Explanation of Significant Differences

Grasse River (aka Alcoa Aggregation) Superfund Site

Massena, St. Lawrence County, New York

EPA Region 2 April 2020

INTRODUCTION

Under Section 117 (c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or Superfund), as amended, the Environmental Protection Agency (EPA) is required to publish an Explanation of Significant Differences (ESD) when, after issuance of a Record of Decision (ROD),[1] subsequent enforcement or remedial actions lead to significant, but not fundamental, changes in the selected site remedy. Sections 300.435(c)(2)(i) and 300.825(a)(2) of the National Oil and Hazardous Substances Contingency Plan (NCP) set forth the criteria for issuing an ESD and requiring that an ESD be published if the remedy is modified in a way that differs significantly in either scope, performance or cost from the remedy selected for the site.

In 2018, Arconic, Inc., now named Howmet Aerospace Inc. (hereinafter, Arconic),[2] the potentially responsible party (PRP) for the Grasse River (a.k.a. Alcoa Aggregation) site, was notified by the St. Lawrence Seaway Development Corporation (SLSDC) that it had ordered a new tugboat to service the Seaway lock system. The SLSDC moors its tugboat at Snug Harbor, a small embayment on the north shore of the Grasse River a short distance upstream of its confluence with the St. Lawrence River, which is impacted by polychlorinated biphenyls (PCBs) from the PRP's past operations. The new tugboat will be larger, will have greater engine power, and will require deeper navigation draft than the current tugboat. As a result, Snug Harbor and the channel leading to the harbor from the St. Lawrence River will need to be deepened.

This ESD serves to document the increase in the volume of contaminated sediment to be dredged to accommodate the new tugboat and the estimated cost of the selected remedy.

SITE HISTORY, CONTAMINATION AND SELECTED REMEDY

The Grasse River site is located near the northern boundary of New York State in the Town and Village of Massena. The site is not on the National Priorities List (NPL) but is being investigated and remediated as an enforcement-lead remedial action that follows the same investigation and remedy selection requirements as sites on the NPL. EPA issued an Administrative Order (Index II CERCLA – 90229) (Order) to Alcoa Inc. (Alcoa), Arconic's predecessor in interest, in September 1989, calling for the investigation of the Alcoa Study Area to determine the nature and extent of hazardous substances contamination. The Alcoa Study Area included approximately 7.2 miles of the lower Grasse River from the intersection of the Massena Power Canal (Power Canal) and the Grasse River, to the confluence of the Grasse and St. Lawrence Rivers. This 7.2 mile stretch of the Grasse River is referred to as the site. The Alcoa Study Area also included the approximately 1.3 miles of the lower Grasse River upstream of the confluence of the Grasse River and the Power Canal, Robinson Creek (which discharges to the St. Lawrence River) and the Unnamed Tributary (See Figure 1, Site Location Map).

The Alcoa Massena-West Plant (owned and operated by Arconic) is located on the north shore of the lower Grasse River, east of the Power Canal, and is bounded to the north by the St Lawrence River. Two other large manufacturing facilities, the Alcoa Massena-East Plant (formerly a facility of Reynolds Metals Company) and the former General Motors Central Foundry Division plant (demolished as of 2012) are located within two miles east of the confluence of the Grasse and St. Lawrence Rivers.[3]

The ancestral lands of the federally recognized Saint Regis Mohawk Tribe (SRMT), Mohawks, and Mohawks of Akwesasne, include land on both banks of the lower Grasse River and a tract of land along the confluence of the St. Lawrence River, as recognized by the 1796 Treaty

[1] A ROD documents the EPA's remedy decision.

[2] On April 1, 2020, Arconic Inc. separated into two companies, with Arconic Inc. changing its name to Howmet Aerospace Inc. and also spinning off a subsidiary that was then renamed Arconic Corporation. Howmet Aerospace Inc. is the owner and Arconic Corporation is the operator for the Grasse River site. Howmet Aerospace Inc. has indicated that it retains responsibity for the work at the site.

