The Stringfellow hazardous waste disposal facility, located 50 miles east of Los Angeles, was voluntarily closed in 1972. After 2001 groundwater testing results indicated presence of perchlorate, Kleinfelder was contracted to perform a remedial investigation to characterize the perchlorate source(s) and plume boundaries.

**PROJECT RESULTS**

Kleinfelder’s thorough feasibility study included an in situ bioremediation pilot report, numerical modeling of groundwater flow and contaminant transport, statistical and risk-based development of an ambient perchlorate concentration for use in evaluation of remedial options, and evaluation of green and sustainable remediation.

**COMPLEX CONTAMINATION**

Prior to Kleinfelder’s remedial investigation, the perchlorate plume was suspected to extend over a large area, and its full extent was not known. Challenges included possible perchlorate migration through the area’s complex geology, as well as potential contamination within an urban community. The perchlorate’s physical characteristics, its interaction with the alluvium, the presence of sensitive receptors, and the need for access to private lands owned by concerned community members demanded Kleinfelder’s experience, patience, tenacity, and creativity.

**AN INTRICATE INVESTIGATION**

Kleinfelder’s investigation identified and assessed the nature and extent of contamination, characterized the aquifer system, developed a site conceptual model, evaluated risks to human health and livestock, and evaluated the feasibility of various remedial action alternatives. After collecting geological data from three phases of field investigation, Kleinfelder identified both primary and secondary sources of perchlorate—including perchlorate-laden explosives used at an adjacent quarry and widespread historic use of Chilean fertilizer.

**Location:**
Riverside, California

**Owner:**
State of California, Department of Water Resources