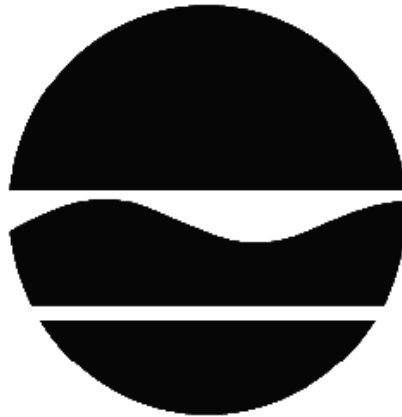


DECISION DOCUMENT

NM - Cohoes MGP
Voluntary Cleanup Program
Cohoes, Albany County
Site No. V00468
March 2014



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

DECLARATION STATEMENT - DECISION DOCUMENT

NM - Cohoes MGP
Voluntary Cleanup Program
Cohoes, Albany County
Site No. V00468
March 2014

Statement of Purpose and Basis

This document presents the remedy for the NM - Cohoes 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 - Cohoes 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. In-Situ Solidification

In-situ solidification (ISS) of the impacted soil will be implemented in the source areas, which include the former western gas holder, purifier and tar filter locations. Any remaining structures and piping will be removed in the areas to be addressed by the ISS. The ISS will extend to the top of rock in each location. ISS will be required for all grossly contaminated soil and any soil exhibiting visible tar or sheen with total polycyclic aromatic hydrocarbons over 500 ppm, in these areas. In general, the tar filter/purifier areas will be solidified to approximately twelve feet below grade while the western gas holder will be solidified to approximately nineteen feet. In addition, the area immediately downgradient of the western gas holder will be solidified to approximately fourteen feet. ISS is a process that binds the soil particles in place creating a low permeability mass. The contaminated soil will be mixed in place together with solidifying agents (typically portland cement) or other binding agents using an excavator or augers. The soil and binding agents are mixed to produce a solidified mass resulting in a low permeability monolith. The solidified mass will then be covered with a four foot minimum cover system, similar to that described in element #4 to prevent direct exposure to the solidified mass and protect the mass from freeze/thaw conditions. The resulting solid matrix reduces or eliminates mobility of contamination and reduces or eliminates the matrix as a source of groundwater contamination.

3. Excavation

Excavation and off-site disposal of MGP contaminated soil not subject to ISS. This excavation will occur along the riverbank, in the purifier waste area, and off-site areas to the south of the site. The on-site portion of the excavation will remove:

- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- soil containing SVOCs exceeding 500 ppm; and
- soils that create a nuisance condition, as defined in Commissioner Policy CP-51 Section G.

The off-site portion of the excavation will remove:

- soils that create a nuisance condition, as defined in Commissioner Policy CP-51 Section G;
- soils that exceed the residential SCOs, as defined in 6 NYCRR Part 375-6.4(b)(1).

Riverbank excavation will include an approximate 50 x 250-foot section of Mohawk River bank along the eastern edge of the site. Riverbank soils in this area will be excavated to bedrock, which extends up to 15 feet bgs. The excavated riverbank will be restored in kind using natural

stream restoration techniques including the replacement of excavated material with clean backfill and topsoil, re-establishing appropriate cross-sectional dimensions of the stream channel, and replanting the riverbank with stabilizing vegetation. All elements of riverbank remediation and restoration will meet the requirements of 6 NYCRR Part 608.

Approximately 21,600 cubic yards of MGP contaminated soil will be removed from the purifier waste area and the riverbank. Also, it is estimated that an additional 10,000 cubic yards of MGP contaminated soil will be removed from the off-site excavation area to the south. This amount will be more precisely determined during the remedial design program.

On-site soil which does not exceed commercial use SCOs and/or the protection of groundwater may be used to backfill the excavation and establish the designed grades at the site to the extent that a sufficient volume of on-site soil is available.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavations and establish the designed grades at the site. For the riverbank excavation, the backfill will meet the SCOs for the protection of ecological resources.

The site will be re-graded to accommodate installation of a cover system as described in remedy element #4. Soil derived from the re-grading may be used to backfill the excavation.

4. Cover System

For the upland area to the west of Linden Street a site cover will be required to allow for commercial use of the site. The cover will 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 the soil cover is required it will be a minimum 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).

