Aluminum Company Of America

New York

EPA ID#: NYD980506232

EPA REGION 2

Congressional District(s): 23

St. Lawrence

Massena

NPL LISTING HISTORY

Site Description

The 2700 acre ALCOA West facility is an active aluminum production plant, parts of which have been in operation since 1903. The production plant includes three operating areas: the fabricating area, the ingot-extrusion area, and the smelting plant. Fourteen areas of contamination are located at the facility and have been investigated and cleaned up under the authority of the New York State Department of Environmental Conservation (NYSDEC). Clean up of the ALCOA West facility was completed in 2001.

The ALCOA West facility is bounded on the north by the St. Lawrence River, on the southwest by the Massena Power Canal, and on the southeast by the Grasse River. During routine plant operations, ALCOA discharged wastewater to the Grasse River and to the Massena Power Canal through four permitted outfalls. As a result of these discharges, sediments in the river system surrounding the ALCOA West facility and approximately seven miles downstream have been contaminated with polychlorinated biphenyls (PCBs).

The site is adjacent to the Village of Massena, with a population of approximately 11,000 (Census 2000). The St. Regis Mohawk Indian Nation, called Akwesasne, is located approximately eight miles to the east.

Site Responsibility: The contaminated sediments in the Grasse River system are being addressed through Federal and responsible party's actions. Contaminated plant property and groundwater are being addressed through State and responsible party's actions.

Threat and Contaminants

PCB contamination has been found throughout the entire length of the Lower Grasse River from the Massena Power Canal to the confluence of the Grasse River with the St. Lawrence River. This seven mile stretch contains approximately 1,250,000 cubic yards of PCB-contaminated sediment. The highest levels of contamination at the surface were found in an area immediately adjacent to ALCOA's SPDES Outfall 001 which was also the most upstream source in the Grasse River. The sediments near the Outfall 001 were addressed by the non-time-critical removal action in 1995.

The consumption of fish or wildlife from contaminated areas is of concern because of the tendency of PCBs to accumulate in the fatty tissues of fish and wildlife. In 1990, the New York State Department of Health issued a consumption advisory for the Lower Grasse River recommending that no fish be eaten. Public water supply systems are not contaminated.

Cleanup Approach

This site is being addressed in two stages: a non-time-critical removal action which focused on removing the upstream, most highly contaminated sediments located adjacent to ALCOA's Outfall 001 and a long-term remedial action focusing on cleanup of the remaining river system sediments.

Response Action Status:

Non-time-critical Removal Action: In 1995, ALCOA, under the EPA's oversight, completed dredging of the most highly contaminated sediments from the area adjacent to the Outfall 001. This action removed about 3,000 cubic yards of sediment, boulders and debris. Approximately 8,000 lbs. of PCBs were removed and the average PCB concentrations in the top foot of the sediment bed were reduced by approximately 86 percent. The dredged sediments were dewatered and disposed of in ALCOA’s on-site TSCA landfill.

Remediation of Remaining River Sediments: Following completion of the non-time critical removal action (NTCRA 1995),

ALCOA completed the investigation of contaminants in the Grasse River, and issued the Comprehensive Characterization of the Lower Grasse River Report (CCLGR, a remedial investigation report equivalent) in 2001. After the NTCRA, ALCOA designed and conducted a Capping Pilot Study in 2001. The capping study was to test a variety of capping materials and application methods over a seven acre area. After implementation, ALCOA submitted the Capping Pilot Study Documentation (CPS) Report and the Analysis of Alternatives Report (a feasibility study report equivalent) for remediating the remaining river sediments in 2002.

Monitoring efforts conducted in the CPS area during spring of 2003 indicated that a loss of the cap material had occurred and, in some areas, underlying sediment had also eroded since the previous monitoring conducted in fall 2002. After extensive investigation and consultation with river ice experts, the stakeholders discovered that the formation of ice jams had caused erosion in parts of the pilot cap and sediment. Prior to the 2003 ice jam event, the occurance of ice jams in that location was not known, therefore, the pilot cap implemented in 2001 was not designed specifically to withstand the magnitude of forces generated by the occurrence of an ice jam event. This event prompted the revision of the CCLGR which was documented in the Draft Addendum to the CCLGR dated April 2004. To immediately mitigate the future potential impacts of ice jam related scour and to develop site specific information related to the implementation and effectiveness of potential remedial options for the lower Grasse River, ALCOA was directed to implement Remedial Options Pilot Study (ROPS) in 2005.

Since late summer of 2005, EPA with other stakeholders have been working with Alcoa on the proposed In-Situ PCB Bioavailability Reduction Pilot Study using granulated activated carbon. The study was conducted in a half-acre area of the Lower Grasse River from mid-September to October of 2006. Following implementation, two years of monitoring was conducted and third year monitoring was added.

Based on the Preliminary Engineering Analysis and Siting Evaluation for Ice Management Report , EPA determined that an ice breaking demonstration was necessary as a preventive interim measure to prevent scouring of PCB-contaminated sediments in the Lower Grasse River. Alcoa implemented the Lower Grasse River Ice Breaking Demonstration Project in March of 2007.

The Draft Addendum to the CCLGR dated 2004 was updated in 2009. The Draft Analysis of Alternatives Report was submitted in March 2010. EPA anticipates issuing a Proposed Plan in 2012 and will solicit public comment on the cleanup plan for the Grasse River.

Site Facts: In November 1989, the EPA issued a Unilateral Administrative Order to ALCOA requiring ALCOA to undertake an investigation of contamination in the Grasse River near its Massena facility and evaluate alternatives to address the contamination. The Order also includes the design and implementation of the final remedy for the river system once a remedy has been selected by EPA.

Cleanup Progress

During NTCRA 1995, approximately 3,000 cy of sediment, boulders and debris were dredged from the area adjacent to the Outfall 001. Approximately 8,000 lbs. of PCBs were removed and the average PCB concentrations in the top foot of the sediment bed were reduced by approximately 86 percent. During the ROPS 2005, approximately 24,000 cy of sediment, boulders, and debris were dredged. The dredged sediments were dewatered and disposed in ALCOA's on-site TSCA landfill. By 2001,clean up of the facility had been completed under NYSDEC oversight. Plant clean up, coupled with modifications to the wastewater treatment system, have significantly reduced the source of PCB contamination to the Grasse River. The upland source control and removal actions in the river have reduced the level of PCBs to fish and wildlife. This, in turn, will reduce the risk to humans while ALCOA completes long-term remediation of the remaining river sediments.

Site Repositories

St. Regis Mohawk Tribe, Community Building, Hogansburg, New York 13655

Massena Public Library, 41 Glen Street, Massena, New York 13662