RECORD OF DECISION

NYSEG - Plattsburg Saranac St. MGP
Operable Unit 2 (OU-2): Saranac River
State Superfund Project
Plattsburgh, Clinton County
Site No. 510007
March 2018

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

DECLARATION STATEMENT - RECORD OF DECISION

NYSEG - Plattsburg Saranac St. MGP
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Statement of Purpose and Basis

This document presents the remedy for Operable Unit Number: 02: Saranac River of the NYSEG - Plattsburg Saranac St. MGP site, a Class 2 inactive hazardous waste disposal 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 NYSEG - Plattsburg Saranac St. MGP site and the public's input to the proposed remedy presented by the Department. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

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 construction, operation, optimization, maintenance, and monitoring of the remedial program. A pre-design investigation will be conducted to determine the extent of sediment excavation. The design will include a restoration and monitoring plan for areas in the Saranac River that are disturbed by the remedy and all activities will be consistent with the substantive technical requirements of 6 NYCRR Part 608, Use and Protection of Waters.
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. Excavation of Contaminated Sediment

Excavation, on-site processing, and off-site disposal of all visually impacted sediment from the Saranac River to bedrock. Where till is present beneath impacted sediments and above bedrock, excavation will only continue through the till layer until all impacted till is removed. Sediment removal will occur at several locations from the Broad Street Bridge downstream to a depositional area extending approximately 500 feet beyond the railroad bridge. Sediment will be removed based on the following criteria:

- grossly contaminated sediment, as defined in 6 NYCRR Part 375-1.2(u);
- sediment containing visual impacts including tar like material, purifier waste, or non-aqueous phase liquid;

Sediment will be accessed through the construction of a temporary diversion system to facilitate sediment removal and backfilling in the dry conditions, to the extent practicable. Approximately 17,700 cubic yards of sediment will be excavated. Excavated sediment will be processed on-site and larger materials (cobbles and boulders) will be cleaned for reuse in the river. Finer materials will be sent off-site for disposal. It is estimated that 5,300 cubic yards of excavated cobbles and boulders will be suitable for reuse.

The area around sediment sample RSS-97-08 (total PAHs = 325 ppm) will be investigated during the remedial action to determine if tar blebs are still present in this area of the Saranac River. A 2012 investigation of the area found no visual evidence of contamination. These findings will be re-evaluated, and any visual coal tar found in the area of this sediment sample location will be excavated, processed, and disposed of off-site as described above.

In areas where the bedrock is exposed during excavation and visual NAPL and tar is observed, the bedrock surface will be cleaned prior to backfilling. If encountered, visually impacted till will be removed.

3. Backfill

Larger materials excavated from the river will be cleaned on-site for re-use. If additional fill is required it will be clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) and NYSDEC Guidance "Screening and Assessment of Contaminated Sediments", Table 5 to replace the excavated sediment and establish the designed grades in the River.

4. Restoration of River Bed and Banks

The Saranac River bed and banks will be restored in kind and in the same season as the disturbance to the extent practicable. River bed and bank bathymetry and topography will be restored to preexisting grades with in kind stream bed and bank materials that may include reused materials. If present, submerged aquatic and riparian vegetation in the disturbed area will be restored adhering to an approved restoration plan that includes a 5-year restoration monitoring plan.

New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy for this site is protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

March 31, 2018

Date

Michael J. Ryan, P.E., Director
Division of Environmental Remediation

RECORD OF DECISION

NYSEG - Plattsburg Saranac St. MGP
Operable Unit 2 (OU-2)
Plattsburgh, Clinton County
Site No. 510007
March 2018

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 wastes 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 hazardous wastes at this site, as more fully described in this document, has contaminated various environmental media. The remedy is intended to attain the remedial action objectives identified for this site for the protection of public health and the environment. This Record of Decision (ROD) identifies the selected remedy, summarizes the other alternatives considered, and discusses the reasons for selecting the remedy.

The New York State Inactive Hazardous Waste Disposal Site Remedial Program (also known as the State Superfund Program) is an enforcement program, the mission of which is to identify and characterize suspected inactive hazardous waste disposal sites and to investigate and remediate those sites found to pose a significant threat to public health and environment.

The 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:

Plattsburgh Public Library
Attn: Librarian
19 Oak Street
Plattsburgh,, NY 12901-2810
Phone: (518) 563-0921

A public meeting was also conducted. At the meeting, the findings of the remedial investigation (RI) and the feasibility study (FS) were presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period was held, during which verbal or written comments were accepted on the proposed remedy.

Comments on the remedy received during the comment period are summarized and addressed in the responsiveness summary section of the ROD.

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 in the City of Plattsburgh, Clinton County, at Saranac Street. The site occupies approximately 11 acres of land in an urban area along the east and south bank of the Saranac River, directly across the river from downtown Plattsburgh. The corner of Saranac and Caroline Streets defines the northeast corner of the site, with Caroline Street forming the eastern site boundary. The remaining three sides are bounded by the Saranac River.

Site Features: Currently the only structures present on-site are temporary structures associated with the recently completed remedial construction for Operable Unit 1 (OU-1). There are some trees and underbrush along the river bank, but the rest of the site is currently free of vegetation. Several large electrical transmission towers are located along the northern site boundary, and a buried sewer line crosses the southern portion of the site and then runs along Caroline Street.

Current Zoning/Use(s): The site is zoned for light industrial use and is currently owned by NYSEG. The site is unused, with the exception of an electrical substation located near the Saranac River. The nearest residences are on the east side of Caroline Street, approximately 50 feet from the site boundary. Off-site Operable Unit 2 (Saranac River) and Operable Unit 3 (Cumberland Bay) are not privately owned and considered waters of New York.

Past Use of the Site: From approximately 1896 to 1960, the site housed a manufactured gas plant (MGP). The MGP used coal and petroleum products to produce flammable gas, which was used in much the same way that natural gas is used today. The gas manufacturing process produced large quantities of two different waste materials (coal tar and gas purifier waste), both of which were disposed on site.

Operable Units: The site is divided into three 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 (OU-1) is the on-site source area covering the area of former MGP structures and the section of the Saranac River from approximately 300 feet upstream of the former wooden footbridge which was removed in 2016 that was located at the end of Caroline Street and the Kennedy Bridge. Operable Unit 2 (OU-2) includes the section of the Saranac River downstream of the Kennedy Bridge. Operable Unit 3 (OU-3) includes the portion of Cumberland Bay within Lake Champlain impacted by coal tar. Remedial construction in OU-1 is complete.

Site Geology and Hydrogeology: The site is underlain by several layers of overburden consisting of unconsolidated soils overlying limestone bedrock. A thin layer of man-placed fill covers the entire site. The depth of this fill ranges from a few feet to 21 feet across the site. The fill consists of a complex mix of reworked site soils, building demolition debris and soils brought from outside sources. The groundwater that can be found at a depth between 8 to 15 feet flows toward the Saranac River within the man-made fill layer and the layer of coarse grained alluvium. Off-site Saranac River sediments (OU-2) generally consist of cobbles ranging from 6 inches to 2 feet in diameter underlain by till where present, and bedrock.

Operable Unit (OU) Number 2 is the subject of this document. References to site in the remainder of the document are references to OU-2.

A Record of Decision was issued previously for OU-1. A Record of Decision will be issued for OU-3 in the future.

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, an alternative which allows for unrestricted use of the site was evaluated.

A comparison of the results of the RI against unrestricted use standards, criteria and guidance values (SCGs) for the site contaminants is included in the Tables for the media being evaluated in Exhibit A.