Impacted areas to the south and east of Linden Street are within the floodplain forest and include the purifier waste area and the area associated with the western gas holder. These areas will be restored with backfill that meets the SCOs for residential use and is suitable for revegetation. They will then be seeded and re-planted with locally native trees and shrubs.

5. Institutional Controls

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 use 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

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 Control: The deed restriction discussed in Paragraph 5 above.

Engineering Control: The soil cover discussed in Paragraph 4.

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/or groundwater and/or surface water use 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. Details of the monitoring program will be developed during the remedial design. The plan will include, but may not be limited to:
- monitoring of groundwater and sediment to assess the performance and effectiveness of the remedy;

- periodic inspection of the site cover system to assure it remains intact;
- restoration monitoring of the riverbank and forested floodplain. Restored areas will be inspected for erosion, settlement and establishment of plantings and seeding. Repairs will be made as necessary and as directed by the Department; and
- 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.

March 31, 2014
Date

George Heitzman
George Heitzman, Director
Remedial Bureau C

DECISION DOCUMENT

NM - Cohoes MGP
Cohoes, Albany County
Site No. V00468
March 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 repositories:

Cohoes Public Library
169 Mohawk Street
Cohoes, NY 12047
Phone: (518) 235-2570

NYSDEC Central Office
Attn: John Miller
625 Broadway, 11th floor
Albany, NY 12233
Phone: (518) 402-9662

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 site is located on the Linden Street Extension, off of Route 787 N, in a residential area of the City of Cohoes, Albany County. The Mohawk River borders the site to the east, and NYS Route 787 borders the site to the west.

Site Features: The site consists of a grass covered field and a wooded area. A sewer pump station, owned and operated by the City of Cohoes, is located in the east-central portion of the site. The grass portion of the site has been fenced.

Current Zoning and Land Use: The site is currently unoccupied. The property is zoned for commercial and office use. Residential properties are located adjacent to the site.

Past Use of the Site: A manufactured gas plant (MGP) operated on the site from 1852 to 1949. The MGP operations have resulted in contamination of the site. Coal tar has leaked from MGP structures including the former western gas holder, tar filter and purifier areas.

Site Geology and Hydrogeology: The site's overburden consists of mostly fill material containing lenses of native sand and silt. The underlying bedrock consists of weathered shale and siltstone. The depth to groundwater ranges from 6 to 18 feet below grade across the site. Overburden groundwater flow is primarily east toward the Mohawk River.

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.

The Department and Niagara Mohawk Power Corporation (subsequently acquired by National Grid) entered into a Consent Order on January 25, 2002 (Index Number D0-0001-0011). The Order obligates the responsible 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:

- 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	BENZENE
Polycyclic Aromatic Hydrocarbons	ETHYLBENZENE
(PAHs), Total	TOLUENE
	XYLENE (MIXED)

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 conducted to date, the primary contaminants of concern include benzene, toluene, ethylbenzene, xylene (BTEX), non-aqueous phase liquid (NAPL), in the form of coal tar and polyaromatic hydrocarbons (PAHs).

Soil - NAPL, in the form of coal tar, is found in subsurface soil in the vicinity of the former tar filter, purifier and western gas holder. Soil inside of the eastern gas holder was not significantly impacted with coal tar. Coal tar has migrated downgradient of the source areas, in the direction

of the Mohawk River, and is generally present on the surface of bedrock between approximately eight and twelve feet below grade. Also, isolated pockets of coal tar contamination extend off-site to the south, one of which is referred to as the purifier waste area. PAHs were detected above commercial cleanup goals in the surface and subsurface soil across the site. PAHs and limited NAPL were also detected in off-site borings south of the site. The most heavily impacted areas are located in and downgradient of the source areas. The highest level of PAHs in surface soil were seen in a soil boring, where benzo(a)anthracene was detected at 48 parts per million (ppm), benzo(a)pyrene was detected at 56 ppm, benzo(b)fluoranthene was detected at 49 ppm, dibenzo(a,h)anthracene was detected at 16 ppm and indeno(1,2,3-cd) pyrene was detected at 47 ppm. In addition, total PAHs were detected in subsurface soil above 500 ppm at numerous locations. The highest detection of PAHs was in the six to eight foot interval of a soil boring at 25,329 ppm.

