

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

**STAFF REPORT FOR REGULAR MEETING OF SEPTEMBER 2, 2010**  
Prepared August 6, 2010

**ITEM NUMBER: 9**

**SUBJECT: Recommended Case Closures**

**Background:**

This staff report provides summaries of recommended case closures for three Department of Defense (DoD) sites, one Site Cleanup Program (SCP) closure, and one Underground Storage Tank (UST) site. For these sites, soil and/or groundwater beneath these site has not attained water quality or soil cleanup goals for one or more constituents. Staff's closure recommendation is premised on the knowledge that: 1) the remaining constituent concentrations are sufficiently low so as to not pose a threat to surrounding existing beneficial uses of the water (e.g., supply wells, surface waters, etc.); 2) the constituent sources have been removed; 3) monitoring has indicated that the groundwater plumes are contracting in size and concentration; and 4) continued monitoring at these sites would not provide additional benefit for the staff resources invested. These sites are appropriate for closure, based on the site-specific information provided below for each of these cases.

**DEPARTMENT OF DEFENSE CASE CLOSURES**

**UST Cases, US Air Force, Santa Rosa Island, Santa Barbara County [D. Grant Himebaugh 805-542-4636]**

Staff recommends the Central Coast Water Board close three UST cases (UST-10, UST-11a, and UST-11b) located on Santa Rosa Island, Channel Island National Park, in Santa Barbara County. These three recommended closures complement seven staff closures documented in the previous agenda item for this Water Board meeting. Completion of these ten total site closures will complete the facility-wide site closure of fifteen UST and eight transformer sites that began in 1989. Upon completion, no additional site characterization or closure work would remain at this former US Air Force installation on Santa Rosa Island.

The US Air Force constructed the site near the harbor of Johnson's Lee on the southern tip of Santa Rosa Island in 1951. The USTs provided diesel fuel for generators that powered an early warning radar installation and a water desalination plant. The transformers were part of the installation's power infrastructure, which was operational until 1963, when the US Air Force abandoned the site and returned the property to private ownership. The National Park Service acquired the Island in the 1980s, and the US Army Corps of Engineers (Army Corps) removed most of the buildings and infrastructure in 1989.

Santa Barbara County Fire Department (County Fire) staff oversaw the original site closure work (1989), after which it was determined that additional site assessment work (2003-2007) was needed for ten sites. After contractors completed this additional field work, Central Coast Water Board staff determined that seven sites met water quality goals and could be closed immediately. The remaining three sites do not meet cleanup goals, but risk to surface and groundwater is sufficiently low at these sites to recommend them for closure above cleanup goals. The following information pertains to the three USTs recommended for closure.

The three USTs (UST-10, UST-11a, and UST-11b) were removed in 1989, after which contractors performed additional soil testing. The Army Corps tested the UST sites for: total petroleum hydrocarbons (TPH) as diesel, TPH as gasoline, TPH oil, volatile organic compounds (e.g. including benzene), and polycyclic aromatic hydrocarbons (PAHs). After reviewing the reports, Central Coast Water Board staff finds that some wastes exceed County Fire and Central Coast Water Board cleanup goals, yet site-specific conditions indicate that wastes left in place will result in a low threat to groundwater and the environment.

Based on these site-specific conditions, the limited areal extent and low concentrations of hydrocarbons in soil, staff does not consider there to be significant risk to human health or the environment from residual diesel fuel wastes at this site. Therefore, staff recommends the Central Coast Water Board close these sites based on the following:

