

# DECISION DOCUMENT

---

NM - Oswego W. Utica St. MGP  
Operable Unit Number 02: Offsite Groundwater Impacts  
Manufactured Gas Plant Project  
Oswego, Oswego County  
Site No. 738049  
April 2021



**Department of  
Environmental  
Conservation**

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

# **DECLARATION STATEMENT - DECISION DOCUMENT**

---

NM - Oswego W. Utica St. MGP  
Operable Unit Number: 02  
Manufactured Gas Plant Project  
Oswego, Oswego County  
Site No. 738049  
April 2021

## **Statement of Purpose and Basis**

This document presents the remedy for Operable Unit Number: 02: Offsite Groundwater Impacts of the NM - Oswego W. Utica St. Manufactured Gas Plant (MGP) site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375, and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for Operable Unit Number: 02 of the NM - Oswego W. Utica St. MGP site and the public's input to the proposed remedy presented by the Department.

## **Description of Selected Remedy**

The elements of the selected remedy are as follows:

### 1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the 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.
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

## 2. Coal Tar Recovery

Installation and operation of coal tar recovery wells to remove potentially mobile coal tar from the subsurface. The number, depth, type and spacing of the wells will be determined during the design of the remedy. Coal tar will be collected periodically from each well; however, if the wells are determined by the Department to accumulate large quantities of coal tar over extended time periods, they will be converted to an automated collection.

## 3. Natural Attenuation with Monitoring

Groundwater contamination (remaining after the active remediation completed under operable unit 1 [OU1]) will be addressed through natural attenuation with monitoring. Groundwater will be monitored for site related contamination and also for monitored natural attenuation indicators which will provide an understanding of the biological activity breaking down the contamination. It is anticipated that contamination will decrease by an order of magnitude in a reasonable period of time (10 years). Reports of the attenuation will be provided every two years, and active remediation will be proposed if it appears that natural processes alone will not address the contamination. The contingency remedial action will depend on data trends in monitoring data collected during site management. It is currently anticipated that an enhanced bioremediation technology would be the expected contingency remedial action, if appropriate based on monitoring data.

## 4. Site Management Plan

- a. The Site Management Plan for OU1 will be updated to include OU2 site management activities, which includes the following:
  - a provision for additional groundwater measures should it be necessary based on long-term groundwater monitoring;
  - the steps necessary for the periodic review and certification of the institutional and/or engineering controls; and
  - a provision for evaluation of the potential for soil vapor intrusion for any future occupied buildings on Operable Unit 2, including provision for implementing actions recommended to address any potential exposures related to soil vapor intrusion.
- 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;

- a schedule of monitoring and frequency of submittals to the Department;
- monitoring for vapor intrusion for any future buildings on OU2, as may be required;
- monitoring and maintenance of the coal tar recovery wells referred to in Paragraph 2 above;
- maintaining site access controls and Department notification; and
- providing the Department access to the site and operation, monitoring and maintenance 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.

4/9/2021

Date



Janet Brown, Director  
Remedial Bureau C

# DECISION DOCUMENT

NM - Oswego W. Utica St. MGP  
Oswego, Oswego County  
Site No. 738049  
April 2021

---

## **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 hazardous substances associated with former manufactured gas plant operations (MGP wastes) at the site has resulted in threats to public health and the environment that will 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.

Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. 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:

DECInfo Locator/On-line repository - Web Application  
<https://www.dec.ny.gov/data/DecDocs/738049/> and  
<https://www.dec.ny.gov/data/DecDocs/V00481/>

### **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 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 1.2-acre NM - Oswego (West Utica St.) MGP site is located on the north side of West Utica Street between 3rd and 4th Streets in the City of Oswego.

**Site Features:** There are currently two occupied buildings and two unoccupied buildings on the site. One occupied building serves as a dialysis center, while the other occupied building is a medical office. The unoccupied buildings previously housed an automobile repair shop, and an electrical supply store. The majority of site area is paved.

The off-site area consists of a convenience store, the four-lane West Utica Street, and a bank. The off-site properties are paved, with some landscaping.

**Current Zoning and Use:** The site and off-site impacted area are zoned for commercial use. The site is bounded by a mix of residential areas and businesses.

**Past Use of the Site:** MGP operation occurred at the site from approximately 1852 to 1935. MGP contamination at the site is likely the result of direct disposal or inadvertent releases of byproducts from process equipment during the operation.

**Operable Units:** The site was divided into two operable units. An operable unit represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination.

**Operable Unit 1 (OU1)** is the original footprint of the manufactured gas plant. OU1 was remediated in the summer of 2020 through in-situ solidification and placement of a site cover.

