoned for commercial use. During the spring, summer and fall the site is intermittently used for a farmer's market, recreational stickball and bocce leagues. The rectangular site comprises approximately 1.02 acres in a mixed residential and commercial area.

Past Use of the Site: The gas works were constructed at the site in 1848, and operated until 1889 by the Troy Gas Light Company. All of the former MGP buildings were demolished by 1899, when the City of Troy purchased the property. The City used the site as an open-air market into the 1970s. The parcel was purchased by the Troy News Company in 1975, and was used mainly for parking. The City regained possession of the property in 2003, and the site continues to be used as a farmer's market and for various community activities.

Site Geology and Hydrogeology: The site is underlain by several geologic units, including fill material, alluvial deposits, alluvial sand and gravel, sand and silt. The fill material has been found as thick as 25 feet on site. Below this layer are the alluvial layers, as well as sand. Groundwater depths range from 13 to 16 feet below ground surface, flow direction is generally to the southwest.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, at a minimum, alternatives (or an alternative) that restrict(s) the use of the site to commercial use (which allows for industrial use) as described in DER-10, Technical Guidance for Site Investigation and Remediation were/was evaluated.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

The voluntary cleanup agreement is with a responsible party. The agreement requires the party to address on-site and off-site contamination. Accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: <http://www.dec.ny.gov/regulations/61794.html>

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

COAL TAR	DIBENZ[A,H]ANTHRACENE
BENZENE	indeno(1,2,3-cd)pyrene
ACENAPHTHENE	CYANIDES(SOLUBLE CYANIDE SALTS)
ACENAPHTHYLENE	ETHYLBENZENE
ANTHRACENE	TOLUENE
BENZ(A)ANTHRACENE	XYLENE (MIXED)
BENZO(A)PYRENE	NAPHTHALENE
BENZO(B)FLUORANTHENE	PHENANTHRENE
BENZO(GHI)PERYLENE	PYRENE
BENZO[K]FLUORANTHENE	FLUORANTHENE
Chrysene	FLUORENE

The contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

There were no IRMs performed at this site during the RI.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Based upon investigations conducted to date, the primary contaminants of concern at the site include benzene and semi-volatile organic compounds (SVOCs), consisting primarily of polycyclic aromatic hydrocarbons (PAHs). Benzene was only found in the southern portion of the site, where the highest concentration was 390 mg/kg in soils. PAHs ranged from non-detect to approximately 23,000 mg/kg in soils. There are two areas of concern where coal tar, also

known as non-aqueous phase liquid (NAPL), is present in soils. These correspond to the locations of the two former tar wells.

In groundwater, benzene was found as high as 1,900 ug/L, and PAHs ranged from non-detect to 3,800 ug/L. The highest concentrations of PAHs in both soil and groundwater are found on site at the southern tar well location. Groundwater sampled in off-site monitoring wells was not impacted by site contaminants.

There are no on-site buildings where potential soil vapor intrusion could occur, so no subslab or indoor air samples were collected during the investigation.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure*.

Access to the site is unrestricted. Since the entire site is covered with asphalt, people will not come into contact with site-related soil contamination unless they dig below the surface. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not contaminated by the site. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of the buildings, is referred to as soil vapor intrusion. Because there is no on-site building, inhalation of site contaminants in indoor air due to soil vapor intrusion does not represent a concern for the site in its current condition. However, the potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site building development and occupancy. Furthermore, environmental sampling indicates soil vapor intrusion is not a concern for off-site buildings.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation.

The selected remedy is referred to as the Source Material Excavation, Site Cover and Institutional Controls remedy.

The elements of the selected remedy, as shown in Figure 2, are as follows:

1. A remedial design program would be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation and site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
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- requires compliance with the Department approved Site Management Plan.

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a) an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

i. Institutional Controls: The Deed Restriction discussed in Paragraph 4 above;