Groundwater - NAPL, in the form of coal tar, was observed in several on-site overburden and bedrock wells. NAPL was not observed in off-site wells, however, dissolved phase contamination has migrated off site in both the overburden groundwater and through the bedrock fractures. All groundwater eventually discharges to the Mohawk River. BTEX compounds were detected in overburden and bedrock groundwater both on-site and off-site at concentrations exceeding respective groundwater standards. The groundwater standard is 5 parts per billion (ppb) for all BTEX compounds except for benzene which has a standard of 1 ppb. Maximum concentrations of BTEX compounds were detected in a bedrock well located in the western gas holder, including benzene detected at 20,000 ppb, toluene detected at 4,400 ppb, ethylbenzene detected at 4,600 ppb and xylene(total) detected at 6,200 ppb. Maximum concentrations of BTEX compounds were detected in an off-site that is screened across a bedrock fracture at approximately one hundred feet below grade, including benzene detected at 32,000 ppb, toluene detected at 2,800 ppb, ethylbenzene detected at 1,900 ppb and xylene(total) detected at 1,200 ppb. In total, five off-site deep bedrock groundwater exhibited BTEX contamination.

Sediment - The riverbed of the Mohawk River is predominantly hard bottom consisting of rock and cobbles. Thus, no sediment samples were collected during the RI. However, since coal tar has been documented in the adjacent river bank deposits, it is possible that contamination has migrated or could migrate into the riverbed sediments in the future.

Soil Vapor - During the RI, soil vapor samples were collected adjacent to the former St. Michael's Community Center and also near the existing residences south-west of the site. Volatile organic compounds associated with petroleum and MGP waste were detected in some of the samples collected both on-site and off-site. The soil vapor results collected on-site showed some elevated levels of petroleum and MGP related constituents. The soil vapor results collected off-site indicated no additional sampling was warranted.

Special Resources Impacted: The Mohawk River abuts the eastern site boundary. The remedial investigation has documented MGP related contamination in the soil along an approximate 250 linear foot section of the riverbank, which produces sheens in the river when agitated. The riverbank is densely vegetated and connected to a large area of forested floodplain in the southern portion of the site. The remedial investigation identified two areas within the forested

floodplain that contain MGP related contamination; the former western gas holder and the purifier waste area.

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*.

A portion of the site is fenced, which restricts public access. However, persons who enter the site could contact contaminants in the soil by walking on the soil, digging or otherwise disturbing the soil. People are not drinking the contaminated groundwater because the area is served by a public water supply that is 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 this 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 development. In addition, sampling indicates soil vapor intrusion is not a concern for off-site buildings. People may come in contact with contaminants present in shallow riverbank soils and sediment adjacent to the site while entering or exiting the river during recreational activities.

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.
- Prevent the discharge of contaminants to surface water.
- 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.

Sediment

RAOs for Public Health Protection

- Prevent direct contact with contaminated sediments.
- Prevent surface water contamination which may result in fish advisories.

RAOs for Environmental Protection

- Prevent releases of contaminant(s) from sediments that would result in surface water levels in excess of (ambient water quality criteria).
- Prevent impacts to biota from ingestion/direct contact with sediments causing toxicity or impacts from bioaccumulation through the marine or aquatic food chain.
- Restore sediments to pre-release/background conditions to the extent feasible.

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 In-Situ Solidification, Excavation, Capping and Institutional Control 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;
- 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. In-Situ Solidification

In-situ solidification (ISS) of the impacted soil will be implemented in the source areas, which include the former western gas holder, purifier and tar filter locations. Any remaining structures and piping will be removed in the areas to be addressed by the ISS. The ISS will extend to the top of rock in each location. ISS will be required for all grossly contaminated soil and any soil exhibiting visible tar or sheen with total polycyclic aromatic hydrocarbons over 500 ppm, in these areas. In general, the tar filter/purifier areas will be solidified to approximately twelve feet below grade while the western gas holder will be solidified to approximately nineteen feet. In addition, the area immediately downgradient of the western gas holder will be solidified to approximately fourteen feet. ISS is a process that binds the soil particles in place creating a low permeability mass. The contaminated soil will be mixed in place together with solidifying agents (typically portland cement) or other binding agents using an excavator or augers. The soil and binding agents are mixed to produce a solidified mass resulting in a low permeability monolith. The solidified mass will then be covered with a four foot minimum cover system, similar to that described in element #4 to prevent direct exposure to the solidified mass and protect the mass from freeze/thaw conditions. The resulting solid matrix reduces or eliminates mobility of contamination and reduces or eliminates the matrix as a source of groundwater contamination.

