AquaBlok® Installation Profile

Site Location: *US EPA Region 10*
Potrero Power Plant, San Francisco

Project Status: *Completed 2019*

Objective: Dredging and active capping of impacted sediments from the nearshore zone.

Setting/Purpose: Remediation of contaminated sediment in the Offshore Sediment Area of the Potrero Power Plant (PPP) property (Pacific Gas & Electric) on the San Francisco Bay. The project implemented a Water Board approved Remedial Action Plan.

Contaminant(s) of Concern: Historic MGP Site - Polycyclic aromatic hydrocarbons (PAHs), Petroleum hydrocarbons, low level of polychlorinated biphenyls (PCBs) and metals.

AquaBlok Cap Design / Site Area: A multi-layer reactive cap with various elements at different locations across the site was designed to address various aspects to resolve the issue. The design started at the dredge surface with a layer of aggregate (AASHTO M43 No.8) to both level the dredge surface and provide control of residuals disturbed during dredging. This layer was followed by a 1-foot thick reactive capping layer composed of AquaGate+PAC 5%. In limited areas of the installation an organoclay Reactive Core Mat (RCM) was used to address potential DNAPL migration and protect the activated carbon-based reactive capping layer. The active material layers were followed by a 6-inch layer of sand (AASHTO M43 No.8) to promote the sediment accumulation allow for bioturbation. The final layer consisted of a 6-inch layer of aggregate (AASHTO M43 No. 1) designed to withstand the storm events in the submerged cap areas. AquaGate+PAC was selected due to its dense aggregate core and suitability for placement in the marine (saline) environment. The use of Powder Activated Carbon (PAC) amendments were evaluated during modeling as being superior to other reactive capping alternatives.

Method of Placement: The contractor employed a level-cut clamshell on an excavator as a low-impact placement system. Material was loaded from land onto barge-based hoppers and conveyed out to the placement system. Both catch pans/trays and cores were used to verify layer thickness during placement.

Current Status: Since the completion no visible sheen has been reported. Efforts are underway to perform further monitoring of the capping zones, but the areas addressed are considered to be successful in accomplishing the objectives outlined by the engineer and site owner.

Site Owner: / Contractor: Sevenson Environmental **/ Engineering Firm:** Haley & Aldrich, Inc.