

**Badger AAP
Superfund Site
Contaminated
Sediment
Investigation &
Dredging**

Baraboo, WI

for Stone & Webster, Inc.
A Shaw Group Company
Under the

USACE Omaha District TERC 5
Contract #DACA15-95-R-0022/0010

\$2.3M Value
January 1999 - December 2001
100% Complete

**Omaha District Corps of
Engineers Commander's
Safety Award -- May 2002**



Geotubes, 20' x 200' geotextile fabric containers, were used to separate the water and sediments in the Laydown Area.



For more information, contact us
at info@baywest.com or
log onto www.baywest.com

This task order was under the USACE Omaha District's Total Environmental Restoration Contract (TERC) 5, for which Bay West is a team subcontractor to the Shaw Group. Bay West was contracted to dredge sediments from Gruber's Grove Bay, located off the Wisconsin River near the Badger AAP Superfund site, where munitions components were formerly manufactured.

Initial Investigation & Winter Sampling

Bay West initiated work at the site in the winter of 1999 by performing an investigation of sediments in the frozen 20-acre bay to identify the extent of mercury-contaminated sediments. Sediment probes were used to determine the thickness of sediments at more than 500 locations. As a cost efficient approach, work was completed in the winter when the lake was frozen; this way, surveyors could stake sample locations and the sample crews could move easily between areas, in comparison to using boats. Using a combination of geoprobng for discreet core sampling, and hand-operated grab and core samplers, Bay West collected and sampled sediment cores at 1-foot intervals. The crews were able to complete each location in less then half the time originally estimated. As a result, Bay West saved the client nearly \$50,000.



Bay West used geoprobing for discreet core sampling, as well as hand-operated grab and core samplers to collect sediment samples from the bay.

Dredging Activities

Dredging of the contaminated sediments took place throughout the spring, summer, and fall of 2001. Utilizing an Ellicott MC-2000 hydraulic dredge, Bay West is dredging approximately 99,000 cubic yards of contaminated sediments.

Dewatering/Disposal

The sediments were dewatered through the use of large geotextile fabric containers (geotubes) placed in a lined and bermed dewatering basin, called a Laydown Area. This area, the size of three football fields, is where the water and sediments were separated. The geotubes, each 200 feet long and 20 feet in diameter, were repeatedly pumped full of slurry at a rate of 1,500 gpm, until the tubes were full of sediment. Approximately 111 tubes were filled to dewater the sediment. Water from the sediments was pumped through another pipeline and discharged over 20 acres of pastureland via a spray irrigation technique.



Manufactured by Ellicott Int'l., the MC-2000 was ideal for the BAAP project as it is transportable on one truck for easy mobilization to this remote location, and is efficient in lakes, bays, and rivers.