**Operable Unit 2 (OU2)** consists of the off-site groundwater impacted by the MGP.

**Site Geology and Hydrogeology:** The overburden at the on-site area (OU1) and surrounding areas including OU2, consists of an approximately six to twelve-foot thickness of fill materials including sand, gravel, cinders, coal and occasional brick and concrete. Underlying the fill is an approximately eight to fifteen-foot thickness of glacial till, a dense, poorly sorted mixture of fine-grained and coarse-grained materials. Below the till is sandstone bedrock at an approximate depth of 20 feet below ground surface. The water table is approximately seven feet below ground surface. Water-bearing zones within the rock are limited to the upper bedrock. Groundwater in the overburden and shallow bedrock flows to the south with a component of the flow to the southwest. Groundwater in deep bedrock (deeper than 120 feet below ground surface) flows to the east northeast.

**Operable Unit (OU) Number 02** is the subject of this document.

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. This decision document evaluated remedial options for addressing the off-site contamination in groundwater (OU2). On-site contamination (OU1) was addressed under the previously issued decision document for this site, prepared under the Voluntary Cleanup Program (ref. site number V00481). Land use is considered in evaluating potential remedial alternatives for the off-site area (OU2). Specifically, this criterion evaluates the current, intended and reasonably anticipated future use of this off-site area (OU2), as it relates to an alternative when unrestricted use levels are not achieved. Land use in OU2 is commercial.

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**

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The PRPs for the site, documented to date, include:

Niagara Mohawk Power Corporation

The Department and Niagara Mohawk Power Corporation, doing business as National Grid, entered into a Consent Order, Index No. CO 7-20180629-27, on July 13, 2018. The Order obligates Niagara Mohawk Power Corporation to implement a full remedial program for MGP-related contamination both on and off the site.

## **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 OU2 includes data for:

- groundwater

### **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 hazardous waste 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 for this Operable Unit at this site is/are:

benzene	chrysene
toluene	benzo(b)fluoranthene
xylene (mixed)	cyanides(soluble cyanide salts)
acenaphthene	ethylbenzene
benzo(a)anthracene	naphthalene
benzo(a)pyrene	

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

- groundwater

### **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.

#### **Operable Unit 1, On-site**

Prior to remediation, non-aqueous phase liquid (NAPL), in the form of coal tar was observed on-site during the RI from approximately four feet below ground surface to approximately 35 feet in depth. The NAPL was more prevalent in the southwest quadrant of the site, extending over nearly one acre. Specifically, NAPL was identified within the former 40,000 cubic foot gas holder foundation and extended south in the overburden to West Utica Street. The area of the gas holder is currently a parking lot. NAPL was also found in the overburden in the area west of the former retort house, adjacent to the east side of the former electrical supply store building. In addition, NAPL was found in the shallow bedrock underlying NAPL-contaminated soil. NAPL in the bedrock extends off-site to the south, resulting in contamination in off-site groundwater (i.e., OU2). It should be noted that in-situ solidification was performed in OU1 in 2020, which is expected to cut off the source of the NAPL migration.

Groundwater: Prior to remediation in OU1, the most prevalent constituents detected in on-site groundwater at concentrations above the Class GA criteria were benzene, toluene, ethylbenzene and xylene (collectively known as BTEX) and naphthalene. The highest concentrations of BTEX and naphthalene were observed in the overburden and bedrock in the vicinity of the former 40,000 cubic foot gas holder. As examples, benzene was detected up to 26,000 parts per billion (ppb), exceeding the standard of 1 ppb and toluene was detected at 2,200 ppb, exceeding the standard of 1 ppb. In the fourth quarter of 2020, approximately 8,000 cubic yards of overburden material contaminated with:

- concentrated solid or semi-solid hazardous substances;
- non-aqueous phase liquids; and/or
- grossly contaminated media, including coal tar;

were remediated through either removal or solidification.

Prior to remediation, BTEX compounds were found in on-site soil vapor. However, soil vapor intrusion was determined not to be a concern for on-site buildings.

#### **Operable Unit 2, Off-Site**

Soil:

Soil did not exceed the SCGs for the contaminants of concern at the perimeter of OU1, and on-site soils (OU1) were solidified in place in 2020. Therefore, soil at OU2 was not analyzed

because at that point, the only off-site contamination was in the bedrock. However, continuous vertical visual observations were made during the installation of off-site overburden monitoring wells. Coal tar was not seen in OU2 overburden soils. Sheen was observed in one boring along the south curb of West Utica Street at a depth of 16 feet and at an eight-foot depth in one boring along the western curb of West Fourth Street near the convenience store property.

