AquaBlok is selected for New, Large-Scale Demonstration of In-Situ Treatment of Contaminated Sediments in Active DoD Harbors

New study evaluates use of in-situ reactive amendments in treatment of contaminated sediments.

Toledo, OH (PRWEB) December 28, 2011 -- AquaBlok, Ltd., a leading manufacturer of composite particle materials for environmental remediation, has developed a new product for in-situ treatment and remediation of contaminated sediments. The new technology represents an improvement over costly remediation methods like dredging and conventional capping that can damage existing ecosystems.

The company has developed a new in-situ reactive amendment based on delivery of activated carbon (AC) which forms chemical bonds with contaminants in sediments.

The new reactive capping material, AquaGate+PACTM, will be deployed at an active U.S. Naval shipyard to verify its effectiveness in reducing the bioavailability of contaminants in harbor sediments. The project will demonstrate use of the new reactive capping material over a relatively large area (approximately 20,000 square feet) in an active harbor area using a deep water capping technology developed by AquaBlok.

The use of reactive amendments for contaminated sediments is intended to speed ecosystem recovery by introducing a chemical sorbent to neutralize contaminants.

AquaGate+PAC combines an AC reactive amendment with the company’s patented composite particle delivery system, optimized for sequestration and treatment of specific targeted contaminants in sediments. The accumulation of contaminants such as polychlorinated biphenyls (PCBs), pesticides, dioxins, mercury (Hg) and methyl mercury (MeHg) are common sediment-bound pollutants posing a threat to benthic ecosystems and human health.

Activated Carbon (AC) has been proven effective in binding to contaminants and reducing their presence in the water column. Studies with AquaGate+PAC have shown that amending or thin-capping a bioactive surface layer of sediment with AC amendments can dramatically reduce pore water concentrations of contaminants and therefore the bioavailability and uptake of contaminants by benthic organisms.

“Cost savings will be substantial if sediment amendments such as AC can be easily delivered in composite particle form” according to SERDEP/ESTCP (Demonstration of In Situ Treatment with Reactive Amendments for Contaminated Sediments in Active DoD Harbors, ER-201131).

Expected results are: 1) improved remediation performance, 2) reduced construction costs compared to dredging, 3) reduced long-term monitoring costs, and 4) substantial energy savings and cost savings compared to conventional remediation methods (removal, transport and disposal). Project is scheduled for completion in 2015.

References:

SERDP/ESTCP. Demonstration of In Situ Treatment with Reactive Amendments for Contaminated Sediments in Active DoD Harbors, RE201131.

About AquaBlok

AquaBlok, Ltd. (Toledo, Oh) is a manufacturer of advanced composite materials for environmental and geotechnical applications. AquaBlok’s Composite Particle System® is a proprietary aggregate composite delivery system with environmental remediation, flood control, and other civil engineering applications for water management and conservation.

Environmental Remediation: AquaBlok® and reactive AquaGate+™ are low-permeable composites for the isolation and in situ treatment of contaminated sediments.

Flood Mitigation, Water Retention, And Sealing Applications: PONDSEAL™ and HoleBlok™ are designed for targeted bentonite placement and reliable sealing in ponds and commercial impoundments; for bedding around pipes, structures and utility installations; to construct cut-off walls in porous soil conditions; for dam and levee repair and rehabilitation; for flood mitigation; and even in well drilling and abandonment applications.

Wetland Restoration: AquaBlok partners with native plant nurseries to offer custom seed-amended blends (SubmerSeed®) for wetland and shoreline re-vegetation and with the Adventus Group to deliver their proprietary treatment materials.

Phosphorus Management: AquaBlok, Ltd. is a licensee of Halliburton’s Baroid IDP Division for BARACLEAR® phosphorus management products. For more information please visit www.aquablokinfo.com.

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