

Redevelopment of a Former Industrial Area Along the City of Richmond's Waterfront

Richmond, CA



EKI assisted a developer with the remediation planning for redevelopment of an 86-acre former industrial property along the City of Richmond's waterfront. The site was historically used for industrial processes including the manufacture of sulfuric acid (using pyrite as the base material), superphosphate fertilizer, thiocarbamate pesticides, and other chemicals.

Prior to 2005, environmental investigations and remedial activities were conducted by others under the oversight of the Regional Water Quality Control Board (RWQCB). As part of the previous remedial activities, the acid-leaching potential of the pyrite cinders was addressed by mixing the material with crushed dolomitic limestone and placing the treated material on a portion of the site. Then, the treated cinder material was covered with a temporary cap to limit water infiltration. In addition to the acid-leaching potential of the pyrite cinders and acidic conditions in groundwater, soil and groundwater on portions of the site contained metals, volatile organic compounds (VOCs), semi-volatile organic compounds, pesticides, and polychlorinated biphenyls (PCBs). VOCs in groundwater were treated by a combination of in situ treatment and monitored natural attenuation. Metals in groundwater were treated by a permeable reactive barrier prior to discharge to a saltwater marsh.

In 2005, regulatory oversight for the Project was transferred to the California Department of Toxic Substances Control (DTSC). EKI worked with the developer, other Responsible Parties, the DTSC, and a Community Advisory Group to develop a plan for addressing known environmental issues that remain at the site, including the long-term acid-leaching potential of the treated cinders, residual metals in groundwater, and VOCs in groundwater. EKI prepared a human health risk assessment, developed remediation goals for the site, and prepared a Feasibility Study and Remedial Action Plan ("FS/RAP") for the uplands portion of the site. The FS/RAP presented remediation strategies and risk management measures to facilitate redevelopment by addressing potential human health and ecological risks posed by chemicals at the site, including potential risks associated with the discharge of groundwater to a salt water marsh. EKI also performed groundwater monitoring at the site which included 34 wells sampled quarterly and up to 12 wells monitored semi-annually. EKI then prepared and oversaw the implementation of a Removal Action Workplan to remediate PCBs and VOCs in soil on a portion of the property.