ii. Engineering Controls: The soil cover discussed in Paragraph 3. This plan

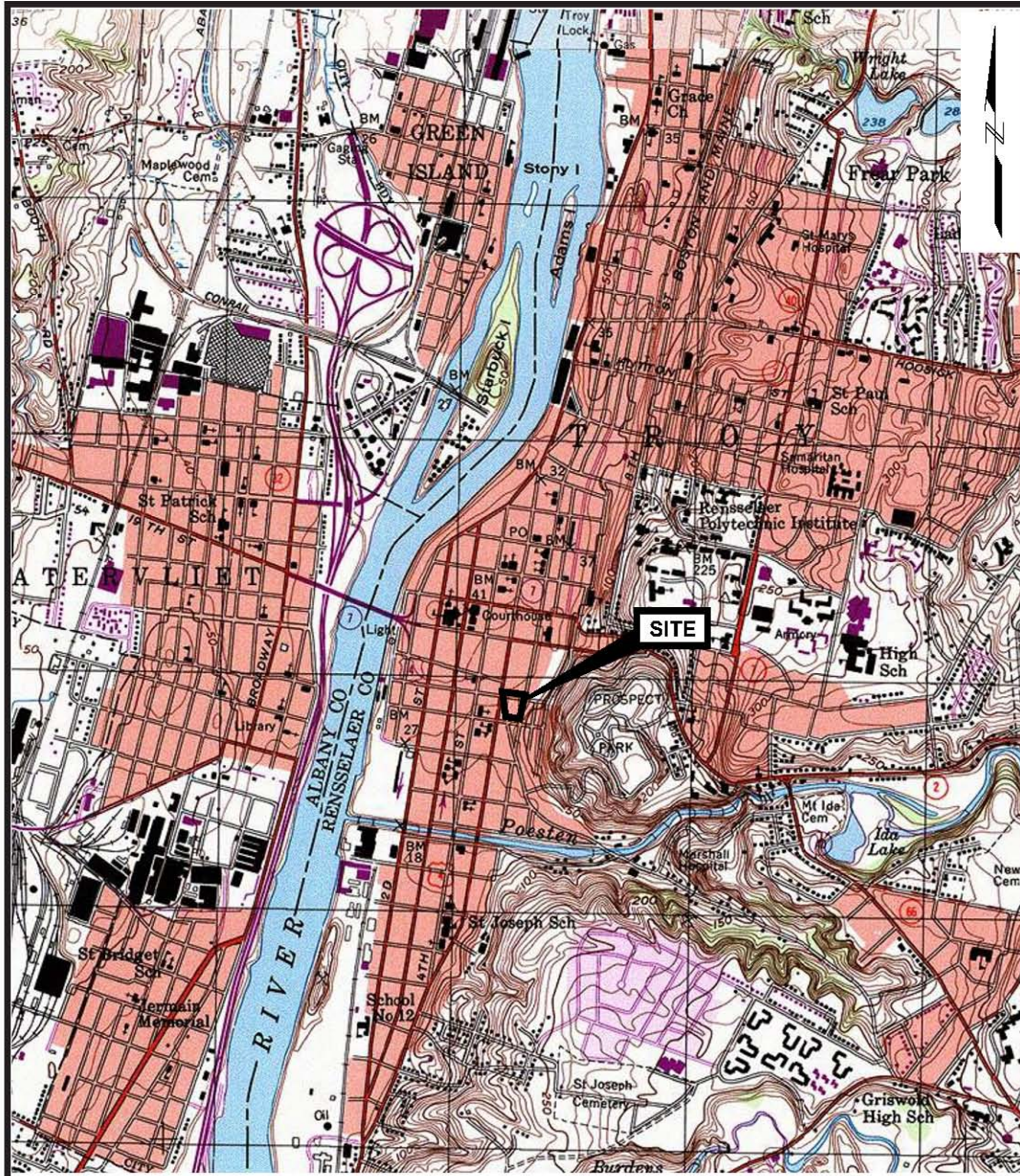
includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the deed restriction including any land use or groundwater use restrictions;

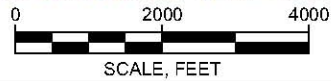
- a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provisions for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification;
- and the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

(b) a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- monitoring for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed in item (a);
- a schedule of monitoring and frequency of submittals to the Department.

