

DECISION DOCUMENT

NM - Whitehall MGP
Voluntary Cleanup Program
Whitehall, Washington County
Site No. V00467
August 2013



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

DECLARATION STATEMENT - DECISION DOCUMENT

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Voluntary Cleanup Program
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Site No. V00467
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Statement of Purpose and Basis

This document presents the remedy for the NM - Whitehall 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 - Whitehall 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. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, 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 gases 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. Installation and Operation of a Coal Tar Collection System

Installation of coal tar recovery wells in multiple locations on and off-site, with removal and off-site disposal conducted, as required, using passive extraction methods on a periodic schedule. The location and collection schedule will be determined during the remedial design. The wells will be targeted to collect the coal tar which has collected at the top of the bedrock, in an apparent dip in the bedrock, approximately 20 to 30 feet below the ground and just to the north of the site, mainly under Bellamy Street.

3. Excavation

All soils at the adjacent private residence, which exceed residential SCOs, as defined by 6 NYCRR Part 375-6.8, will be excavated and transported off-site for disposal. Approximately 1,200 cubic yards of soil from a 3,000 square foot area will be removed from the property and treated prior to disposal using thermal desorption.

Soil which does not exceed the residential SCOs may be used to backfill the excavation to the extent that a sufficient volume of on-site soil is available.

Clean fill meeting the requirements of DER-10, Appendix 5 will be brought in to complete the backfilling of the excavation and establish the designed grades at the site.

4. Soil Cover

A site cover currently exists 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 soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. 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).

5. Institutional Control

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; and
- requires compliance with the Department approved Site Management Plan.

6. Site Management Plan

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:

Institutional Controls: The deed restriction discussed above in number 5.

Engineering Controls: The soil cover, groundwater monitoring wells, and the DNAPL collection wells noted in number 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, and groundwater restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provision 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 and DNAPL collection wells to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the Department;
- monitoring for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c) an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:

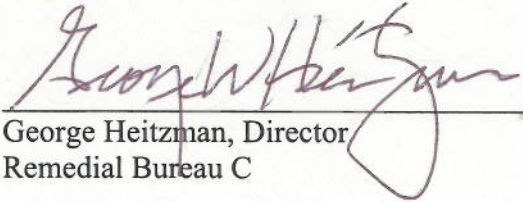
- compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
- maintaining site access controls and Department notification; and
- providing the Department access to the site and O&M records.

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.

August 2, 2013

Date



George Heitzman, Director
Remedial Bureau C

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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:

Whitehall Free Library
Attn: Reference Librarian
12 Williams St.
Whitehall, NY 12887
Phone: (518) 499-1366

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 Whitehall Manufactured Gas Plant (MGP) site is located in a suburban area on the edge of the Village of Whitehall, Washington County. The site is located at the end of Bellamy Street and is bounded by railroad tracks to the west, Bellamy Street to the north, and Clinton Avenue to the south.

Site Features: The site is a vacant, grass-covered open lot with a small wooded area.

Current Zoning/Use: The site is currently inactive and is zoned commercial. The surrounding parcels are a combination of commercial, residential, and railroad rights-of-way. The nearest residence is located about 50 yards east of the site at the corner of Main St. and Bellamy. The property line for this residence abuts the site.

Past Use of the Site: From the 1860s through the 1890s the site was the location of a manufactured gas plant. Byproducts from the gas production process have contaminated the site.

Site Geology and Hydrogeology: The site is underlain by fill materials of varying depths (7-22 feet). The fill is underlain by native layers of silt, sands, peat, and silty clays. Bedrock lies at depths from 6 feet to 33 feet below the ground surface. In some areas, the native soils are absent and the fill materials lie directly on the bedrock.

The water table lies roughly 6 feet below the ground surface. Groundwater flows radially away from the site to the northwest and to the northeast, towards the two nearest discharge areas: Lake Champlain to the northeast and a large wetland to the northwest.

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 that restrict 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 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.

The Department and National Grid entered into a Voluntary Clean-up Order on January 25, 2002, for 26 sites. The Order obligates the remedial party to implement a full remedial program.

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:

- air
- groundwater
- soil
- soil vapor

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

Total Polycyclic Aromatic Hydrocarbons (PAHs)

benzene, toluene, ethylbenzene and xylenes (BTEX)

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.