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On-site soil which does not exceed commercial use SCOs and/or the protection of groundwater may be used to backfill the excavation and establish the designed grades at the site to the extent that a sufficient volume of on-site soil is available.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavations and establish the designed grades at the site. For the riverbank excavation, the backfill will meet the SCOs for the protection of ecological resources.

The site will be re-graded to accommodate installation of a cover system as described in remedy element #4. Soil derived from the re-grading may be used to backfill the excavation.

4. Cover System

For the upland area to the west of Linden Street a site cover will be required to allow for commercial use of the site. The cover will 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 the soil cover is required it will be a minimum 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).

Impacted areas to the south and east of Linden Street are within the floodplain forest and include the purifier waste area and the area associated with the western gas holder. These areas will be restored with backfill that meets the SCOs for residential use and is suitable for revegetation. They will then be seeded and re-planted with locally native trees and shrubs.

5. Institutional Controls

Imposition of an institutional control in the form of a deed restriction for the controlled property that:

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- allows the use and development of the controlled property for commercial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
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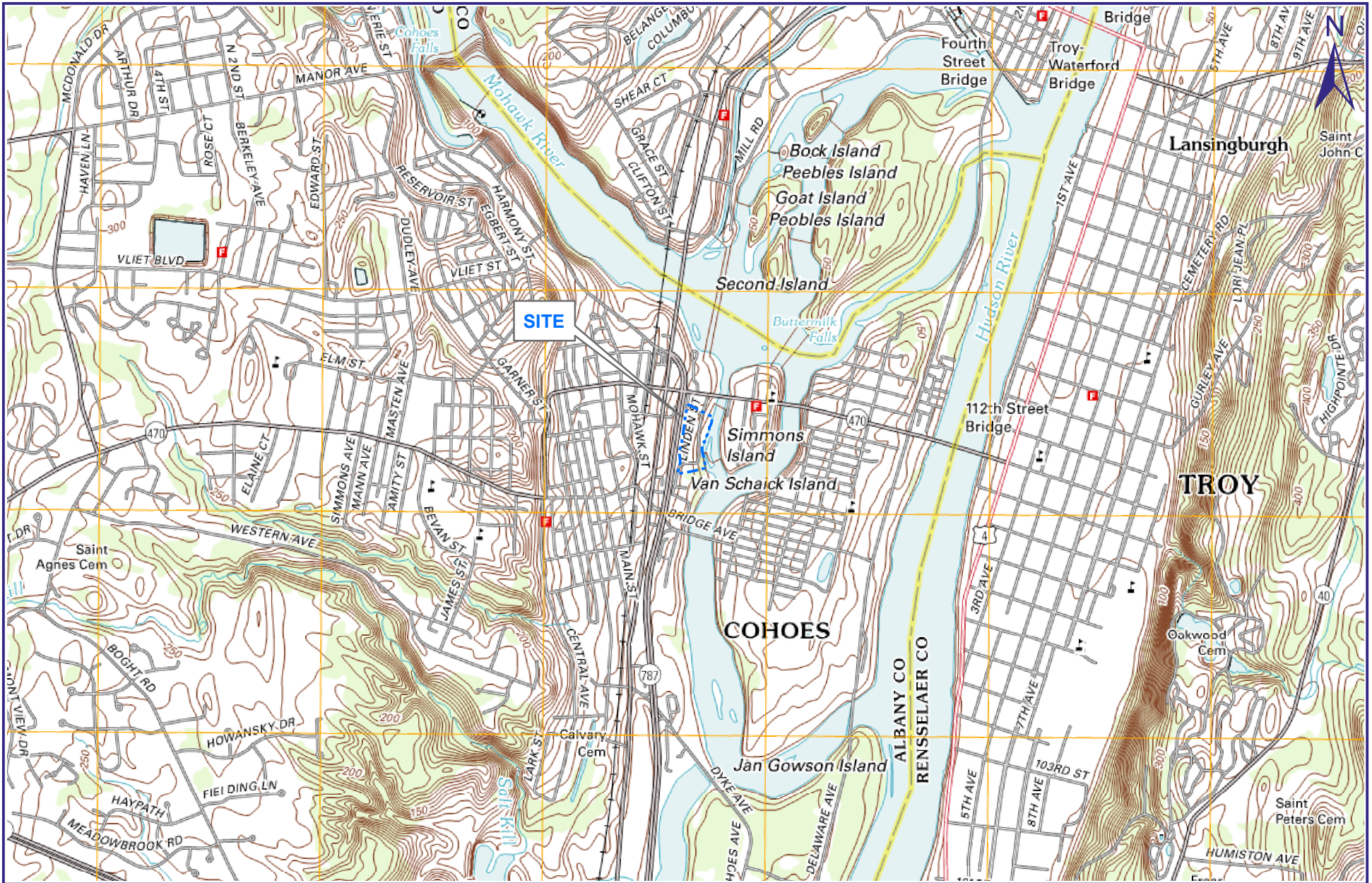
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- descriptions of the provisions of the deed restriction including any land use, and/or groundwater and/or surface water use restrictions;