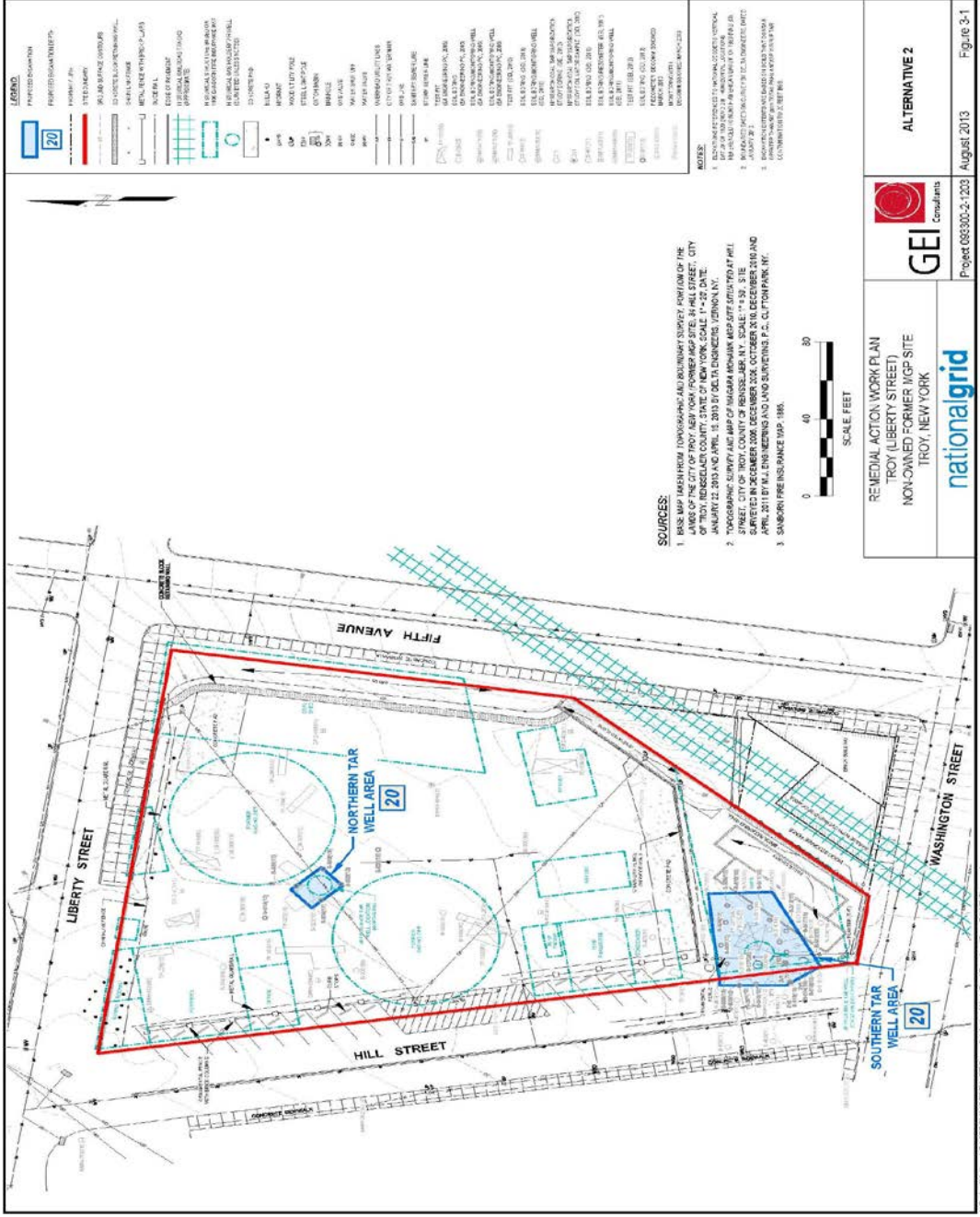


SOURCE: Map created with TOPO! © 2001 National Geographic
 (www.nationalgeographic.com/topo)*



<p>REMEDIAL ACTION WORK PLAN TROY (LIBERTY STREET) NON-OWNED FORMER MGP SITE TROY, NEW YORK</p>	 <p>GEI Consultants</p>	<p>SITE LOCATION MAP</p>
	<p>Project 093300-2-1203</p>	<p>June 2013 Figure 1</p>

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LEGEND

PROPERTY BOUNDARY	EASEMENT
MCGP BOUNDARY	CITY OF TROY
TIE LINE	RIGHT-OF-WAY
CONCRETE CURB	ASPHALT CURB
METAL CURB	ASPHALT CURB
METAL CURB	ASPHALT CURB
EDGE OF PAVEMENT	ASPHALT CURB
ASPHALT CURB	ASPHALT CURB
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- NOTES:**
- ALL INFORMATION IS BASED ON RECORD DOCUMENTS AND FIELD SURVEY INFORMATION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.
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- SOURCES:**
- BASE MAP FROM TOPOGRAPHIC AND BOUNDARY SURVEY PERFORMED BY THE CITY OF TROY, BOSSLAND COUNTY, STATE OF NEW YORK, SCALE: 1" = 40' DATE: JANUARY 22, 2010 AND APRIL 15, 2010 BY DLT ENGINEERING, VINCENY, IN.
 - TOPOGRAPHIC SURVEY AND MAP OF MAGARA MOUNTAIN AND SITE ADJACENT AT WELL STREET, CITY OF TROY, COUNTY OF RENSSELAIRE, NY. SCALE: 1" = 50'. SITE SURVEYED IN DECEMBER 2006. DECEMBER 2006. OCTOBER 2010. DECEMBER 2010 AND APRIL 2011 BY HILTING BURNS AND COMPANY P.C., CANTON, NY.
 - SOBORN PRE-INSURANCE TOP: 186.

REMEDIAL ACTION WORK PLAN
 TROY (LIBERTY STREET)
 NON-OWNED FORMER MCP SITE
 TROY, NEW YORK

GEI Consultants

Project 088300-2:1033 August 2013 **Figure 3-1**