Nature and Extent of Contamination: Based upon investigations to date, the primary contaminants found on the site are coal tar and its chemical constituents. The tar was released from pipes and subsurface structures in the northeastern portion of the site while the plant was in operation, and has migrated through the subsurface soils. The tar can now be found approximately 100 yards beyond the site boundary, under the street and two nearby properties, at depths of 10 feet or more below the ground surface. Chemical constituents of the tar are found at levels which exceed residential SCOs.

These constituents include benzene, toluene, xylene, and ethylbenzene (known collectively as BTEX), benzo(a)pyrene, naphthalene, and several other polycyclic aromatic hydrocarbons

(PAHs). The BTEX and PAHs associated with the tar are found just beyond the limits of the tar at concentrations which are as high as 53,000 parts per million (ppm) for total PAHs and 5600 ppm for total BTEX.

Groundwater which comes into contact with tar-contaminated soils becomes contaminated with the chemical constituents found in the tar.

A plume of contaminated groundwater has been identified in the overburden and the bedrock that extends roughly 400 yards north of the site. Groundwater concentrations reach as high as 400 parts per billion (ppb) for total PAHs and 216 ppb for total BTEX.

Soil vapor samples collected at the site and on the adjacent residential property contain low levels of VOCs including BTEX compounds, decane, and trimethyl benzene. The compounds are indicative of a petroleum source that is not related to the site.

Special Resources Impacted/Threatened: Based upon the investigations to date, no Fish and Wildlife Resources Impact Assessment was needed as no special resources are threatened or impacted.

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*.

Direct contact with contaminants in the soil is unlikely because the majority of the site is covered with soil, gravel and vegetation. In the small area of soil contamination on the property to the south, persons could contact contaminants in soil by digging or otherwise disturbing the soil. On the off-site property to the north, people will not come in contact with site-related contamination unless they dig deep below the surface. People are not drinking the contaminated groundwater because the area is served by a public water supply that obtains water from a different source not affected by this contamination. 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 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 construction. In addition, 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.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

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 NAPL collection with residential excavation remedy.

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

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, 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 gases and other emissions;
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3. Excavation

All soils at the adjacent private residence, which exceed residential SCOs, as defined by 6 NYCRR Part 375-6.8, will be excavated and transported off-site for disposal. Approximately 1,200 cubic yards of soil from a 3,000 square foot area will be removed from the property and treated prior to disposal using thermal desorption.

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(SCOs). Where a soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. 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).

5. Institutional Control

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; and
- 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:

Institutional Controls: The deed restriction discussed above in number 5.

Engineering Controls: The soil cover, groundwater monitoring wells, and the DNAPL collection wells noted in number 3.