- 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. Details of the monitoring program will be developed during the remedial design. The plan will include, but may not be limited to:

- monitoring of groundwater and sediment to assess the performance and effectiveness of the remedy;
- periodic inspection of the site cover system to assure it remains intact;
- restoration monitoring of the riverbank and forested floodplain. Restored areas will be inspected for erosion, settlement and establishment of plantings and seeding. Repairs will be made as necessary and as directed by the Department; and
- a schedule of monitoring and frequency of submittals to the Department



Proposed Decision Document

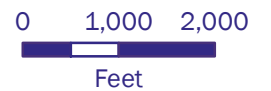
FIGURE 2-1

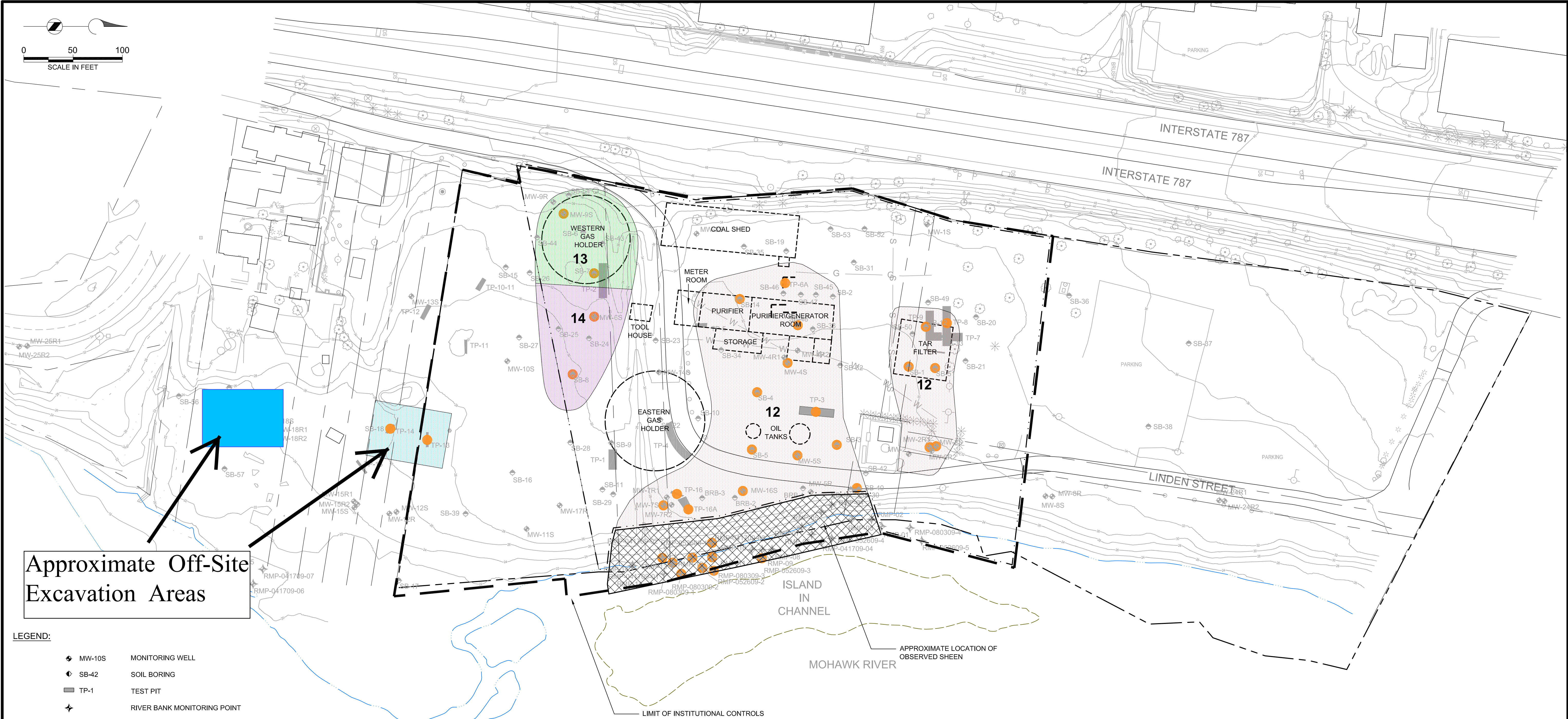
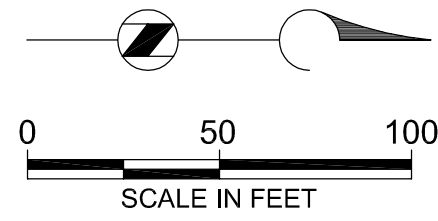
Figure 1

