

## OVERVIEW: Port of Indiana

Typically, erosion problems are thought of as a surface problem, visible from land. Erosion or scour underwater many times goes unnoticed, "out of sight out of mind". When large freighter ships entered the Portage, Indiana harbor, their massive propellers would cause the sandy harbor bottom to migrate. The smallest closed-cell block mats, ArmorFlex Class 45S weighing in at 45 lbs per square foot, were utilized to deflect the propeller forces and stabilize the harbor bottom. An added feature was a high-strength woven-monofilament geotextile pre-attached to the bottom of the ArmorFlex mats. This is not typically done or recommended, but under the circumstances it was a necessary requirement of this project. The installation was accomplished by a crew from the U.S. Army Corp of Engineers who had a little fun with the project by painting the U.S. Army Corp Symbol on one of the mats.



**PRODUCT:** ArmorFlex Class 45S

**AMOUNT:** 18,240

**DATE:** August 2003

**OWNER:** U.S. Army Corp of Engineers  
Attn. Steve Hungness

**ENGINEER:** U.S. Army Corp of Engineers  
111 N. Canal Street  
Chicago, IL 60606

**CONTRACTOR:** U.S. Army Corp of Engineers  
111 N. Canal Street  
Chicago, IL 60606

**SUBMITTED BY:** Doug Buch

**DATE:** January 2004