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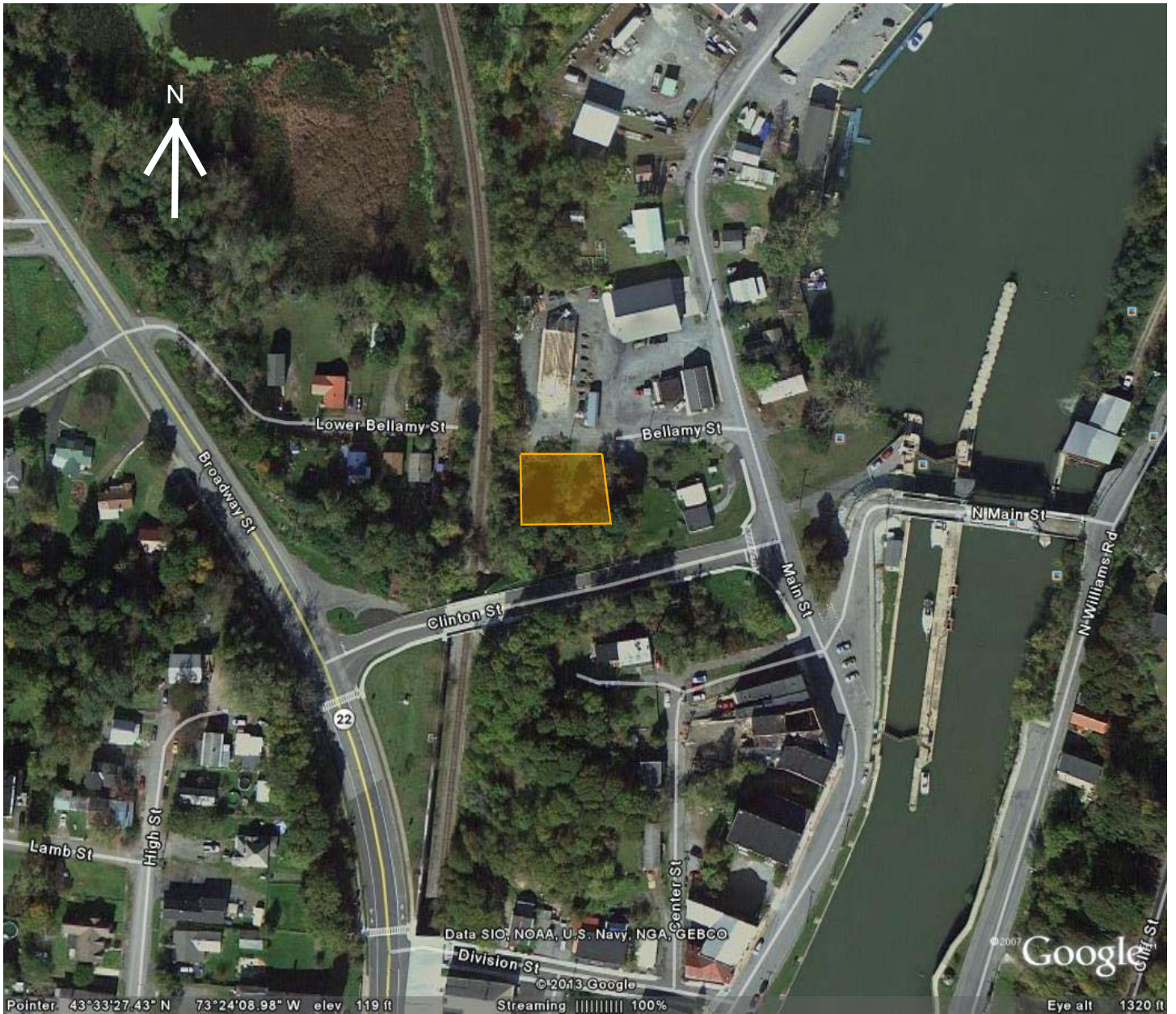
- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the deed restriction including any land use, and groundwater restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provision 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 and DNAPL collection wells to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the Department;
- monitoring for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c) an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:

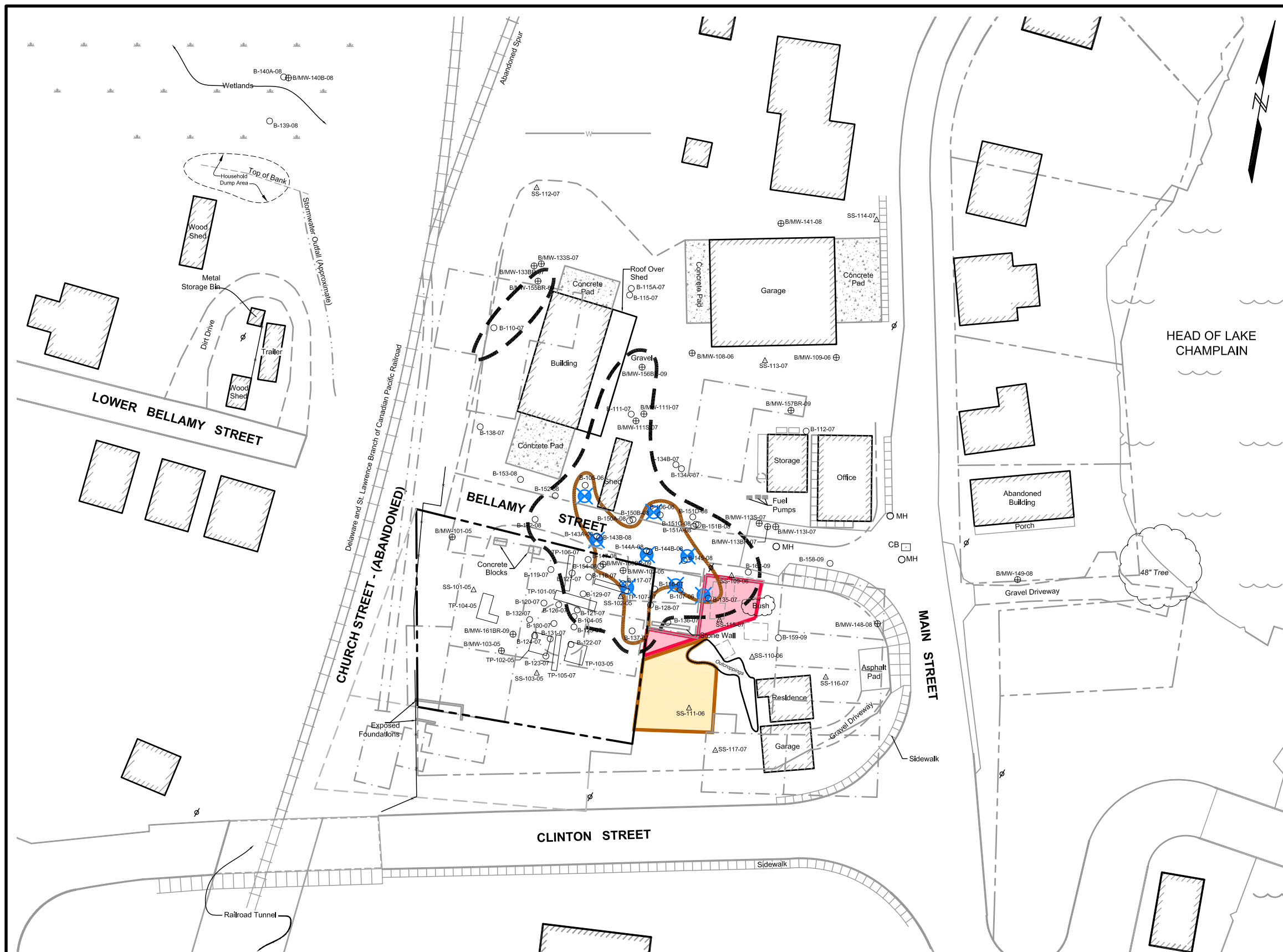
- compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
- maintaining site access controls and Department notification; and
- providing the Department access to the site and O&M records.