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:

New York State Electric and Gas (NYSEG)

The NYSDEC and NYSEG entered into a Consent Order on March 30, 1994. The order obligates NYSEG to investigate and, if necessary, remediate 33 former MGP sites in their service area. The Plattsburgh (Saranac Street) site is one of the sites included in the multi-site order.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A Remedial Investigation (RI) has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information,
- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

The analytical data collected on this site includes data for:

- surface water
- soil
- sediment

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. The tables found in Exhibit A list the applicable SCGs in the footnotes. 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 in Exhibit A. 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:

coal tar Total PAHs

As illustrated in Exhibit A, the contaminant(s) of concern exceed the applicable SCGs for:

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 Record of Decision.

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 Fish and Wildlife Resources Impact Analysis (FWRIA) for OU 02, which is included in the RI report, presents a detailed discussion of the existing and potential impacts from the site to fish and wildlife receptors.

The Saranac River is classified as and class C(t) stream and is one of the top fisheries in northeastern New York supporting a world class fishery. The river provides anglers the opportunity to fish for landlocked salmon and trout during spring and fall runs, as well as a healthy black bass harvest all summer long. Saranac River is also part of the Northern Forest Canoe Trail, and kayakers frequent rapids in the river reaches both upriver of the hydroelectric dam and within the City of Plattsburg. The river is a valuable resource to the people of New York that provides ample opportunities for direct contact recreation.

Nature and Extent of Contamination: The principal type of waste material found in OU-2 is coal tar. Coal tar is a black, oily liquid which condensed from the hot gas produced by the manufacturing process. Large quantities of tar escaped from the site into the Saranac River and migrated downstream into OU-2 and OU-3.

Coal tar is known to contain PAH compounds (polycyclic aromatic hydrocarbons) in exceedance of sediment guidance values (SGVs). Coal tar was observed in Saranac River sediment throughout the investigation of OU-2 in the form of non-aqueous phase liquid (NAPL) sheens

and blebs as shown on Figure 3 and in Exhibit A. Coal tar was observed in two main areas of OU-2 during the remedial investigation: along the west bank of the Saranac River between Broad Street and Bridge Street and from adjacent to City Hall to the municipal boat launch. Five sediment samples were collected for laboratory analysis from OU-2 during the RI and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs) and metals. One analytical sediment samples in OU-2 indicated a maximum concentration of total PAHs of 325 parts per million (ppm) in a sample visually impacted by coal tar blebs. This Total PAH level exceeds the Class C SGV of 35 ppm. The four other sediment samples did not exceed the Class C SGV.

Two surface water samples were collected for laboratory analysis from OU-2 during the RI and analyzed for VOCs, SVOCs, and metals. Surface water standards were not exceeded in either sample for these analytes.

Post-remediation (OU-1): Purifier waste and tar-contaminated sediments and soils have been removed and shipped off-site for treatment and disposal. The excavated areas within the river were backfilled with clean cobble. The excavated areas along the riverbanks were backfilled with clean soil and seeded to control erosion.

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 to control the potential for coming in contact with subsurface soil and groundwater contamination remaining on-site. Surface water of the river has not been impacted by site contaminants, however, people may come in contact with contaminants present in the shallow river sediments while entering or exiting the river during recreational activities. 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 are no occupied buildings at the site, inhalation of site contaminants in indoor air due to soil vapor intrusion does not represent a concern for the site in its current condition. An evaluation of the potential for soil vapor intrusion to occur will be completed should the current use of the site change.

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:

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.

SECTION 7: SUMMARY OF THE SELECTED REMEDY

To be selected the remedy must be protective of human health and the environment, be cost-effective, comply with other statutory requirements, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. The remedy must also attain the remedial action objectives identified for the site, which are presented in Section 6.5. Potential remedial alternatives for the Site were identified, screened and evaluated in the feasibility study (FS) report.

A summary of the remedial alternatives that were considered for this site is presented in Exhibit B. Cost information is presented in the form of present worth, which represents the amount of money invested in the current year that would be sufficient to cover all present and future costs associated with the alternative. This enables the costs of remedial alternatives to be compared on a common basis. As a convention, a time frame of 30 years is used to evaluate present worth costs for alternatives with an indefinite duration. This does not imply that operation, maintenance, or monitoring would cease after 30 years if remediation goals are not achieved. A summary of the Remedial Alternatives Costs is included as Exhibit C.

The basis for the Department's remedy is set forth at Exhibit D.

The selected remedy is referred to as the Removal of Visually Impacted Sediment remedy.

The estimated present worth cost to implement the remedy is $16,300,000. The cost to construct the remedy is estimated to be $16,300,000 and the estimated average annual cost is $0.

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 construction, operation, optimization, maintenance, and monitoring of the remedial program. A pre-design investigation will be conducted to determine the extent of sediment excavation. The

design will include a restoration and monitoring plan for areas in the Saranac River that are disturbed by the remedy and all activities will be consistent with the substantive technical requirements of 6 NYCRR Part 608, Use and Protection of Waters.
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. Excavation of Contaminated Sediment

Excavation, on-site processing, and off-site disposal of all visually impacted sediment from the Saranac River to bedrock. Where till is present beneath impacted sediments and above bedrock, excavation will only continue through the till layer until all impacted till is removed. Sediment removal will occur at several locations from the Broad Street Bridge downstream to a depositional area extending approximately 500 feet beyond the railroad bridge. Sediment will be removed based on the following criteria:

- grossly contaminated sediment, as defined in 6 NYCRR Part 375-1.2(u);
- sediment containing visual impacts including tar like material, purifier waste, or non-aqueous phase liquid;

Sediment will be accessed through the construction of a temporary diversion system to facilitate sediment removal and backfilling in the dry conditions, to the extent practicable. Approximately 17,700 cubic yards of sediment will be excavated. Excavated sediment will be processed on-site and larger materials (cobbles and boulders) will be cleaned for reuse in the river. Finer materials will be sent off-site for disposal. It is estimated that 5,300 cubic yards of excavated cobbles and boulders will be suitable for reuse.

The area around sediment sample RSS-97-08 (total PAHs = 325 ppm) will be investigated during the remedial action to determine if tar blebs are still present in this area of the Saranac River. A 2012 investigation of the area found no visual evidence of contamination. These findings will be re-evaluated, and any visual coal tar found in the area of this sediment sample location will be excavated, processed, and disposed of off-site as described above.

In areas where the bedrock is exposed during excavation and visual NAPL and tar is observed, the bedrock surface will be cleaned prior to backfilling. If encountered, visually impacted till will be removed.

3. Backfill

Larger materials excavated from the river will be cleaned on-site for re-use. If additional fill is required it will be clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) and NYSDEC Guidance "Screening and Assessment of Contaminated Sediments", Table 5 to replace the excavated sediment and establish the designed grades in the River.

4. Restoration of River Bed and Banks

The Saranac River bed and banks will be restored in kind and in the same season as the disturbance to the extent practicable. River bed and bank bathymetry and topography will be restored to preexisting grades with in kind stream bed and bank materials that may include reused materials. If present, submerged aquatic and riparian vegetation in the disturbed area will be restored adhering to an approved restoration plan that includes a 5-year restoration monitoring plan.

Exhibit A

Nature and Extent of Contamination

This section describes the findings of the Remedial Investigation for all environmental media that were evaluated. As described in Section 6.1, samples were collected from various environmental media to characterize the nature and extent of contamination.

For each medium for which contamination was identified, a table summarizes the findings of the investigation. The tables present the range of contamination found at the site in the media and compares the data with the applicable SCGs for the site. The contaminants are arranged into three categories volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides/ polychlorinated biphenyls (PCBs), and inorganics (metals and cyanide). For comparison purposes, the SCGs are provided for each medium that allows for unrestricted use.

Waste/Source Areas

As described in the RI report, waste/source materials were identified at the site and are impacting sediment.

Wastes are defined in 6 NYCRR Part 375-1.2 (aw) and include solid, industrial and/or hazardous wastes. Source areas are defined in 6 NYCRR Part 375 (au). Source areas are areas of concern at a site where substantial quantities of contaminants are found which can migrate and release significant levels of contaminants to another environmental medium. Wastes and source areas were identified at the site include, coal tar.

