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Orange County Section

OCACS Environmental Program

In Situ Treatment of Hexavalent Chromium in Perched Groundwater

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Presentation Abstract:
Former chromium plating operations located above regional aquifers in the San Fernando Valley have generated concern over the potential impacts to regional groundwater supplies. Since 2000, perched groundwater impacted with concentrations of hexavalent chromium (Cr[VI]) exceeding 2,000,000 parts per billion has been extracted at a former chromium plating site in Burbank, California.
In situ treatment of Cr(VI) was pilot tested with the goals of: 1) shortening the remediation timeframe and 2) continuing to mitigate Cr(VI) migration from the perched zone to the regional aquifers.
Two parallel test cells were installed in the source area at the site. Two different methods for reducing Cr(VI) in perched groundwater were implemented. Chemical reduction of Cr(VI) using calcium polysulfide (CaSx) injection was tested in one cell. Biological reduction of Cr(VI) using molasses was tested in the second cell.
Physical and chemical parameters were monitored during the injection and subsequent six months. The results have important implications regarding the use of these methods for remediation of soil, perched groundwater, and regional groundwater. The ongoing results of the full-scale implementation will be discussed.

Speaker Biography:
Mr. Alexander has 25 years of experience in planning, design, construction, and operation of air and water treatment systems, remediation of sites with impacted soil and groundwater, scoping of wastewater treatment projects, and litigation support. He has worked at refineries, food processing plants, research labs, industrial sites, residential neighborhoods, airports, U.S. Army, Navy, and Marine installations. He has worked in the most sensitive areas, managing treatment system designs to meet the most stringent discharge, aesthetic, noise, space and schedule limitations. Mr. Alexander has provided technical expertise for litigation support and for evaluation of remedial strategies, remedial cost allocation, and fate and transport of chemicals in the subsurface.

Location:
Kennedy/Jenks Consultants - Conference Hall
2355 Main St., Suite 140
Irvine, CA 92614

Reservations:
Limited to first 25 persons with reservations. E-mail reservations to Ganesh Rajagopalan at RGanesh@KennedyJenks.com by January 24th, 2012.