

Application Story

PROJECT | BADGER ARMY AMMUNITION PLANT
Product | Geotube® Dewatering Technology
Application | Marine Remediation

Location
Installation

Wisconsin
2001 and 2006

The Challenge:

Clean up contaminated sediments from harbor caused by run-off from munitions production. The contaminants included mercury, lead, and copper.

The Solution:

Geotube® containers were installed to dewater over 145,000 cubic yards of contaminated sediments in the harbor. This involved 28,200 linear feet of 45' circumference (during 2001) and 10,650 linear feet of 60' circumference (in 2006) GT500 Geotube® containers [photo 1]. The 25-acre harbor was dredged to remove the contaminated sediments [photo 2]. Geotube® units were installed side-by-side. Each unit was able to dewater an average of 750 cubic yards of contaminated sediments. To maximize the allotted space for the dewatering project, three layers of Geotube® containers were added on top of one another [photo 3].

The Geotube® containers from the first phase of the project remained in the dewatering basin and were covered with three feet of soil in 2002 [photo 4]. Four years later, a new layer of Geotube® units were installed over the top of the previous containers in the basin [photo 5]. The second phase dewatered over 50,000 cubic yards of contaminated sediments.

Projected Highlights:

- The U.S. Army Corps of Engineers

specified Geotube® technology as the best practice for dewatering contaminated marine dredge materials.

- A manifold method of filling the Geotube® containers was designed specifically for this project. Each branch could be individually adjusted to control the sediment flow [photo 6]. Each pipe leading to a Geotube® bag was fitted with a pinch valve to help control the flow.
- To aid in dewatering and consolidation, polymer was injected into the dredge spoil discharge line.
- The effluent was collected in a temporary lagoon which will eventually become a wetlands area [photo 7].
- The clean lagoon water was later used for irrigation purposes [photo 8].



Contact Information:

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