

**OUTBOARD MARINE SUPERFUND SITE (WAUKEGAN, IL)
(MCSS DATABASE PROJECT 05-12)**

Site Description

The Outboard Marine Corporation, Inc. ("OMC") site is a federal Superfund Site located on the western shore of Lake Michigan in Waukegan, Illinois; about 40 miles north of Chicago. Land use in the vicinity of the site is primarily industrial and marine recreational, and the site is located adjacent to a public beach. The site comprises four designated operable units ("OUs"): Waukegan Harbor is OU 1; the Waukegan Manufactured Gas and Coke Plant ("WCP") site is OU 2; the PCB containment cells created when the harbor was dredged in 1992 (Slip #3, East and West Containment Cells) collectively are OU 3, and the OMC Plant 2 site is OU 4. Waukegan Harbor is an irregularly shaped harbor of about 37 acres that varies in depth from 14 to 25 feet. The entire harbor is bordered by 20 to 25-foot long steel sheet piling except in boat launching areas and at the retaining wall near the harbor mouth.

Site History

OMC was a recreational marine products manufacturer which used PCB-containing hydraulic fluid in its die-casting machines from 1961 to 1972. During site operations, PCBs escaped into floor drains which discharged to either the western end of Slip #3 (at the north end of Waukegan Harbor) or to the North Ditch which ran along the north of the property and discharged into Lake Michigan. By the time the drains were sealed in 1976, an estimated 300,000 pounds of PCBs had been released into Waukegan Harbor and another 700,000 pounds had been discharged on the OMC Plant 2 site property.

PCBs were detected in the Upper Harbor area (ranging from 1.8 to 460 ppm), which covers approximately 10 acres, and in Slip #3 (ranging from 350 to 16,400 ppm). As a result, in 1984 EPA issued a ROD for the site that was later amended in 1989 through a ROD Amendment that recommended various remedial actions including the dredging of Slip #3 and the Upper Harbor. In December 1991 and January 1992, OMC dredged the Upper Harbor as well as excavated PCB-contaminated soil from the OMC site to achieve a 50 ppm cleanup level. A total of 50,000 cy of PCB-containing sediment and soils was remediated that included 6,300 cy of sediment dredged from Slip #3 and 32,000 cy of sediment dredged from the Upper Harbor. Slip 3, an abandoned boat slip, was prepared as a permanent containment cell. The 6,300 cy dredged from this unit were treated by thermal desorption and returned to the cell along with the 32,000 cy from the Upper Harbor. Soils removed from OU 2 were disposed within the East and West Containment cells, located on the north side of OMC Plant 2, between the North Ditch and the Plant 2 building. Each cell was constructed using a slurry wall keyed into the lake clay and a landfill liner system. The estimated cost for the remedy was \$15 million. The estimated cost for annual operation and maintenance of the three containment cells (OU 3) averages \$25,000.

In 2000, OMC declared bankruptcy. As a result of the bankruptcy, between 2001 and 2003 the EPA conducted several removal actions at the OMC Plant 2 site and began an RI/FS at the site in 2004. In 2002 the City of Waukegan purchased the WCP property from the bankruptcy court, and in 2005 obtained title to the OMC Plant 2 property. In December 2006, EPA released a proposed plan for cleanup of the OMC Plant 2 site abandoned buildings and surrounding soil and sediment

containing PCBs. Additionally, in late 2006 the EPA began pilot testing a potential cleanup approach for groundwater TCE contamination at OU 4.

In 2002 the Great Lakes Legacy Act (“GLLA”) was signed into law which identified Waukegan Harbor as an Area of Concern. Beginning in 2004, the EPA and US Army Corp of Engineers (“ACOE”) worked to develop plans to dredge the remainder of the harbor to both remove residual PCBs in sediment and to return the harbor to its federally mandated navigational depth. Various plans have been presented to the associated stakeholders, including the City of Waukegan. However, the City of Waukegan’s masterplan “A 21st Century Vision for Waukegan’s Downtown and Lakefront”, which includes steps to gradually eliminate industrial use from the harbor area, is at odds with the EPA and the ACOE plans to dredge the harbor for both remedial and continued navigational purposes. This plan also recommends the incorporation of the East and West containment cells as part of a proposed city park. In May 2007 the City of Waukegan passed a resolution calling for capping of the harbor sediments to address the remedial component of the original plan rather than dredging for navigational purposes to support future industrial use.

In September 2007, the EPA issued its third Five-Year Review document for the site, indicating that a protective cleanup level for harbor sediment would be about 0.2 ppm PCBs.