August 2013

Whitehall Former MGP Site

Figure 1



LEGEND:

- NATIONAL GRID PROPERTY BOUNDARY
- OTHER PROPERTY BOUNDARY
- EXISTING BUILDING
- CONCRETE PAD
- ASPHALT PAD
- CHAIN-LINK FENCE
- BULKHEAD EDGE
- EDGE OF GRAVEL
- B/MW-101-05 MONITORING WELL LOCATION
- B-104-05 SOIL BORING LOCATION
- SS-101-05 SURFACE SOIL SAMPLE LOCATION
- TP-101-05 TEST PIT LOCATION
- PROPOSED RECOVERY WELL LOCATION
- APPROXIMATE LIMIT OF SOURCE MATERIAL
- APPROXIMATE LIMIT OF SUBSURFACE SOIL EXCEEDING APPLICABLE RESTRICTED SCOs
- SURFACE SOIL EXCAVATION AREA (2 FT)
- SUBSURFACE SOIL EXCAVATION AREA (MAX 20 FT)

NOTE:
SOURCE MATERIAL IS DEFINED AS NAPL-SATURATED MATERIAL WITH LENSES OF GREATER THAN 0.2 ft.

- SOURCES:**
1. LANDS OF NIAGARA MOHAWK POWER CORPORATION, CLINTON AVENUE AND MAIN STREET, VILLAGE OF WHITEHALL - WASHINGTON COUNTY, STATE OF NEW YORK; PREPARED BY SNYDER ENGINEERING & LAND SURVEYING, LLP, ONEIDA, NEW YORK, SCALE: 1"=20', DATED MAY 19, 2005, REVISIONS DATED 7/7/05, 8/25/06 AND 8/23/07.
 2. AERIAL PHOTOGRAPH OBTAINED FROM <http://maps.live.com>, ACCESSED ON 5/16/07.
 3. AERIAL PHOTOGRAPH OBTAINED FROM <http://maps.yahoo.com/>, ACCESSED ON 5/24/07.
 4. FIGURE 3: EXPLORATION LOCATION MAP, PREPARED BY ENVIRONMENTAL ENGINEERING CONSULTING SERVICES, INC., APPROXIMATE SCALE: 1" = 30'.
 5. ORTHOPHOTO OBTAINED FROM NEW YORK STATE INTERACTIVE MAPPING GATEWAY (<http://www1.nysgis.state.ny.us/MainMap.cfm>) photo date: Apr. 2004, ACCESSED 9/09/08.
 6. OFF-SITE PROPERTY INFORMATION OBTAINED FROM WASHINGTON COUNTY GIS WEB MAP (<http://gis.co.washington.ny.us/webmap/default.aspx>) ACCESSED 11/21/08.

Whitehall Former MGP Site



Figure 2
Proposed Remedy

nationalgrid

August 2013