#### Groundwater:

Overburden Groundwater - Consistent with the OU1 findings, the most prevalent constituents detected in off-site groundwater at concentrations above the Class GA criteria were BTEX and naphthalene. BTEX and naphthalene exceeding the Class GA groundwater standards off-site were limited to the area of West 4th Street and the eastern portion of the convenience store property, approximately 50 feet west of the site. Groundwater sampled adjacent to the site beneath West 4th Street exhibited higher concentrations of BTEX compounds as compared to the store property. Beneath the street, benzene was detected up to 620 ppb, exceeding the standard of 1 ppb. Toluene was detected up to 15 ppb, exceeding the standard of 5 ppb. Ethylbenzene was detected up to 96 ppb, exceeding the standard of 5 ppb. Xylene was detected up to 130 ppb, exceeding the standard of 5 ppb. Naphthalene was detected up to 890 ppb, exceeding the standard of 10 ppb. Beyond the street, away from the site, benzene was detected up to 12 ppb, toluene was detected up to 8.2 ppb, ethylbenzene was detected up to 19 ppb, xylene was detected up to 48 ppb and naphthalene was detected up to 98 ppb. MGP-related constituents, listed in Section 6.1.2, did not exceed their respective standards in groundwater beneath the bank property.

Bedrock Groundwater - Sheens, staining and tar-like odors were observed in the shallow bedrock groundwater along the southern edge of West Utica Street and along the western edge of West 4th Street. NAPL was observed in one bedrock monitoring well located south of the site and proximate to it. However, no extensive zones of NAPL saturation were observed within the off-site bedrock. BTEX and other MGP-related constituents in the bedrock were detected in concentrations exceeding the Class GA groundwater standards in several off-site/OU2 bedrock wells which delineated an approximately 300 feet wide and 250 feet long plume extending off-site to the south southeast. Groundwater exceeding standards was found as deep as 50 feet from the ground surface, which is approximately 30 feet into the bedrock. Off-site groundwater contamination was also found southwest of the site, beneath the convenience store property near the boundary with OU1. Benzene was detected up to 21,000 ppb, exceeding the standard of 1 ppb. Toluene was detected up to 1,400 ppb, exceeding the standard of 5 ppb. Xylene was detected up to 2,700 ppb, exceeding the standard of 5 ppb. Naphthalene was detected up to 6,900 ppb, exceeding the standard of 10 ppb. Constituent concentrations in groundwater decreased with distance away from the site.

Data indicates that soil vapor intrusion is not currently a concern for off-site buildings.

#### **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*.

Measures are in place within Operable Unit 1 (on-site) to prevent exposure to residual site contamination. Since the Operable Unit 2 (OU2) (off-site) is covered with pavement and buildings, people are not likely to come into contact with site-related groundwater contamination unless they drill into and extract bedrock groundwater from certain locations. People are not drinking the contaminated groundwater in OU2 because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in soil vapor (air spaces within the soil) may move into 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. Environmental sampling indicates that soil vapor intrusion is not currently 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.
- Prevent the discharge of contaminants to surface water.
- Remove the source of ground 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 NAPL Recovery and Natural Attenuation with Monitoring 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 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.
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

### 2. Coal Tar Recovery

Installation and operation of coal tar recovery wells to remove potentially mobile coal tar from the subsurface. The number, depth, type and spacing of the wells will be determined during the design of the remedy. Coal tar will be collected periodically from each well; however, if the wells are determined by the Department to accumulate large quantities of coal tar over extended time periods, they will be converted to an automated collection.

### 3. Natural Attenuation with Monitoring

Groundwater contamination (remaining after the active remediation completed under operable unit 1 [OU1]) will be addressed through natural attenuation with monitoring. Groundwater will be monitored for site related contamination and also for monitored natural attenuation indicators which will provide an understanding of the biological activity breaking down the contamination. It is anticipated that contamination will decrease by an order of magnitude in a reasonable period of time (10 years). Reports of the attenuation will be provided every two years, and active remediation will be proposed if it appears that natural processes alone will not address the contamination. The contingency remedial action will depend on data trends in monitoring data collected during site management. It is currently anticipated that an enhanced bioremediation technology would be the expected contingency remedial action, if appropriate based on monitoring data.

