Overview of Completed Slope Repair/Stabilization with AquaBlok Landfill Cap Seal / Repair

Setting / Purpose: Freshwater Creek – Control of Cap/Bank Erosion on Closed Landfill

Contaminant(s) of Concern: Creek bed erosion penetrated historic landfill cap and was causing a release of leachate from landfill into creek. AquaBlok, a bentonite coated aggregate sealant, was selected to provide the low permeability (in the range of $10^{-9}$ cm/sec) interface with the existing landfill cap.
Slope Protection Design / Site Area: Ohio EPA approved design that incorporated AquaBlok as primary low permeability seal for re-establishment of the certified landfill cap.

A multi-layer design was used to first re-establish the landfill cap, then to provide bank/slope protection to high flow conditions in the creek bed. The first layer utilized a 6” thick Geocell to maintain the AquaBlok capping/sealant material on the slope of the creek. This was then covered in a geofabric and a layer of stone. An articulated concrete mat was placed over the entire area to provide the final level of protection from long-term erosion to the bank. Site area was comprised of 3,000 square feet of embankment area.

Method of AquaBlok Placement: Land-based excavator.