[3] These two facilities are associated with the Reynolds Metals Co. and General Motors-Central Foundry Division Superfund Sites, respectively, and both include sediment in the St. Lawrence River. EPA is overseeing cleanups under CERCLA at both sites.

with the Seven Nations of Canada, 7 Stat. 55, known as "Indian Meadows." The lower Grasse River, as well as associated land identified by the SRMT as the Indian Meadows, are of cultural importance to the Mohawks, Mohawks of Akwesasne, and the SRMT. Fishing, hunting, harvesting and spiritual ceremonies are among the activities that have been historically and are now conducted by the Mohawks of Akwesasne in the lower Grasse River.

Sediment at the site is contaminated with PCBs from past disposal practices at the Alcoa Massena-West plant. The sediment PCB concentration profile in the main channel generally increases with depth; i.e., highest PCB concentrations are at the deepest layers of sediment (which overlay bedrock). Alcoa stopped using PCBs in the 1970s, so the sediment deposited since then is much cleaner than that deposited earlier.

As a result of these past disposal practices, the New York State Department of Environmental Conservation (NYSDEC) determined that environmental conditions arising from hazardous waste disposal at the facility gave rise to significant threats to human health and the environment. Under a 1985 NYSDEC order, Alcoa undertook land-based cleanup actions from 1991 to 2001, which included the elimination or mitigation of sources of contamination to the Grasse River. Concurrent with the land-based cleanup, Alcoa made several improvements in relation to its State Pollution Discharge Elimination System permit. Upland-based efforts included: remediation of 18 separate disposal areas, including 37 acres of landfill areas and 100 acres of lagoons; construction of Alcoa's on-site Secure Landfill to dispose of excavated material; remediation of the Unnamed Tributary; and, cleaning of underground utilities that are part of a stormwater/wastewater collection system. Through these efforts, Alcoa significantly reduced discharges and controlled the upland sources of PCBs to the site.

Alcoa's early investigation of the site under the terms of the 1989 EPA administrative Order identified significantly elevated PCB concentrations in an area of Grasse River sediment located adjacent to wastewater Outfall 001. As a result, EPA amended that Order in May 1995 to require Alcoa to conduct a Non-Time-Critical Removal Action to address the PCB-contaminated sediment within a one-acre area around the outfall. Approximately 3,000 cubic yards (cy) of sediment, boulders and debris were removed, dewatered and disposed of in Alcoa's permitted, double-lined, on-site Secure Landfill.

Following extensive consultation with SRMT and coordination with the State of New York, EPA issued a ROD on April 4, 2013 to address cancer risk and noncancer health hazards associated with human ingestion of fish containing PCBs, as well as ecological risks, including those associated with ingestion of fish by birds and mammals. The ROD calls for the removal of approximately 109,000 cy of PCB-contaminated sediments from near shore areas along the 7.2 mile stretch of the lower Grasse River. The near shore areas will be backfilled with clean material after they are dredged, and the dredged sediment will be disposed of in the on-site Secure Landfill on the Alcoa Massena-West property, with the option of disposing materials off-site if there is insufficient capacity on-site. In the river's main channel, an area of approximately 284 acres of contaminated sediment will be capped to isolate contamination from the surrounding environment. Of this capped area, approximately 59 acres of contaminated sediment that may be susceptible to scouring caused by extreme ice jam events will be armored on top of the cap. Treatment of dredging and processing-generated water to meet the NYSDEC discharge limit will occur prior to discharge into the Grasse River. Habitat reconstruction, long-term monitoring and maintenance will also be performed. The estimated cost of the cleanup in the ROD was $243 million.

The dredging and backfilling of the nearshore areas began in 2019 and was completed in 2019. The capping of the main channel will commence in 2020 and continue to 2021, followed by the completion of habitat reconstruction in 2021-2022.

BASIS FOR THE DOCUMENT AND DESCRIPTION OF SIGNIFICANT DIFFERENCES

Towards the end of the design phase in 2018, the PRP was notified by the SLSDC that they had ordered a new Tundra Class tugboat to guide a gate-lifter barge used to service the Seaway lock system. The gate-lifter barge is moored at Snug Harbor, located on the north shore of the Grasse River around the river transect (T) 69 (about a third of a mile from the confluence with the St. Lawrence River, refer to Figure 2). The new tugboat will be larger, will have greater engine power, and will require deeper navigation draft than the current tugboat (the Robinson Bay). As a result, the remedy identified in the 2013 ROD for Snug Harbor and the areas downstream of T68 will need to be redesigned to maintain the protectiveness of the remedy under these new design conditions.

