

Marathon Battery Co.

New York

EPA ID#: NYD010959757

EPA REGION 2

Congressional District(s): 19

Putnam
Cold Spring

NPL LISTING HISTORY

Proposed Date: 10/1/1981

Final Date: 9/1/1983

Deletion Date: 10/18/1996

Site Description

The 70-acre Marathon Battery Co. site includes a now-demolished nickel-cadmium battery plant and 11 surrounding acres, the Hudson River in the vicinity of the Cold Spring pier, and a series of river backwater areas known as Foundry Cove and Constitution Marsh. The battery facility operated from 1952 to 1979, producing military and commercial batteries. During this time, the plant changed ownership several times, finally operating as the Marathon Battery Co. from 1969 to 1979. Before 1965, the plant's wastewater treatment system discharged into the Hudson River at the Cold Spring pier through the use of the municipal sewer system, except during periods of overload or system shutdowns, when the wastewater was discharged directly into East Foundry Cove. In 1965, the New York State Department of Health concluded that a new sewage treatment plant being designed for Cold Spring could not handle the battery plant's industrial discharge. The battery plant operators, therefore, constructed a wastewater treatment plant and began channeling the treated discharge into East Foundry Cove. The treatment plant operated with limited success. Although the potentially responsible parties (PRPs) dredged parts of Foundry Cove and surrounding areas in 1972 and 1973, studies of the sediments and the wetlands still revealed high levels of cadmium and nickel in the late 1970s. EPA divided the site into three geographical sub-sites to speed cleanup activities: East Foundry Cove Marsh and Constitution Marsh (Area I); the plant grounds, the former battery plant, a clay- and asphalt-lined underground vault on the plant grounds containing the dredged cadmium-contaminated sediment from Foundry Cove, and nearby residential yards (Area II); and East and West Foundry Coves and the portion of the Hudson River near the Cold Spring pier (Area III). In 1980, the battery plant was sold to Merchandise Dynamics for use as a warehouse to store books. Two million books remained in the warehouse when all business activities at the facility ceased in 1986. The surrounding area is residential and includes a historic district. Approximately 400 people live within a mile of the site. A school, a mobile home park, and a number of residences are served by ground water within a 3-mile radius of the site. Local surface water is used for both recreation and commercial fishing.

Site Responsibility : This site was addressed through federal, state, and potentially responsible parties' actions.

Threat and Contaminants

The State found high levels of heavy metals, including cadmium, zinc, nickel, and cobalt, both inside and outside the plant facility. High concentrations of trichloroethylene (TCE) were detected in the ground water underlying the site. A state-supervised sampling program conducted in 1984 and 1985 revealed widespread heavy metal contamination of the sediments and marsh soils of Foundry Cove. The highest levels were found in East Foundry Cove Marsh at the outfall from which the battery facility's process wastes were discharged. Cadmium was found in soil on the plant grounds, in neighboring backyards, and in dust inside the former battery facility. High levels of cadmium were present in Foundry Cove sediments, and cadmium was accumulating in the biota, threatening the marsh that supports several surface and underwater plant species and the surrounding wildlife. Tidal action was slowly flushing the cadmium deposits from the wetlands into the Hudson River. An endangered species, the shortnose sturgeon, migrates up and down the Hudson River and enters East Foundry Cove to feed. Since this fish feeds on insect larvae on the cove bottom, it was likely to eat contaminated sediments. Public health could have been adversely affected by eating fish and/or wildlife caught in contaminated waters. The threat associated with inhaling or ingesting contaminated soils or dusts, or eating foods grown in contaminated soil has been eliminated through the remedial actions taken at the site.

Cleanup Approach

This site was addressed in four stages: immediate actions and three long-term remedial phases focusing on the cleanup

of each of the three sub-site areas.

Response Action Status

Immediate Actions: In 1989, the PRPs placed fencing and screens over the former battery plant's entrances and windows to limit access.

Area I Cleanup: In 1986, following the completion of a remedial investigation and feasibility study (RI/FS) to determine the nature and extent of the contamination at and emanating from the Area I portion of the site and to evaluate remedial alternatives, a Record of Decision (ROD) was signed, selecting a remedy for cleaning up East Foundry Cove Marsh and Constitution Marsh, featuring: (1) dredging highly contaminated sediments from East Foundry Cove Marsh; (2) chemically binding the sediment and properly disposing of the watery component; (3) disposing of the treated sediments off-site; (4) restoring the marsh by adding clean fill and clay and replanting; and (5) diverting storm sewers. Long-term sediment and water monitoring in East Foundry Cove Marsh and Constitution Marsh and a public awareness program will be undertaken. EPA completed the engineering design for Area I in early 1992. The remediation of Area I was completed in the summer of 1995.