The Remedial Investigation for OU-2 was completed primarily through the visual observation of coal tar. Sediment within OU-2 was disturbed by the advancement of test pits and sheet piles and nature and extent of impacts was determined based on observations made following disturbance. The investigation was completed during low flow periods in the Saranac River, but water was still present during all test pitting, and observations were based on the observed quantity of disturbed non-aqueous phase liquid (NAPL) escaping to the surface of the river in the form of sheens and blebs or lenses. The Remedial Investigation noted sheens and whether NAPL blebs or lenses were present at each sampling location and classified impacts in one of three categories: no-to-minor impacts – sheens only; minor-to-moderate impacts, and moderate-to-heavy impacts.

Coal tar was observed in three general areas of the site as shown on Figure 3. These areas are denoted from upstream to downstream as Area A, Area B, and Area C.

Area A consists of sediment adjacent to the west bank of the Saranac River between the Broad Street and Bridge Street bridges. In general, impacts in Area A were observed as minor-to-moderate and primarily consisted of sheens. One heavily impacted area was observed in Area A in the vicinity of test pits TP-20 and TP-34.

Areas B is located adjacent to the city park slightly upstream from the railroad bridge along both sides of the river. Impacts are more heavy and extend farther from the northwest bank into the river (Area B1). Impacts are closer to the shore along the southeast bank of this area (Area B2). In Area B1, NAPL blebs or lenses were observed at test pits TP-10 and TP-11 and moderate to heavy sheens were observed at test pit TP-8. In Area B2 NAPL blebs were observed in near shore sediments at test pits TP-41, TP-42, and TP-43 and moderate to heavy sheens were observed at TP-41.

Area C is located along the southern river bank downstream of the railroad bridge. Area C contains a gravel bar which is heavily impacted by coal tar. In Area C, moderate-to-heavy NAPL impacts including blebs or lenses were observed at test pits TP-25 within the gravel bar and TP-54 at the down gradient edge of OU-2. Moderate-to-heavy impacts extend to the downstream limits of OU-2 and presumably into OU-3.

The waste/source areas identified will be addressed in the remedy selection process.

Sediments

Characterization of OU-2 during the Remedial Investigation was primarily completed by visual observation. Five sediment samples were collected from OU-2 and submitted for laboratory analysis for VOCs, SVOCs, PCBs, and metals. VOCs were not detected in sediment samples collected from OU-2. PCBs were detected in one sediment sample collected from OU-2 at a concentration below the Class C sediment guidance value (SGV). Sediment samples exceeded the Class C sediment guidance values for total polycyclic aromatic hydrocarbons (PAHs) and metals (lead). The high concentration of PAHs at the one sediment sample location (RSS-97-08) visually impacted by coal tar (observed tar blebs throughout) confirms the presence of SVOCs in sediment visually impacted by coal tar. Removal of visually impacted sediment should result in meeting the Class C sediment guidance value for total PAHs.

Lead is not a contaminant associated with MGP waste or coal tar and is likely present above the Class C sediment guidance value due to the extensive historic industrial use of the Saranac River area in Plattsburgh.

Table 1 – Sediment

Detected Constituents	Concentration Range Detected (ppm)[a]	SGV[b] (ppm)	Frequency Exceeding SCG
SVOCs			
Total PAHs	1.6 - 325	35	1 out of 5
Inorganics			
Lead	15.6 - 400	130	1 out of 5

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in sediment;
b - SGV: The Department's Technical Guidance for Screening Contaminated Sediments.@

Based on the findings of the Remedial Investigation, the migration of coal tar downstream from OU-1 has resulted in the contamination of sediment in OU-2. The site contaminants that are considered to be the primary contaminants of concern which will drive the remediation of sediment to be addressed by the remedy selection process are SVOCs. SVOCs will be addressed in OU-2 sediment through the addressing the waste material source areas (coal tar) in the three visually identified waste areas (Area A, Area B, and Area C).

Exhibit B

Description of Remedial Alternatives

The following alternatives were considered based on the remedial action objectives (see Section 6.5) to address the contaminated media identified at the site as described in Exhibit A.

Alternative 1: No Action

The No Action Alternative is evaluated as a procedural requirement and as a basis for comparison. This alternative leaves the site in its present condition and does not provide any additional protection to public health and the environment.

Alternative 2: Shallow Sediment Removal and Capping

This alternative would include the excavation and off-site disposal of all sediment in OU-2 visually impacted by coal tar to a depth of two feet. In areas where visually impacted sediment is present beyond 2 feet, an extra one foot of sediment would be removed and replaced with a one foot thick low permeability cap. Excavated sediment would be processed on-site and larger material will be screened out and cleaned for reuse and backfill. The top two feet of sediment would be backfilled and river bed bathymetry and topography would be restored with appropriate stream bed materials including reused materials. A Site Management Plan would be necessary for periodic maintenance of the site cover system. An institutional control would be needed to limit activities in the area of the sediment cap that would disturb the sediment cap. Alternative 2 is shown on Figure 4.

Present Worth: *$16,800,000*
Capital Cost: *$15,400,000*
Annual Costs: *$80,000*

Alternative 3: Removal of Visually Impacted Sediment

Alternative 3 is similar to Alternative 2 as it includes the excavation and off-site disposal of sediment in OU-2 visually impacted by coal tar. Alternative 3 differs from Alternative 2 because it includes the removal of all visually impacted coal tar to bedrock and therefore a sediment cap is not needed. Excavated sediment would be processed on-site and larger material would be screened out and cleaned for reuse and backfill. The top two feet of sediment would be backfilled and river bed bathymetry and topography would be restored with appropriate stream bed materials including reused materials. The removal of all sediment visually impacted by coal tar to bedrock would meet pre-disposal/unrestricted conditions to the extent practicable given the historic use of the Saranac River, therefore no Site Management Plan or institutional controls would be required. Alternative 3 is shown on Figure 5.

Present Worth: *$16,300,000*

Exhibit C

Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
No Action	0	0	0
Shallow Sediment Removal and Capping	$ 15,400,000	$ 80,000	$ 16,800,000
Removal of Visually Impacted Sediment	$ 16,300,000	$ 0	$ 16,300,000

Exhibit D

SUMMARY OF THE SELECTED REMEDY

The Department is selecting Alternative 3, Removal of Visually Impacted Sediment as the remedy for this site. Alternative 3 would achieve the remediation goals for the site by removing all sediments visually impacted by coal tar from the Saranac River. Full removal of visually impacted sediment would meet all RAOs to the extent practicable by eliminating exposure to coal tar by incidental recreational users of the Saranac River. The elements of this remedy are described in Section 7. The selected remedy is depicted in Figure 5.

Basis for Selection

The selected remedy is based on the results of the RI and the evaluation of alternatives. The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375. A detailed discussion of the evaluation criteria and comparative analysis is included in the FS report.

The first two evaluation criteria are termed "threshold criteria" and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

The selected remedy (Alternative 3) would satisfy this criterion by removing all sediments visually impacted by coal tar to bedrock to the extent practicable from the Saranac River. Alternative 1 (No Action) does not provide any additional protection to public health and the environment and will not be evaluated further. Alternatives 2 and 3 would each satisfy this criterion by eliminating exposure to contaminated sediments by removal and capping (Alternative 2) or complete removal (Alternative 3). Full removal of visually impacted sediments would most permanently satisfy this criteria to the extent practicable.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis.

Alternatives 2 and 3 comply with SCGs to the extent practicable. The removal of sediment visually impacted by coal tar from the top two feet of sediment will meet Class C sediment guidance values (SGVs) for sediment impacted by coal tar. Class C SGVs are the appropriate standards for the protection of human health and the environment given that future use of the site will consist of incidental recreation use. Alternative 3 best satisfies this criterion with the full removal of visually impacted sediments, thus removing all impacts from the site to the Saranac River and meeting SGVs to the extent practicable.