SITE LOCATION
NATIONAL GRID

COHOES (LINDEN ST.) FORMER MGP SITE, COHOES, NEW YORK

Source: USGS 7.5 Minute Topographic Map
Troy North Quadrangle (2013)





Approximate Off-Site Excavation Areas

LEGEND:

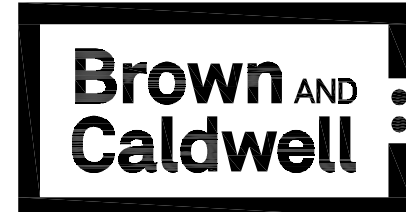
	MW-10S	MONITORING WELL
	SB-42	SOIL BORING
	TP-1	TEST PIT
		RIVER BANK MONITORING POINT
		FORMER MGP STRUCTURES. LOCATIONS ARE APPROXIMATE, BASED ON 1925 SANBORN FIRE INSURANCE MAP AND 1952 AERIAL PHOTOGRAPH.
		BUILDING
		ROAD
		APPROXIMATE BOUNDARY OF FORMER MGP SITE
		TAX PARCEL BOUNDARY (APPROXIMATE)
		LIMIT OF INSTITUTIONAL CONTROLS
		LIMIT OF ENGINEERING CONTROLS (ENGINEERING CAP)
	23	GROUND SURFACE ELEVATION CONTOUR (FT., NGVD)
		SHORELINE
	S	SEWER
	G	GAS
	W	WATER

LEGEND:

	LOCATION MEETING SOURCE MATERIAL CRITERIA
	APPROXIMATE LIMITS OF ISS TO AVERAGE DEPTH OF 12' BGS
	APPROXIMATE LIMITS OF ISS TO AVERAGE 14' BGS
	APPROXIMATE LIMITS OF ISS TO AVERAGE DEPTH 13 BGS
	APPROXIMATE LIMITS OF EXCAVATION TO APPROXIMATELY 3' BGS
	APPROXIMATE LIMITS OF EXCAVATION TO APPROXIMATELY 0-15' BGS

NOTES:
 1. SOURCE MATERIALS ARE DEFINED AS SOIL SATURATED WITH NAPL/TAR, SOIL WHERE NAPL GAUGING OF WELLS INDICATED NAPL ENTRY INTO WELLS, OR MATERIAL INDICATIVE OF PURIFIER WASTE.
SOURCE:
 BASE MAP FROM SURVEY BY VAN DUSEN AND STEVES LLC, 2003 & 2005.
 REVISED BY M.J. ENGINEERING & LAND SURVEYING, LLC. 2007, 2009 & 2011.

Proposed Decision Document Figure 2



BROWN AND CALDWELL ASSOCIATES
 142703.200.007
 DATE: November 20, 2013

NATIONAL GRID
 COHOES (LINDEN ST.)
 FORMER MGP SITE
 COHOES, NY

ISS WITHIN AND EAST OF THE FOOTPRINT OF FORMER MGP STRUCTURE, REMOVAL OF PURIFIER WASTE AND RIVER BANK SOURCE MATERIALS, MNA, AND ENGINEERING AND INSTITUTIONAL CONTROLS

ALTERNATIVE 3

FIGURE

7-2