Potentially Responsible Parties (PRPs)

OMC was the sole PRP for the PCB contamination identified in harbor sediment and at the OMC Plant 2 site. Future investigative and remedial actions in these areas will be evaluated and conducted by EPA, Illinois EPA, and area stakeholders. In 1989 during initial cleanup of the harbor, additional contaminants were discovered in soil on the adjacent WCP property (OU 2) that was owned by OMC at the time. The former operator of the WCP site, North Shore Gas (“NSG”), conducted a remedial investigation and feasibility study on the WCP property between 1992 and 1999. NSG and another coke plant PRP completed soil cleanup work at the WCP property in 2005, and construction of a groundwater pump-and-treat system began at the site in April 2007.

Threats and Contaminants

The primary contaminant of concern in the harbor is PCBs. Other compounds (e.g., TCE, PAHs, arsenic) have been identified in soils and groundwater beneath the WCP and OMC Plant 2 sites. Sediment PCB concentrations in Slip #3 were typically greater than 500 ppm, with maximum concentrations being greater than 10,000 ppm. In the Upper Harbor, pre-dredge sediment PCB concentrations were between 50 and 500 ppm. PCB concentrations in North Ditch soils (drainage ditch north of the plant) ranged from between 50 and >10,000 ppm.

Harbor sediment sampling performed in 2003 and 2005 indicate an average concentration of 2-3 ppm PCBs with one hot spot identified with concentrations of about 30 ppm. EPA also believes that the current fish data suggests that the consumption of fish from the harbor continues to be a potential risk to human health.

In January 2006, the fish consumption advisory for Waukegan Harbor was updated to state, “All sizes of white sucker and sunfish from Waukegan North Harbor of Lake Michigan should be limited to one meal per month because of elevated levels of PCBs. For all other Waukegan Harbor fish, follow the fish advisory for Lake Michigan.”

Selected Remedy

The remedial action specified in the 1989 ROD Amendment was to remove sediments greater than 500 ppm PCBs from abandoned Slip #3, treat by thermal desorption to remove the PCBs, return the treated sediment to Slip #3, prepare Slip #3 as a permanent containment cell, and remove sediment containing greater than 50 ppm from the Upper Harbor and deposit the removed sediment in the Slip #3 containment cell. These remedial activities were completed in late 1991 to early 1992.

The containment cells require ongoing operation of groundwater removal to support an inward gradient to the cells and maintenance. OMC operated and maintained the containment cells until shortly after it declared bankruptcy in 2000, followed by EPA and Illinois EPA, and presently by the city of Waukegan. Annual maintenance activities for the containment cells include routine inspections and repair and maintenance to the caps. Additionally, 12 groundwater monitoring wells surrounding the containment cells are monitored for PCBs on a semi-annual basis during the post-closure period.

Future Activities

The operation and maintenance of the containment cells is ongoing as well as the annual collection and sampling of fish in the harbor by Illinois EPA.

Additionally, the City of Waukegan has submitted plans to reconfigure the cap that covers the Slip #3 containment cell so that a boat storage building may be constructed over the cell. The areas over the two remaining containment cells may also be modified for use as recreational parkland.

In September 2007, the EPA issued its third Five-Year Review document for the site. In its review, the EPA in consultation with the Illinois EPA determined that: (1) the Waukegan Harbor site (OU 1) currently is not protective because PCB levels in certain fish caught in the harbor are too high for human consumption; (2) the WCP site (OU 2) currently is protective because soil cleanup is complete and groundwater work is underway; (3) the PCB Containment Cells (OU 3) is currently protective because the city is currently operating and maintaining the cells; and (4) the OMC Plant 2 (OU 4) currently is not protective because site cleanup work has not yet begun. The EPA makes several recommendations in its review, including completion of an investigation for harbor sediments to determine a protective PCB cleanup level and then to choose and implement a cleanup remedy to achieve that level.

According to EPA, the City Council of Waukegan officially has rejected the Harbor Sediment Remediation project developed as part of the GLLA and therefore the site has been re-acquired by the Superfund Group. The EPA Superfund program consultant for the site, CH2M HILL, is currently developing a Draft Remedial Investigation plan that is targeted for completion in February 2008 that will then be followed by a Draft Feasibility Study in the summer of 2008.

References

City of Waukegan, City of Waukegan-Position Pager on Waukegan Harbor,
<http://www.waukeganweb.net/waukegan%20Harbor%20clean%20up/waukeganharborpositionpaper>

EPA, Third Five-Year Review Report, Outboard Marine Corporation Superfund Site, September 26, 2007, <http://epa.gov/superfund/sites/fiveyear/f2007050001777.pdf>

EPA, NPL Fact Sheet – Outboard Marine Corp., last updated December 2007,
<http://www.epa.gov/R5Super/npl/illinois/ILD000802827.htm>

GE MCSS Database, Outboard Marine-Project 2 (Harbor/Upper Bay), Release 5.0, September 30, 2004

No. 54, A Resolution Respecting the Dredging of Waukegan Harbor adopted by the Waukegan City Council on May 7, 2007.

Telephone conversation with Kevin Adler, EPA Remedial Project Manager, January 14, 2008.