The next six "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

Both Alternatives 2 and 3 would remove visually impacted sediment to a depth of two feet over the long-term. Under Alternative 2, although impacted sediment may remain at depths greater than 3 feet below the top of sediment, the potential for exposure to impacted sediment is further reduced through construction of the cap. Alternative 2 would rely on institutional controls to reduce the potential for cap damage due to future human activities and monitoring/repair to maintain the cap's integrity. Through excavation alone, the potential for future long-term exposures to sediment containing MGP-related impacts is eliminated to the extent practicable under Alternative 3. Therefore, Alternative 3 is considered the most effective long-term alternative.

4. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

Alternative 2 would include the removal of sediment visually impacted by coal tar to a depth of two feet in areas not requiring a site cover and three feet in areas requiring a site cover. Alternative 3 would include removal of all sediment visually impacted by coal tar. Both alternatives would include off-site thermal treatment of impacted sediment prior to disposal and reuse of suitable material following screening. The cap in Alternative 2 restricts mobility of impacted sediment left in place. Alternative 3 removes more impacted material from the site than Alternative 2 for treatment, thus more coal tar is removed and treated under Alternative 3. Alternative 3 will also eliminate or reduce to the extent practicable wildlife exposure to contaminated surface sediments, wildlife contact with subsurface contaminated sediments, and further migration of tar in the Saranac River and into Lake Champlain. Therefore, Alternative 3 is considered the most effective for this criterion.

5. Short-term Impacts and Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

Both Alternative 2 and Alternative 3 have significant short-term impacts. To remove sediment from the Saranac River to any depth water must be diverted away from the excavation area. The short-term impacts of capping under Alternative 2 and further removal under Alternative 3 are the same as each alternative would cause short term impacts to the Saranac River for the same amount of time.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

Both Alternatives 2 and 3 are implementable. A similar sediment removal action was completed in Operable Unit 1 by the construction of water diversion structures so that river sediments could be excavated. The same removal techniques can be applied for OU-2. Alternative 2 includes the placement of a sediment cap. Capping was not part of the remedial action for OU-1 therefore it may be more difficult to implement this different technology in OU-2.

7. Cost-Effectiveness. Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision.

The present worth costs of Alternatives 2 and 3 are the same. Alternative 2 has less capital costs because less material needs to be excavated and treated under this alternative and placing a cap is cheaper than excavating all material in the short term. The present worth of annual costs under Alternative 2 is greater than the difference in capital costs between Alternatives 2 and 3. Therefore there is no financial benefit for choosing Alternative 2 over Alternative 3 because of the high long-term site management costs for maintaining a sediment cap. Alternative 3 is more cost effective than Alternative 2 because it is a more permanent remedy (full removal) and based on present worth analysis costs less than the partial removal remedy.

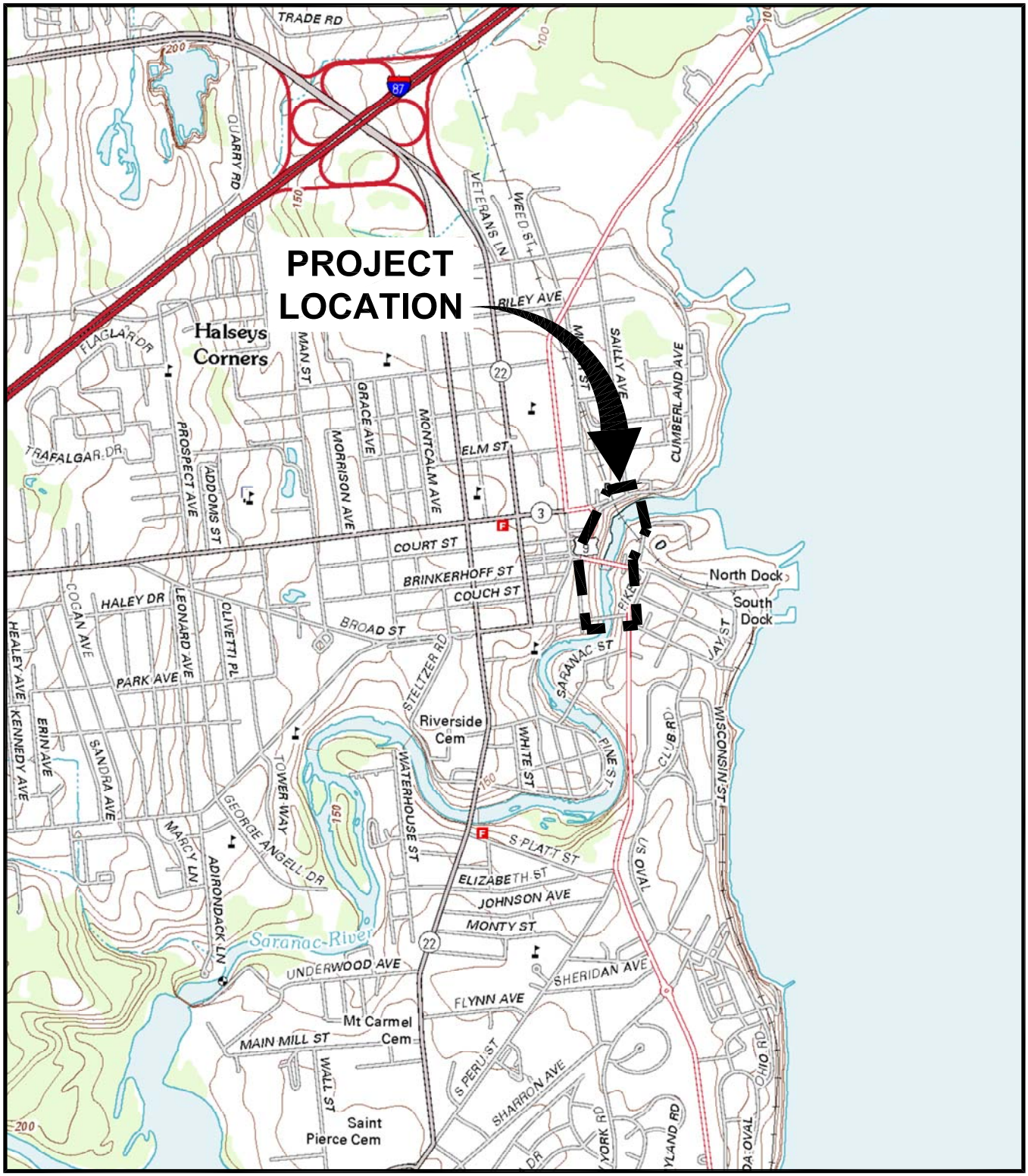
8. Land Use. When cleanup to pre-disposal conditions is determined to be infeasible, the Department may consider the current, intended, and reasonable anticipated future land use of the site and its surroundings in the selection of the soil remedy.

The OU-2 portion of the Saranac River is an urbanized, meandering stream that flows through residential, commercial, and industrial areas. The current and anticipated future use of OU-2 is for recreational fishing and aesthetic viewing (incidental recreational contact with sediment). The river is generally not used for swimming or bathing due to its shallow depth, rocky bottom, and swift currents. Future use of OU-2 is expected to be the same as current use. Neither Alternative 2 or 3 would alter the future use of OU-2. Each alternative would result in a remediated stream bed with which the public only has limited incidental contact with presently and in the future.

The final criterion, Community Acceptance, is considered a "modifying criterion" and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

9. Community Acceptance. Concerns of the community regarding the investigation, the evaluation of alternatives, and the PRAP were evaluated. A responsiveness summary has been prepared that describes public comments received and the manner in which the Department will address the concerns raised.