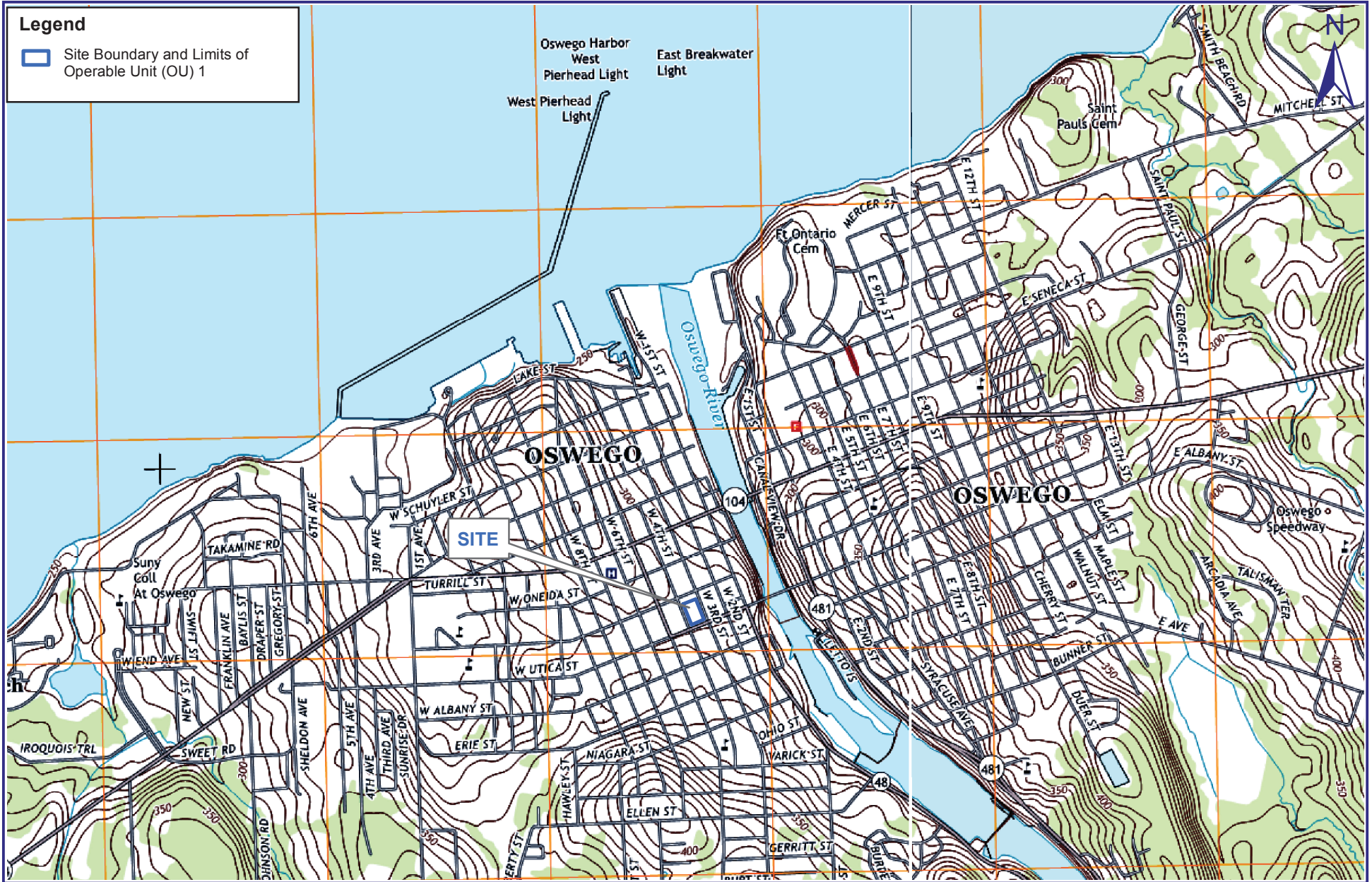
### 4. Site Management Plan

a. The Site Management Plan for OU1 will be updated to include OU2 site management activities, which includes the following:

- a provision for additional groundwater measures should it be necessary based on long-term groundwater monitoring;
- the steps necessary for the periodic review and certification of the institutional and/or engineering controls; and
- a provision for evaluation of the potential for soil vapor intrusion for any future occupied buildings on Operable Unit 2, including provision for implementing actions recommended to address any potential exposures related to soil vapor intrusion.

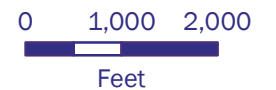
b. A monitoring plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the Department;
- monitoring for vapor intrusion for any future buildings on OU2, as may be required;
- monitoring and maintenance of the coal tar recovery wells referred to in Paragraph 2 above;
- maintaining site access controls and Department notification; and
- providing the Department access to the site and operation, monitoring and maintenance records.

