

**STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

STAFF REPORT FOR REGULAR MEETING OF MAY 4-5, 2011
Prepared April 5, 2011

ITEM NUMBER: 10

SUBJECT: Staff Closures

THIS ACTION: Information/Discussion

This staff report summarizes information for one Central Coast Water Board staff-closed Underground Storage Tank (UST) case and one Site Cleanup Program case. Central Coast Water Board staff closed these sites because the wastes in soil do not pose a threat to human health and the environment and, if applicable, the groundwater beneath the site has reached water quality goals that are protective of beneficial uses. No Central Coast Water Board action is necessary for these items.

For the sites listed in this report, closure reflects a tangible water quality outcome, meaning groundwater has been restored such that it meets water quality goals sufficient for the designated beneficial uses. Table 1 below provides case closure targets for the current fiscal year (July 1, 2010 – June 30, 2011) and progress to date in achieving those tangible water quality outcomes.

**Table 1
Case Closure Performance Scoreboard**

Program	2010-2011 Fiscal Year¹ Case Closure Target	Case Closures To Date^{2,3}
Underground Storage Tanks	17	13
Site Cleanup	12	5

Notes:

¹ Fiscal Year 2010-2011 runs July 1, 2010 to June 30, 2011.

² Final closure letters are not issued for sites until the responsible party submits documentation of proper well abandonment.

³ This total includes sites with pending well destruction and does not include Recommended Closures on the current agenda.

UNDERGROUND STORAGE TANK CASE CLOSURE:

Santa Cruz County Sanitation District, East Cliff Pump Station, 2750 Load Street, Santa Cruz, Santa Cruz County; Case No 2689 [Tom Sayles 805-542-4640]

Central Coast Water Board staff plans to close the Santa Cruz County East Cliff Pump Station UST case where groundwater sample results indicate petroleum hydrocarbon constituents, including total petroleum hydrocarbons (TPH), benzene, and methyl tertiary butyl ether (MTBE) are below the Central Coast Water Board's cleanup goals.

The site is located at 2750 Lode Street in Santa Cruz. The site is bounded to the southeast by Arroyo del Rodeo, a small gulch that drains local surface runoff to Moran Lake, approximately

1,000-feet south of the Site. The seven-acre parcel contains three existing structures including a pump station building, a service building, and a maintenance building. The site currently contains an active diesel and gasoline fuel dispensing area located at the northeast corner of the service building.

A 2,500-gallon diesel UST formerly located near the southern corner of the pump station building was removed in April 1997. A soil sample collected from the UST excavation showed a concentration of total petroleum hydrocarbon as diesel (TPH-D) at 3,200 milligrams per kilogram (mg/kg). No other petroleum constituents were detected.

Between September 1997 and March 1998, consultants installed a total of ten soil borings (B-1 through B-10). B-7 through B-10 were converted to monitoring wells MW-1 through MW-4. Sample results from all soil samples collected during these investigations were below the Central Coast Water Board's cleanup goal for benzene and methyl tertiary-butyl ether (MTBE). The maximum concentration of TPH-D was 8,700 mg/kg at 23.5 feet below grade (fbg) from boring B-9.

Additional soil borings B-11 through B-14 were advanced in November 1998. Soil and groundwater sample results from B-11 through B-14 were below the Central Coast Water Board's cleanup goals for all petroleum hydrocarbon constituents. The Central Coast Water Board's groundwater cleanup goals for TPH-D, benzene, MTBE and TBA are 1,000 micrograms per liter ($\mu\text{g/L}$), 1 $\mu\text{g/L}$, 5 $\mu\text{g/L}$, and 12 $\mu\text{g/L}$, respectively.

The Responsible Party commissioned a bio-venting / bio-sparging (BV/BS) remediation system in July 2009 to reduce hydrocarbon concentrations in soil and groundwater at the site. Confirmation soil samples collected on June 11, 2010 showed concentrations of TPH-D above the Environmental Screening Levels at a depth greater than 20 feet below ground surface (bgs). The BV/BS system operated until September 22, 2010. On November 16, 2010, consultants collected six soil vapor samples to confirm there was no risk of vapor intrusion at the site. One soil vapor sample collected at 25 bgs contained concentrations of total petroleum hydrocarbons slightly above the residential screening levels, but below commercial screening levels.

There are two upgradient wells within $\frac{1}{2}$ mile, of the site. Site characterization shows that the groundwater gradient is towards the south. Corcoran Lagoon is approximately 2,000-feet west of the site. Arroyo del Rodeo is approximately 1,000-feet south of the site. Monterey Bay is approximately 2,000-feet south of the site.

This site is appropriate for closure based on the following:

1. The extent of the release has been fully characterized,
2. The contaminant source was removed from the site to the extent practical and the remaining contaminants in the soil are greater than 20 feet below ground surface and limited in extent,
3. Lab analysis showed no petroleum hydrocarbon constituents in any of the groundwater monitoring samples collected from the site on June 29, 2010, indicating that groundwater remediation at the site is complete and groundwater meets water quality objectives for its assigned beneficial uses.