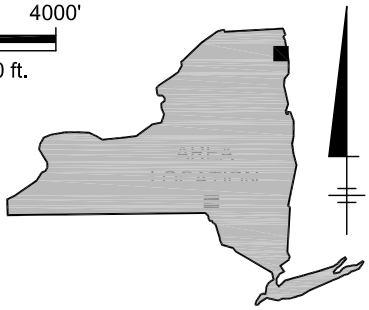
Alternative 3 has been selected because, as described above, it satisfies the threshold criteria and provides the best balance of the balancing criterion.



REFERENCE: BASE MAP USGS 7.5 MINUTE QUADRANGLE., PLATTSBURGH, N.Y. - VT., 2013.

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.



NYSEG
PLATTSBURGH (SARANAC STREET) FORMER MGP SITE
PLATTSBURGH, NEW YORK
FOCUSED FEASIBILITY STUDY (OU-2)

SITE LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1

CITY: SYRACUSE, NY DIV/GROUP: EBC-IM/DV DB: (B.GETTS), L.POSENAUER PIC: K.WHITE PM: M.BIONDOLILLO TM: L.PUTNAM/J.GOLUBSKI LYR: ON=*; OFF=*REF*
C:\ENVCAD\SYRACUSE-ACTIB\00131000\102\00010FFS-OU2\131000G01.dwg LAYOUT: 1 SAVED: 10/16/2017 11:24 AM ACADVER: 20.1S (LMS TECH) PAGESETUP: C-PA-ADOBEPDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 10/16/2017 11:24 AM BY: SARTORI, KATHERINE
XREFS: IMAGES: NY_VT-Plattsburg.tif

LEGEND:

- OU-1 UPLAND AREA
- OU-1 RIVER PORTION
- OU-2 RIVER PORTION
- OU-3 LAKE PORTION

NOTES:

1. HORIZONTAL COORDINATES REFERENCED TO SITE SPECIFIC DATUM. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. IMAGERY OBTAINED FROM THE EARTH EXPLORER WEBSITE HTTP://EARTHEXPLORER.USGS.GOV, DATED APRIL 28, 2014. IMAGERY OBTAINED WAS IN THE NORTH AMERICAN DATUM OF 1983 (NAD83) NEW YORK STATE PLANES, EAST ZONE, US FOOT AND WAS THEN ALIGNED TO SITE SPECIFIC DATUM.

0 250' 500'
GRAPHIC SCALE

NYSEG
PLATTSBURGH (SARANAC STREET) FORMER MGP SITE
PLATTSBURGH, NEW YORK
FOCUSED FEASIBILITY STUDY (OU-2)

SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE
2

CITY PARK

30" RCP

40" RCP

36" RCP

24" CMP

12" CMP

RAILROAD BRIDGE

PEDESTRIAN BRIDGE

BRIDGE STREET

GREEN STREET

BROAD STREET

GRAVEL BAR

BOAT LAUNCH

THE AREA ALONG THE WESTERN SHORELINE FROM TP-20 TO THE DOWNSTREAM EXTENT OF OU-1 WAS OBSERVED DURING 2012 INVESTIGATIONS TO BE IMPACTED WITH VARYING AMOUNTS OF NAPL

AreaB-20160915-TP02
AreaB-20160915-TP05
AreaB-20160915-TP06
AreaB-20160915-TP03
AreaB-20160915-TP04
AreaC-20160915-TP01

TP-1 TP-2 TP-3 TP-4 TP-5 TP-6 TP-7 TP-8 TP-9 TP-10 TP-11 TP-12 TP-13 TP-15 TP-16 TP-17 TP-18 TP-19 TP-20 TP-21 TP-22 TP-23 TP-24 TP-25 TP-26 TP-27 TP-28 TP-29 TP-30 TP-31 TP-32 TP-33 TP-34 TP-35 TP-36 TP-37 TP-38 TP-39 TP-40 TP-41 TP-42 TP-43 TP-44 TP-45 TP-46 TP-47 TP-48 TP-49 TP-50 TP-51 TP-52 TP-53 TP-54

SHT A1 SHT A2 SHT A3 SHT A4 SHT A5 SHT A6 SHT A7 SHT A8 SHT A9 SHT A10 SHT A11 SHT A12 SHT A13 SHT A14 SHT A15 SHT A16 SHT A17 SHT A18 SHT A19 SHT A20 SHT A21 SHT A22 SHT A23

SHT B1 SHT B2 SHT B3 SHT B4 (approx.) SHT B6 SHT B7 SHT B8 SHT B9 SHT B10 SHT B11 SHT B12 SHT B13 SHT B14 SHT B15

SHT C1 SHT C2 SHT C3 SHT C4 SHT C5 SHT C6 SHT C7 SHT C8 SHT C9 SHT C10 SHT C11 SHT C12 SHT C13 SHT C14 SHT C15 SHT C16 SHT C17 SHT C18 SHT C19

TP-14 (APPROXIMATE)

LEGEND:

- CONTOURS (1-FOOT) (2016)
- EDGE OF WATER (2016)
- ORDINARY HIGH WATER MARK
- TEST PIT (ARCADIS 2012, 2016, 2017)
- SHEET PILE TEST (ARCADIS 2016, 2017)
- NO-TO-MINOR SHEENS ONLY
- NO-TO-MINOR GRAY GHOST-LIKE SHEENS ONLY
- MINOR-TO-MODERATE SHEENS ONLY
- MINOR-TO-MODERATE SHEENS WITH NAPL BLEBS OR LENS
- MODERATE-TO-HEAVY SHEENS ONLY
- MODERATE-TO-HEAVY SHEENS WITH NAPL BLEBS OR LENS
- OVERHEAD POWER LINE
- SEWER LINE
- STORM SEWER LINE

NOTES:

1. BASE MAP CONTOURS AND WATER LINE PREPARED BY MACHABEE LAND SURVEYING, PLATTSBURGH NY, A NY LICENSED LAND SURVEYOR. SURVEY FOR OU-2, INCLUDING THE BROAD STREET BRIDGE AREA AND DOWNSTREAM FROM THE BROAD STREET BRIDGE, PERFORMED SEPTEMBER THROUGH DECEMBER, 2016. ORDINARY HIGH WATER MARK PREPARED BY MACHABEE LAND SURVEYING BASED ON FIELD OBSERVATIONS MADE BY ARCADIS DURING THE SEPTEMBER 2016 OU-2 HABITAT ASSESSMENT.
2. HORIZONTAL COORDINATES REFERENCED TO SITE SPECIFIC DATUM. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
3. IMAGERY OBTAINED FROM THE EARTH EXPLORER WEBSITE HTTP://EARTHEXPLORER.USGS.GOV, DATED APRIL 28, 2014. IMAGERY OBTAINED WAS IN THE NORTH AMERICAN DATUM OF 1983 (NAD83) NEW YORK STATE PLANES, EAST ZONE, US FOOT AND WAS THEN ALIGNED TO SITE SPECIFIC DATUM.
4. ALL LOCATIONS ARE APPROXIMATE.
5. 2016 INVESTIGATION LOCATIONS SURVEYED BY MACHABEE LAND SURVEYING SEPTEMBER 15, 29, AND 30, 2016.
6. 2017 INVESTIGATION LOCATIONS SURVEYED BY MACHABEE LAND SURVEYING SEPTEMBER 19, 20, AND 21, 2017.