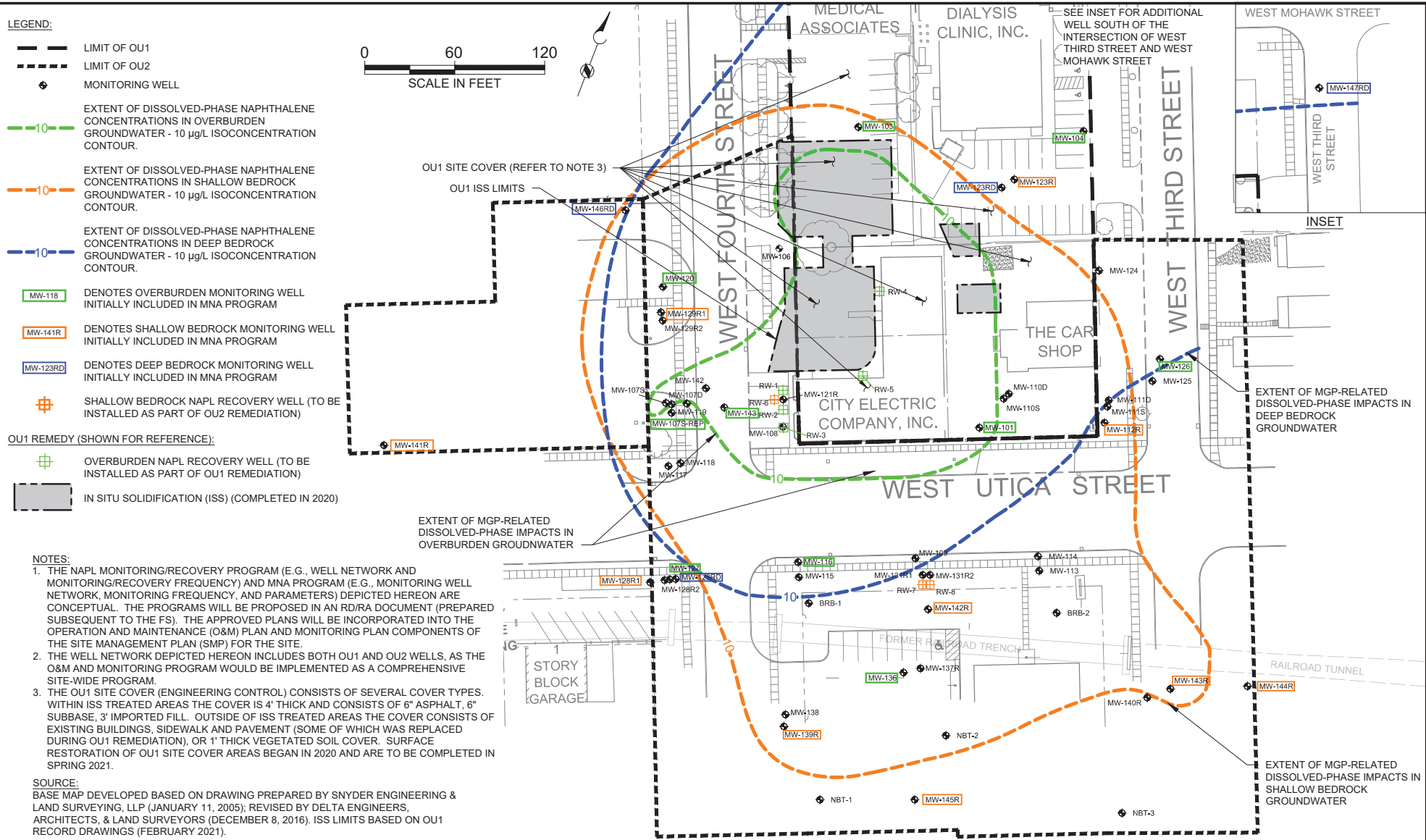


**FIGURE 1**  
**SITE LOCATION**  
**NATIONAL GRID**  
**OSWEGO (WEST UTICA ST.) FORMER MGP SITE - OU1, OSWEGO, NEW YORK**

Source: USGS 7.5 Minute Topographic Maps  
 Oswego West Quadrangle (2013)  
 Oswego East Quadrangle (2013)







SCALE: 1" = 60'  
 154224  
 DATE: March 2, 2021

NATIONAL GRID  
 OSWEGO (WEST UTICA ST.)  
 FORMER MGP SITE - OPERABLE UNIT 2  
 OSWEGO, NEW YORK

Figure 2  
 OU2 REMEDY