Area II Cleanup: In 1988, following the completion of an RI/FS for the Area II portion of the site, a ROD was signed, featuring: (1) decontaminating the inside surfaces and contents of the former battery facility to remove dust containing heavy metals; (2) excavating the cadmium-contaminated soil on the plant grounds and neighboring yards; (3) excavating the on-site vault containing dredge spoils from the 1973 dredging; (4) chemically binding, as needed, the excavated soil, dust, and vault sediments and disposing of them at an EPA-approved facility off-site; (5) backfilling the excavated areas with clean fill; and (6) natural attenuation for the TCE-contaminated ground water. The decontamination of the interior of the warehouse, including the books, was completed in the fall of 1992. The books were taken off-site and recycled. The remediation of the residential yards was completed in 1993. The remediation of the plant grounds portion of Area II was completed in the summer of 1995 and included the demolition of the former battery facility.

Because ground water monitoring results have indicated that the TCE contamination is not responding to natural attenuation as quickly as was expected, in February 2005, a pilot study commenced to study the viability of enhanced reductive dechlorination. The impacted ground water was injected with a hydrogen-release compound to accelerate the microbial degradation of the TCE in the ground water. This process involves injecting the contaminated groundwater with an easily degradable carbohydrate solution (e.g., molasses), which provides excess organic carbon that promotes microbial activity in the aquifer, enhancing the breakdown of chlorinated VOCs. Although ground water sampling following the first injection indicated that the technology showed promise, sample results from a subsequent injection in October 2006 indicate that the site conditions are not currently conducive to bioremediation. Other technologies are being evaluated.

Area III Cleanup: In 1989, following the completion of an RI/FS for the Area III portion of the site, a ROD was signed, featuring dredging 1 foot of sediments from East Foundry Cove and the Cold Spring pier area, chemically binding them, and removing them from the site for disposal, and long-term monitoring of West Foundry Cove. The remediation of Area III was completed in the summer of 1995.

Site Facts: EPA entered into an agreement with the PRPs in 1972 to perform dredging operations and disposal of contaminated sediment into an on-site vault.

In 1989, the PRPs were issued an Administrative Order to decontaminate the interior of the building, including the stored books.

In January 1992, a Consent Decree was entered in U.S. District Court (approved by the Judge) in which several of the PRPs agreed to a cash settlement for Area II.

In September 1992, an agreement was reached with the PRPs in which one PRP agreed to clean up Areas I, II (plant grounds), and III and the two remaining PRPs agreed to pay a cash settlement. The Consent Decree for this agreement was entered by the Court on April 1, 1993.

A Close-Out Report, documenting the completion of construction at the site was approved on September 28, 1995.

The site was deleted from the National Priorities List on October 18, 1996.

In June 1998 and March 2003, EPA issued Five-Year Review Reports, which concluded that the remedies that have been implemented at the site were completed in accordance with the remedies selected in the RODs and that the remedies set forth in the RODs are protective of human health and the environment. EPA issued a third Five-Year Review report in June 2008 that concluded that the remedies that have been implemented at the site were completed in accordance with the remedies selected in the RODs. Because of nationwide concerns regarding vapor intrusion at residential properties located near sites with volatile organic compound-contaminated groundwater, the five-year review called for a vapor intrusion survey. This work was performed in early 2009. The subslabs of ten homes were tested and

two homes required retesting. The retest results indicated that while the remedy remained protective of human health, one of the homes would need regular monitoring of the indoor air. The PRPs elected to install a mitigation system on this home as an alternative to monitoring.

Cleanup Progress

The residential yard soils excavation and building decontamination and demolition activities described above have reduced the potential for exposure to hazardous materials at the site. The removal of the contaminated sediments provides further protection to public health and the environment. A total of 189,000 tons of contaminated sediment and soils were excavated and/or dredged from the site, treated and disposed of off-site. The former battery facility site is now ready for redevelopment and East Foundry Marsh and East Foundry Cove have been acquired by Scenic Hudson, a conservatory organization.

Site Repositories

Constitution Marsh Audubon Society Sanctuary, RFD #2, Garrison, New York 10524

Cold Spring Town Hall, 87 Main Street, Cold Spring, NY 10516

EPA Region 2 Superfund Records Center, 290 Broadway, 18th Floor, New York, NY 10007-1866