0 60' 120'
GRAPHIC SCALE

NYSEG
PLATTSBURGH (SARANAC STREET) FORMER MGP SITE
PLATTSBURGH, NEW YORK
FOCUSED FEASIBILITY STUDY (OU-2)

EXTENT OF 2012, 2016 AND 2017 IMPACTS OBSERVED IN OU-2

ARCADIS Design & Consultancy for natural and built assets

FIGURE
3

LEGEND:

- OU-1 CELL 6E TARGETED REMOVAL AREA
- OU-1 CELL 6E POTENTIAL REMOVAL AREA
- APPROXIMATE OU-2 TARGETED REMOVAL AREA
- CONTOURS (1-FOOT) (2016)
- EDGE OF WATER (2016)
- ORDINARY HIGH WATER MARK
- OVERHEAD POWER LINE
- UNDERGROUND ELECTRIC LINE
- SEWER LINE
- STORM SEWER LINE
- TEST PIT (ARCADIS 2012, 2016, 2017)
- SHEET PILE TEST (ARCADIS 2016, 2017)

AREA B2 (AVERAGE REMOVAL DEPTH OF APPROXIMATELY 2.0 FEET, BACKFILL TO PRE-REMOVAL GRADE)

AREA C (AVERAGE REMOVAL DEPTH OF APPROXIMATELY 3.0 FEET, INSTALL APPROXIMATELY 3-FOOT THICK CAP)

AREA B1 (AVERAGE REMOVAL DEPTH OF APPROXIMATELY 3.0 FEET, INSTALL APPROXIMATELY 3-FOOT THICK CAP)

AREA A (AVERAGE REMOVAL DEPTH OF APPROXIMATELY 2.5 FEET, BACKFILL TO PRE-REMOVAL GRADE)

CITY PARK

RETAINING WALL

BOULDER RETAINING WALL

RAILROAD BRIDGE

PEDESTRIAN BRIDGE

BRIDGE STREET (STONE BRIDGE)

BROAD STREET (CONCRETE DECK BRIDGE)

BOAT LAUNCH

STRANDED RIVER DEPOSITS

SEAWALL

30" RCP

40" RCP

36" RCP

24" CMP

12" CMP

NOTES:

1. BASE MAP CONTOURS AND WATER LINE PREPARED BY MACHABEE LAND SURVEYING, PLATTSBURGH NY, A NY LICENSED LAND SURVEYOR. SURVEY FOR OU-2, INCLUDING THE BROAD STREET BRIDGE AREA AND DOWNSTREAM FROM THE BROAD STREET BRIDGE, PERFORMED SEPTEMBER THROUGH DECEMBER, 2016. ORDINARY HIGH WATER MARK PREPARED BY MACHABEE LAND SURVEYING BASED ON FIELD OBSERVATIONS MADE BY ARCADIS DURING THE SEPTEMBER 2016 OU-2 HABITAT ASSESSMENT.
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4. ALL LOCATIONS ARE APPROXIMATE.

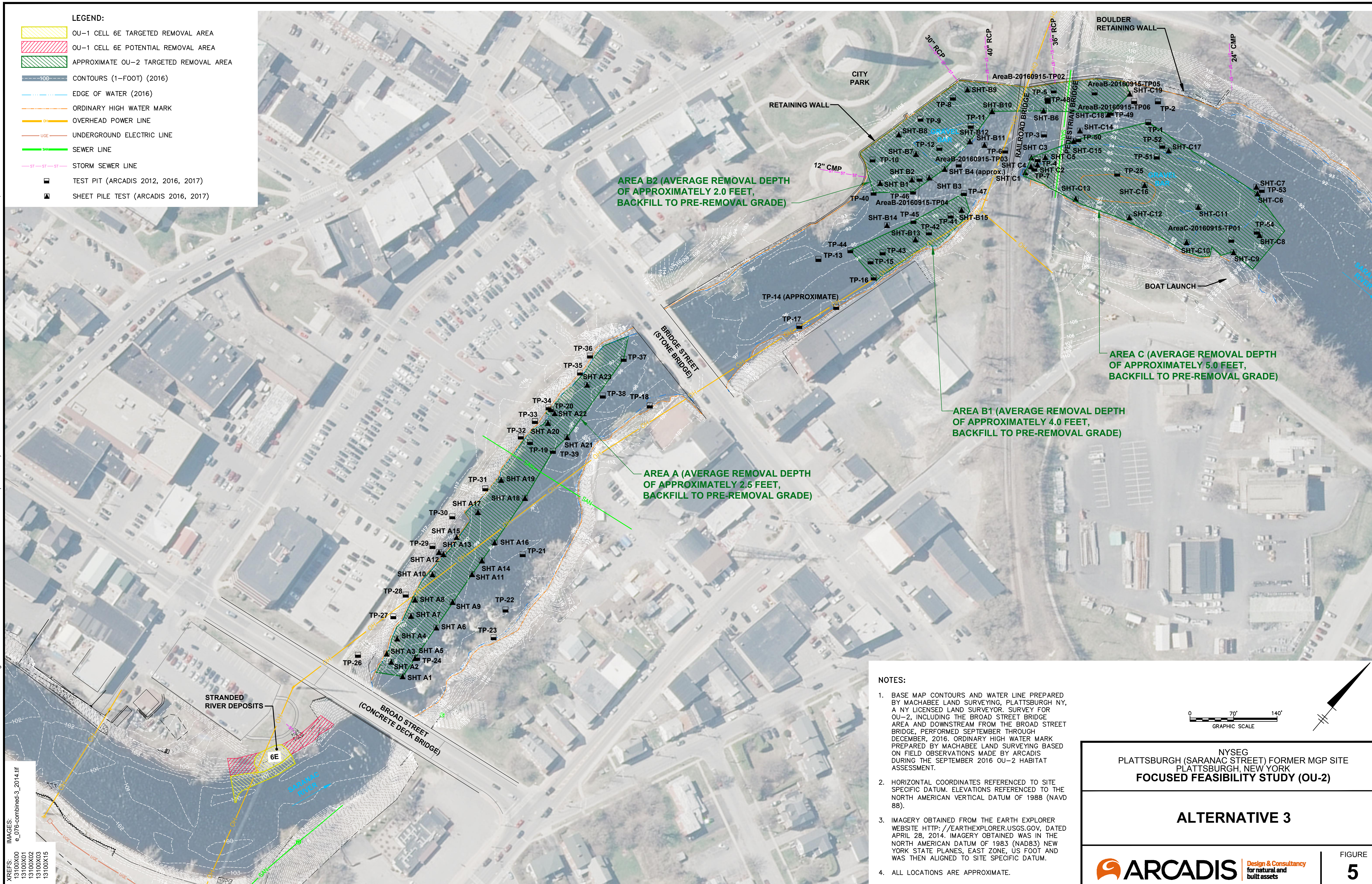
0 70' 140'
GRAPHIC SCALE

NYSEG
PLATTSBURGH (SARANAC STREET) FORMER MGP SITE
PLATTSBURGH, NEW YORK
FOCUSED FEASIBILITY STUDY (OU-2)

ALTERNATIVE 2

ARCADIS Design & Consultancy for natural and built assets

FIGURE
4



LEGEND:
OU-1 CELL 6E TARGETED REMOVAL AREA
OU-1 CELL 6E POTENTIAL REMOVAL AREA
APPROXIMATE OU-2 TARGETED REMOVAL AREA
CONTOURS (1-FOOT) (2016)
EDGE OF WATER (2016)
ORDINARY HIGH WATER MARK
OVERHEAD POWER LINE
UNDERGROUND ELECTRIC LINE
SEWER LINE
STORM SEWER LINE
TEST PIT (ARCADIS 2012, 2016, 2017)
SHEET PILE TEST (ARCADIS 2016, 2017)
CITY PARK
RETAINING WALL
BOULDER RETAINING WALL
30" RCP
40" RCP
36" RCP
24" CMP
12" CMP
RAILROAD BRIDGE
PEDESTRIAN BRIDGE
AREA B2 (AVERAGE REMOVAL DEPTH OF APPROXIMATELY 2.0 FEET, BACKFILL TO PRE-REMOVAL GRADE)
AREA C (AVERAGE REMOVAL DEPTH OF APPROXIMATELY 5.0 FEET, BACKFILL TO PRE-REMOVAL GRADE)
AREA B1 (AVERAGE REMOVAL DEPTH OF APPROXIMATELY 4.0 FEET, BACKFILL TO PRE-REMOVAL GRADE)
AREA A (AVERAGE REMOVAL DEPTH OF APPROXIMATELY 2.5 FEET, BACKFILL TO PRE-REMOVAL GRADE)
BOAT LAUNCH
TP-14 (APPROXIMATE)
BRIDGE STREET (STONE BRIDGE)
BROAD STREET (CONCRETE DECK BRIDGE)
STRANDED RIVER DEPOSITS
6E
SARANAC RIVER
0 70' 140'
GRAPHIC SCALE

