

CASE STUDY

ACTIVATED CARBON MAT INSTRUMENTAL IN REMEDIATION STRATEGY IN HAMMOND, IN

PROJECT: Grand Calumet River - West Branch, Reach #3

LOCATION: Hammond, IN

PRODUCTS: Reactive Core Mat®

BACKGROUND: In 2009 clean up began on a one-mile stretch of the West Branch of the Grand Calumet River in Hammond, IN known as Reach #3. This project involves the mechanical dredging and removal of 82,000 cubic yards of sediments and soils impacted with PAH, PCB, and various heavy metals. The estimated \$ 33 million project is being funded under the Great Lakes Legacy Act (GLLA), with the GLLA contributing to 65% of the overall project cost.

CHALLENGE: Part of the GLLA's initiative is to restore the beneficial uses to polluted areas in the Great Lakes, which includes wildlife habitat restoration. Provisions were made in the final design to include an Engineered Cap that would cover over 75,000 cubic yards of sediment to ensure there would be no re-suspension of contaminants.

Reach #3 posed some unique geo-mechanical challenges to the design engineer due to the fact that the organic laden sediments being capped were very unstable and offered little bearing capacity to support a cap.

SOLUTION: CETCO's Reactive Core Mat® (RCM) was utilized in the Engineered Cap to limit the re-suspension of contaminants and allow this major waterway to be returned to its natural state. The RCM contained granular activated carbon to isolate any contaminants being mobilized through ground water flux or gas ebullition. The final component of the cap was a 2 foot sand/aggregate layer to protect the RCM and allow for the re-development of benthic organisms in the waterway. Another beneficial use of the RCM for this site was increased bearing capacity to support the overall cap. RCM incorporates two (2) geo-textiles that allow for additional strength and load bearing capacity in the presence of soft silt and sediments.

RESULT: Placement of the Engineered Cap is underway and expected to be complete by fall 2010. As suspected, the soft sediments did pose some initial challenges to the installing contractor. Procedures were slightly modified, eliminating these concerns and the cap is now being placed effectively supported by the underlying sediment.

For a free consultation regarding your next project, contact a Remediation Technologies expert at 714.384.0111 or 800.527.9948



Approximately 315,000 square feet of CETCO Reactive Core Mat (RCM) was deployed at the Grand Calumet River project by CETCO trained and certified installers. Once the RCM was in place, installation of the two foot sand/aggregate layer was put into place to protect the RCM. The estimated \$ 33 million project was funded under the Great Lakes Legacy Act (GLLA), with the GLLA contributing to 65% of the overall project cost..