

Chevron Corporation and Chevron Environmental Management Company, Chevron Former Bakersfield Refinery and Wait Tank Yard Groundwater Cleanup, Kern County

Chevron Corporation (Discharger) owns the former Chevron Bakersfield Refinery and adjacent Wait Tank Yard in Oildale, the site of a large petroleum hydrocarbon groundwater plume that has migrated off-site. Site remediation using soil vapor extraction (SVE) began in 1996. To date, over eight million pounds of hydrocarbons have been removed from the subsurface. Air sparge wells were installed within the plume at the downgradient site boundary during 2001 to 2004 to treat the saturated zone. Currently, 21 SVE system extraction wells and 19 air sparge wells are part of the remediation system.

The Discharger proposes to inject nitrogen and phosphorus to enhance biological degradation of petroleum hydrocarbons. Nitrogen will be injected with sparge air in the form of ammonia, and phosphorus will be injected with sparge air in the form of triethyl phosphate (TEP). The estimated cleanup time using biosparging for the off-site groundwater plume is seven years. The requirement would allow the Discharger to effect injection of the nutrients, limit the nutrients injected to the treatment zone, and require monitoring to show that the nutrients are limited to the treatment zone. (BEM)