NOTES:

1. BASE MAP CONTOURS AND WATER LINE PREPARED BY MACHABEE LAND SURVEYING, PLATTSBURGH NY, A NY LICENSED LAND SURVEYOR. SURVEY FOR OU-2, INCLUDING THE BROAD STREET BRIDGE AREA AND DOWNSTREAM FROM THE BROAD STREET BRIDGE, PERFORMED SEPTEMBER THROUGH DECEMBER, 2016. ORDINARY HIGH WATER MARK PREPARED BY MACHABEE LAND SURVEYING BASED ON FIELD OBSERVATIONS MADE BY ARCADIS DURING THE SEPTEMBER 2016 OU-2 HABITAT ASSESSMENT.
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4. ALL LOCATIONS ARE APPROXIMATE.

NYSEG
PLATTSBURGH (SARANAC STREET) FORMER MGP SITE
PLATTSBURGH, NEW YORK
FOCUSED FEASIBILITY STUDY (OU-2)

ALTERNATIVE 3

ARCADIS Design & Consultancy for natural and built assets

FIGURE 5

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

NYSEG – Plattsburgh Saranac St. MGP
Operable Unit 2 (OU-2): Saranac River
State Superfund Project
City of Plattsburgh, Clinton County, New York
Site No. 5-10-007

The Proposed Remedial Action Plan (PRAP) for the New York State Electric and Gas (NYSEG) – Plattsburgh Saranac St. Manufactured Gas Plan (MGP) site - Operable Unit 2 (OU-2), was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 28, 2018. The PRAP outlined the remedial measure proposed for the contaminated sediment at the NYSEG – Plattsburgh Saranac St. MGP site - OU-2.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on March 14, 2018, which included a presentation of the remedial investigation/feasibility study (RI/FS) for the NYSEG – Plattsburgh Saranac St. MGP site - OU-2 as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 30, 2018.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the Department's responses:

COMMENT 1: Has confirmation sampling or test pitting been completed in areas of OU-1 that have been remediated?

RESPONSE 1: Confirmation of coal tar removal during the remedial action in OU-1 was completed through visual inspection of excavated areas and test pitting within excavated areas. This methodology will also be used for the selected remedial action for OU-2.

In subsurface upland locations where coal tar could not be feasibly removed, engineering controls were put in place to ensure that coal tar does not migrate towards the Saranac River. Subsequent phases of the OU-1 remedial action included re-excavation of Saranac River sediment and test pit confirmation of previously remediated areas.

COMMENT 2: Is there coal tar within bedrock fractures beneath the Saranac River sediment in OU-2? Could sediment in OU-2 be recontaminated from underlying coal tar in bedrock fractures?

RESPONSE 2: Coal tar has been observed within bedrock fractures adjacent to the Saranac River sediment in OU-2. As part of the selected remedial action, in areas where the bedrock is exposed

during excavation and visual NAPL and coal tar is observed on bedrock, the bedrock surface will be cleaned prior to backfilling. Till not impacted by NAPL and coal tar will be left in place to further prevent migration of coal tar from bedrock into sediments. If coal tar persists in entering the bedrock surface from below following excavation and cleaning while the river is diverted, bedrock sumps will be constructed prior to backfill to collect coal tar migrating from bedrock that could potentially impact remediated sediments.

The use of till as a barrier to coal tar and the use of bedrock sumps to collect coal tar from beneath remediated sediment are proven technologies that have been employed at OU-1.

COMMENT 3: Is there a lot of coal tar material in the Saranac River delta (OU-3)?

RESPONSE 3: The remedial investigation in OU-3 has observed "trace" amounts of coal tar in sampling points in the Saranac River. More prominent coal tar impacts have been observed in sediment further out into Cumberland Bay in the Saranac River delta area. Additional investigation of OU-3 will be completed to confirm these findings in the spring or summer of 2018.

COMMENT 4: Have there been adverse environmental impacts or impacts to Saranac River biota (fish or benthos) from the coal tar?

RESPONSE 4: The contaminants associated with coal tar, polycyclic aromatic hydrocarbons (PAHs), do not typically have adverse impacts on fish. Coal tar in fine sediments inhibits benthos by physically altering benthos habitat due to the dense and hydrophobic nature of coal tar and through PAH toxicity. It is the intention of the selected remedy to remove all coal tar from the Saranac River to the extent practicable and thus restore benthos habitat currently impacted by coal tar.

COMMENT 5: What happens to coal tar sheens and blebs as they move down the river?

RESPONSE 5: Coal tar sheens which reach the surface of the Saranac River as the result of sediment agitation may volatilize into the ambient air, dilute into the water column, or re-form as dense blebs and sink back to the sediment surface. In either case the dispersion of the sheen via air or water effectively dilutes the environmental impacts of the contaminants causing the sheens. Sampling of the surface water in the Saranac River has not shown any site related contaminants of concern. Coal tar blebs are heavier than water, therefore they typically stay near the bottom of the water column as they move down river. The blebs either find their way into the sediments (that is why we see coal tar in sediments downstream of OU-1) or they slowly break apart due to agitation into smaller blebs and sheen and either dissolve into the water column or volatilize to air above the river. However, with the large dilution of the water coming down the river, sampling has not found coal tar contamination in surface waters.

COMMENT 6: How will the Saranac River be accessed to perform the proposed remediation for OU-2?

RESPONSE 6: The final access points to the Saranac River for the OU-2 remedy will be determined during the remedial design. It is currently anticipated that Area A (Figure 5 from the

ROD) will be accessed from the upland portion of OU-1 via temporary river crossing (i.e., temporary bridge) and temporary access road constructed along the left descending bank, and Area C will be accessed from the former boat launch located near the Plattsburgh Water Pollution Control Plant (WPCP).

COMMENT 7: What does the sediment cap proposed in Alternative 2 consist of?

RESPONSE 7: Under Alternative 2 (which was not selected) a sediment cap would be placed only in areas where coal tar remains after excavation of sediment to a depth of 3 feet. At present, only Area C would require a cover under Alternative 2. The sediment cap would consist of (from the bottom up), a 6-inch "cushion" layer of sand; a reactive-core mat that consists of permeable geotextile composites surrounding a non-swelling granular clay compound designed to absorb coal tar; a 6-inch "fill" layer of gravel, and a 24-inch later of armor stone (including potential reuse of cobble).

COMMENT 8: Could the benthos community of the Saranac River be restored above the sediment cap proposed in Alternative 2?

RESPONSE 8: Alternative 2 and Alternative 3 each intend to restore the Saranac River Bed "in-kind" so that the same habitat existing prior to remediation is restored. In areas proposed for a sediment cap under Alternative 2, armoring stone would be combined with fine sediment to re-establish habitat above the sediment cap.

COMMENT 9: Is there a clean source of backfill material available for the OU-2 remedial action?

RESPONSE 9: All backfill material will be sampled and/or inspected prior to placement and must meet Department standards for clean backfill. NYSEG has indicated that the source of finer grained sediment backfill for the OU-1 remedial action should remain available for use during the OU-2 remedial action. As with the OU-1 remediation, coarser grained sediment (cobbles) will be removed, screened, washed and inspected then reused as backfill.