Pending monitoring wells destruction, the Executive Officer will issue a case closure letter for this site pursuant to California Underground Storage Tank Regulations.

SITE CLEANUP PROGRAM CASE CLOSURE:**Thriftway Main Street Beach, Santa Maria, Santa Barbara County [Alison Jones, (805) 542-4646]**

The site is a former oilfield located adjacent to Main Street Beach, at the western end of Main Street (Highway 166), approximately five miles west of the city of Guadalupe, in Santa Barbara County. The site is located within the Guadalupe Dunes County Park, currently owned by the County of Santa Barbara Parks Department. Portions of the park, including the Union Sugar Lease, of which this site is a part, are located within a biological preserve that is closed to the public during the months of March through October to provide seasonal nesting habitat for the protected snowy plover.

The site is situated within the Coast Ranges geomorphic province, characterized by northwest-southeast trending mountain ranges and intervening valleys which are generally separated by faults. Unconsolidated sediments beneath the site consist primarily of dune sands and beach sands, unconformably underlain by weakly consolidated sedimentary strata of the Paso Robles Formation.

The site lies approximately 300 feet east of the Pacific Ocean, within the Santa Maria Groundwater Basin. The "Water Quality Control Plan, Central Coast Region" (Basin Plan) designates groundwater beneficial uses in this Basin to be domestic and municipal supply, agricultural water supply and industrial supply. The nearest municipal water supply is located approximately five miles away in the City of Guadalupe. The nearest surface water is the Santa Maria River estuary, approximately 500 feet to the east of the site and the Santa Maria River mouth, approximately 300 feet to the north. The uppermost groundwater in the area is thought to represent a semi-perched aquifer at depths of between 20 and 40 feet below ground surface, and is separated from deeper water-bearing zones by low permeability horizons of silt and clay of variable thickness.

The site consists of approximately five acres that was originally leased by Union Oil Company. In the mid-1970's, Thriftway acquired the lease, which included four oil wells, three large aboveground storage tanks used for storage of produced oil, a small diluent tank, and the pump and piping used to transport the diluent from the tank to the well heads. Thriftway did not drill any new oil wells on the lease, and operations were limited to approximately five acres of the larger 80-acre Union Sugar Lease.

In 1996, Thriftway abandoned its four oil wells under permit from the California Division of Oil, Gas and Geothermal Resources (DOGGR). In 1998, Thriftway excavated the area of the aboveground tanks and removed oil-impacted sand. Soil samples taken after the removal of the tanks did not show detectable levels of TPH (total petroleum hydrocarbons). However, groundwater samples taken in the area of the former diluent tank detected TPH at concentrations ranging between 0.9 and 7.8 mg/L. Thriftway installed four groundwater monitoring wells and conducted monitoring for five quarters, from April 2001 through August 2002. With one exception in November 2001, all detected TPH concentrations were below the Central Coast Water Board cleanup goal of 1.0 mg/L. Sampling conducted in August 2002 showed no detectable TPH in any well. No polyaromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene or xylenes (BTEX) were ever detected in any of the wells. Monitoring was suspended with our concurrence in October 2002. The monitoring wells were properly abandoned in February 2010.

In addition to the original site cleanup and groundwater monitoring activities, Thriftway conducted three separate emergency cleanup operations in 1998, 2006 and 2009, when storms eroded portions of the site and exposed contaminated material, including former sumps, piping, older abandoned oil production wells, and contaminated soil. California Department of Fish and Game (CDFG) and the US Coast Guard have coordinated cleanup activities in consultation with our office, US Fish and Wildlife Service, California Coastal Commission, the County of Santa Barbara and others. Thriftway has removed several thousand cubic yards of impacted soil and several tons of piping at the site.

Subsequent to cleanup activities in 2009, Santa Barbara County Fire Department (County Fire) issued a letter dated February 12, 2010, stating that confirmation sample analysis indicated the remaining TPH and PAH concentrations were less than clean up criteria. County Fire deferred issuance of a no further action notice to CDFG or the Water Board because the County did not have knowledge about historical assessment and remediation of the site. CDFG issued a no further action letter March 18, 2010. Water Board staff issued a closure letter for this site in April 2011.

Water Board staff, in consultation with CDFG, has required removal of hydrocarbon impacted soil that poses the greatest risk to water quality. While it is possible that in the future additional hydrocarbon-impacted soil may become exposed by large storms, staff has closed this groundwater cleanup case, since groundwater monitoring shows no impacts from petroleum hydrocarbons at the site. If additional contaminated material is exposed in the future, cleanup activities would be coordinated with CDFG and Santa Barbara County Fire and County Parks Departments.