The PRP evaluated various combinations of dredging and capping to address the new tugboat's physical dimensions and its operational parameters such as propwash forces in the Grasse River from the St. Lawrence up to T68, upstream of the Snug Harbor. The EPA, the U.S. Army Corps of Engineers (EPA's contractor), NYSDEC, and SRMT reviewed and commented on the draft design documents prior to EPA approving the January 2020 Final Design Report Addendum for the Snug Harbor. The option recommended by Arconic (Figure 3 – Snug Harbor Remedy Design), and agreed upon by the Agencies is as follows: the proposed remedy change consists of dredging of approximately 5,800 cy additional sediment for navigational purposes, dredging of 85,000 cy additional sediment due to PCB contamination, backfill

with a 6-inch layer of sand (up to 18.6 acres, depending on post-dredge sampling), and placement of a gravel armor cap of 6-inch sand/GAC layer overlain by a 12-inch gravel armor in a 3.6-acre area to address greater prop wash jet forces anticipated on the main channel upstream of the Snug Harbor during tug maneuvering. The cost of this work is approximately $22.5 million. The original remedy (one foot of sand cap) cost estimate for this area was significantly less than the new design.

With more dredging, greater suspended solids and decreased water quality in the near field is anticipated in the short term. If additional dredged material cannot be contained in an existing on-site landfill, it will need to be trucked off-site to a TSCA permitted landfill.

SUPPORT AGENCY COMMENTS

NYSDEC and SRMT support this ESD, as the modification to the remedy significantly changes but does not fundamentally alter the remedy selected in the 2013 ROD.

FIVE-YEAR REVIEWS

Because hazardous substances, pollutants or contaminants remain at the site which do not allow for unlimited use or unrestricted exposure, in accordance with 40 CFR 300.430 (f)(4)(ii), the remedial action for the Site shall be reviewed no less often than every five years. EPA will conduct the five-year review for this site on or before April 2022.

AFFIRMATION OF STATUTORY DETERMINATIONS

The remedy selected in the 2013 ROD remains fundamentally unaltered, and the statutory determinations made in the ROD still apply. The significant changes to the remedial action include an increase in the volume of contaminated sediment requiring dredging and disposal as well as a corresponding increase in the cost to implement the remedy.

The remedy will continue to be protective of human health and the environment, and it will comply with federal and state requirements that are legally applicable or relevant and appropriate to the remedial action. The remedy remains technically feasible, cost-effective and satisfies the statutory requirements of CERCLA, with the exception of the CERCLA preference for treatment as a principal element and, therefore, permanently and significantly reduces the toxicity, mobility and volume of hazardous substances. As noted in the 2013 ROD for the site, EPA does not believe that treatment of the sediments is practicable or cost effective given the widespread nature of the sediment contamination and the high volume of sediment that is being addressed.

PUBLIC PARTICIPATION ACTIVITIES

Pursuant to NCP §300.825(a)(2), this ESD will become part of the Administrative Record file for the site. The Administrative Record for the remedial decisions related to the site is available for public review at the following locations:

Massena Public Library
41 Glenn Street
Massena, NY 13662
(315) 769-9914

Akwesasne Library
321 State Route 37
Akwesasne, NY 13655
(518) 358-2240

Saint Regis Mohawk Tribe – Environmental Division
449 Frogtown Road
Hogansburg, NY 13655
By appointment: (518) 358-5937

The Administrative Record file and other relevant reports and documents are also available for public review at the EPA Region 2 office at the following location:

U.S. Environmental Protection Agency
290 Broadway, 18th Floor
New York, New York
By appointment: (212) 637-4308

Hours: Monday to Friday: 9:00 am – 5:00 pm

EPA, NYSDEC and SRMT are making this ESD available to the public to inform them of the change to be made to the remedy. Should there be any questions regarding this ESD, please contact:

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With the publication of this ESD, the public participation requirements set out in §300.435(c)(2)(i) of the NCP have been met.

AUTHORIZING SIGNATURE

Andrew Wheeler, Administrator
U.S. Environmental Protection Agency

4/7/2020
Date