COMMENT 10: How will larger sediments (cobbles and boulders) be cleaned before being placed back in the Saranac River? How will wash and rinse water be managed?

RESPONSE 10: Excavated sediments from OU-2 will be transported to the OU-1 area by dump truck and then screened through a large-scale sieve which will separate material greater than 6 inches in diameter from finer sediment. The separated coarse cobbles and boulders will be power-washed in a contained area to remove all surficial coal tar impacts. Wash water will be collected from the contained area, treated and sampled prior to discharge. This washing process was used extensively during the OU-1 remedial construction and was successful.

COMMENT 11: Please provide more details as to why it will take a minimum of 2 years for the OU-2 project to go from Record of Decision (ROD) to remedial construction. Can this process be sped up?

RESPONSE 11: A remedial design is required prior to implementation of the selected remedial action. The design process will take 12 months to complete. Once the design is completed, NYSEG must hire a contractor to perform the remedial action. NYSEG has indicated that their internal procurement process will take 12 - 24 months to complete. Due to several factors that protect the habitat of the Saranac River, the remedial action can only be completed during spring and summer months. Based on these factors it is estimated that the remedial action for OU-2 will commence in the Spring 2021.

COMMENT 12: What is the estimated cost of the selected remedial action (Alternative 3) for OU-2?

RESPONSE 12: The estimated total cost to NYSEG of the selected remedial action for OU-2 is $16,300,000. All costs will be incurred during remedial construction and there will be no long-term costs following the completed of remedial construction.

COMMENT 13: What is the total amount of money spent on remediating the Plattsburgh Saranac St. MGP site to date across all operable units?

RESPONSE 13: NYSEG estimates it has spent to date over 80 million dollars on remedial programs for the Plattsburgh Saranac St. MGP site.

COMMENT 14: The United States Fish & Wildlife Service (USFWS), in conjunction with the community, will be monitoring salmon migration in the Saranac River in the fall of 2018. Will any aspect of the site remedial program affect this study?

RESPONSE 14: A supplemental investigation of OU-3 (Cumberland Bay) is planned for spring or summer 2018 and restoration of the OU-1 river bank is scheduled for fall of 2018. These activities should not interfere the planned salmon migration monitoring. No intrusive remedial activities are planned for the Saranac River until spring 2020.

COMMENT 15: Trout unlimited requests more frequent updates (annual meetings) on project status.

RESPONSE 15: The Department is willing to meet with Trout Unlimited at any time to provide updates on the site's remedial program. As noted in response to comment 18 below, the Department would like such a meeting when NYSEG completes the habitat improvement evaluation. At any time, feel free to contact the Department's project manager (Mr. William Bennett) for more information or to schedule a meeting.

COMMENT 16: As part of the restoration for OU-1, can plunge pools be created in the river behind the police station?

RESPONSE 16: See response to comment 18.

Letter from Victor J. Putnam, Trout Unlimited - Lake Champlain Chapter, Acting Chair of Lake Champlain Basin Program NY Citizens Advisory Committee, dated March 22, 2018, which included the following two comments:

COMMENT 17: Lake Champlain once supported eight (8) different populations of Landlocked Atlantic Salmon before they were extirpated by construction of dams, industrial pollution and overfishing. Maintaining and promoting this recreational and renewable resource as an economic engine for tourism in our region is a priority for State and Federal agencies as well as local residents which depend on seasonal employment opportunities to help improve viability of our communities.

I fully support Alternative 3 incorporating the removal of coal tar contaminated sediment, cleaning and reusing the substrate material where possible and re-establishing the river bed and riparian habitat.

RESPONSE 17: Comment noted.

COMMENT 18: The construction of instream structures during remediation could improve the river's ability to transport sediment - especially during low flow conditions, could protect currently existing manmade infrastructure (retaining walls, bridge supports, boat launch ramps etc.) and could generate ecological stability. Can the restoration program included in the proposed remedial action (Alternative 3) include river enhancements including rock vanes, plunge pools, and woody debris to help prevent future flooding and improve fish habitat?

The use of Applied Fluvial Geomorphology can assist in proper evaluation of the Saranac River in this area to address the ultimate goals that improve habitat, improve physical stability of the river to protect infrastructure, improve stream efficiency, improve aesthetics and improve water quality. These goals could address issues such as delta deposition, flooding, loss of property, collapse of retaining walls and long-term costs to the community and society as a whole. I strongly recommend the Department pursue these goals in the current and future planned remediation tasks now under consideration for this and subsequent phases of the project.

RESPONSE 18: It is the Department's current plan to restore the Saranac River bed within the remediation area "in-kind" to the extent practicable so that the same habitat existing prior to remediation is restored. Therefore, the draft plan is to recreate the river bathometry following excavation. However, the Department has approved remedies that have improved river fisheries with the method described in the comment. The Department will consider incorporating river enhancements into the restoration of the river if these enhancements are consistent with the scope of the remedial action. Once NYSEG completes an evaluation of the potential to add river enhancements to the remedy we will reach out to Trout Unlimited to further discuss the issue.

Letter from Tracy Blazicek of New York State Electric and Gas (NYSEG), dated March 16, 2018, which included the following comment:

COMMENT 19: Section 7, Part 2: The first sentence of the first paragraph states that excavation will occur to bedrock. The last sentence of the last paragraph states that visually impacted till will

be removed if encountered. While it is recognized that in many locations within OU-2 till is not present and excavation will occur to bedrock as a matter of course in those areas, there are locations within OU-2 where till is present. Historically (i.e. in OU-1) NYSEG has been required to remove impacted till where encountered, but has not been required to excavate to bedrock as a matter of course. The PRAP should be clarified to make it clear that where till is present, excavation will be to the top of the till layer including the removal of any impacted till that may be present.

RESPONSE 19: The intention of remedial element number 2 is the removal of impacted sediment to its full extent. For clarification purposes, the following sentence will be added to remedial bullet 2 in the Record of Decision. "Where till is present beneath impacted sediments and above bedrock, excavation will only continue through the till layer until all impacted till is removed."

APPENDIX B

Administrative Record

Administrative Record

NYSEG – Plattsburgh Saranac St. MGP
Operable Unit 2 (OU-2): Saranac River
State Superfund Project
City of Plattsburgh, Clinton County, New York
Site No. 5-10-007

Proposed Remedial Action Plan for the NYSEG Plattsburgh Saranac St. MGP site, Operable Unit No. 2 – Saranac River, dated February 2018, prepared by the Department.

Order on Consent, Index No. D0-0002-9309, between the Department and {New York State Electric and Gas Corporation, executed on March 30, 1994.

Remedial Investigation at the Saranac Street Former MGP Site, Plattsburgh, New York – Work Plan, dated October 9, 1997, prepared by GEI Atlantic.

Remedial Investigation Saranac Street Former MGP Site Operable Unit 2, dated December 12, 2005, prepared by GEI Consultants, Inc.

OU-2 2016 Pre-Design Investigation Results, NYSEG Plattsburgh (Saranac Street) Former MGP Site, dated April 13, 2017, prepared by Arcadis.

Additional OU-2 Pre-Design Investigation Results, NYSEG Plattsburgh (Saranac Street) Former MGP Site, dated October 16, 2017, prepared by Arcadis,

OU-2 Focused Feasibility Study (Revised) – Plattsburgh (Saranac Street) MGP Site, dated February 21, 2018, prepared by Arcadis.

Letter dated March 16, 2018 from Tracy Blazicek, New York State Electric and Gas (NYSEG).

Letter dated March 22, 2018 from Victor J. Putnam, Trout Unlimited - Lake Champlain Chapter, Acting Chair of Lake Champlain Basin Program NY Citizens Advisory Committee.