1. The primary source of petroleum hydrocarbons (e.g. USTs) was removed and a portion of the secondary source (impacted soil) was excavated and disposed of at an appropriate location.
2. Most of the post-remediation soil sampling results indicate that residual total petroleum hydrocarbons in the form of diesel and heavier fractions are below the San Francisco Bay Water Board's Environmental Screening Level for commercial land use;
3. The extent of the residual soil contamination is limited: approximately 18 cubic yards of petroleum impacted soil (i.e. above the 100 mg/kg TPH cleanup objective) remains for UST-10 and approximately 55 cubic yards of petroleum impacted soil for UST-11a and UST-11b. The residual soil wastes are below an eight to ten foot layer of clean soil (i.e. TPH concentrations are below cleanup objectives), allowing no soil exposure pathway.
4. Groundwater is approximately 50 feet deep, and is difficult to reach due to the very hard native sandstone, located approximately 15 feet beneath the surface.
5. There are no water supply wells within several miles. It's very unlikely wells would be placed close to the former UST locations, as the site is too close to ocean waters to allow a drinking water well. Any significant pumping would pull seawater into the supply well. Because of an insufficient supply of surface water and groundwater available on the island, the US Air Force operated a desalination plant.
6. The site location is on a remote area of Santa Rosa Island that receives very few visitors, and is easily controlled by the National Park Service to prevent any unintended excavation or site development.
7. National Park Service staff (Ventura office) has been informed of this proposed site closure and has expressed support.
8. County Fire has written a formal closure letter for their records.
9. Natural attenuation processes will eventually reduce remaining concentrations of total petroleum hydrocarbons in the diesel and heavier ranges to below soil cleanup goals in a reasonable time; and
10. Case closure is consistent with State Board Resolution No. 92-49, Section III.G., which allows consideration of cost effective abatement measures where attainment of reasonable objectives, less stringent than background water quality (if applicable), does not unreasonably affect present or anticipated beneficial uses of groundwater, and will not result in water quality less than that prescribed by the Basin Plan.

Based on findings and data for the subject sites, County Fire, National Park Service, and Central Coast Water Board staff agree that no further investigation or cleanup is necessary. Staff will close this case and issue a final case closure letter upon receiving consent from the Central Coast Water Board.

**SITE CLEANUP CASE CLOSURE****Cowan (former Serifino-Martinelli) Property, East Prado Road, San Luis Obispo,  
[Katie DiSimone, (805) 542-4638]**

Central Coast Water Board staff recommends closure of this case where site assessment has been completed and groundwater concentrations were non-detect for contaminants of concern. The limited area of crude oil-impacted soils located on the subject property presents very little risk to groundwater quality.

The subject property is located in a mixed residential-commercial area near the east end of Prado Road within the City of San Luis Obispo. The property is currently vacant and undeveloped. The City annexed the property as part of the Margarita Area Specific Plan in 2004. Development plans for the property include a business-commercial park, and residential dwellings.

The property was impacted due to crude oil pipeline operations associated with Unocal Corporation's (Unocal) former San Luis Obispo Tank Farm located south of the subject property. An oil pipeline, removed in the 1930s, transported oil to the former San Luis Obispo Tank Farm north across the former Martinelli property and for a very limited extent (approximately 90 feet covering a total of 0.37 acres) onto the Cowan property's southwestern corner. Central Coast Water Board approved the former Martinelli property, located between the Tank Farm and Cowan properties, for no further action at the Central Coast Water Board meeting on December 7, 2007.

To determine the lateral and vertical extent of impacted soil, Unocal conducted subsurface investigations in 1998, 1999, and 2004 which revealed limited soil impacts on the property. The impacted soil is limited to depths of approximately 5 to 15 feet below ground surface, and consists of highly weathered, heavy petroleum hydrocarbons. As would be expected with weathered crude oil that has been in the soil for at least 80 years, volatile compounds were not detected. Heavy-range total petroleum hydrocarbon (TPH) concentrations detected in soil on the property ranged from non-detect to 6,678 milligrams per kilogram (mg/kg), with the majority of samples being less than 30 mg/kg.

In 2004, Unocal installed two monitoring wells to determine whether the impacted soil posed a risk to groundwater quality. No TPH or other petroleum-related constituents were detected in samples from the two wells. These results are consistent with the very limited extent and heavily weathered nature of contamination encountered. The depth to groundwater at the site is approximately nine feet below ground surface and flows to the southwest. The nearest surface water body is the wetland area located on the former Tank Farm property to the south of the subject property by approximately 2000 feet. Chevron Corporation (Unocal's successor) regularly monitors the wetlands under Water Board direction as part of the Unocal San Luis Obispo Tank Farm cleanup and restoration project. The nearest water supply well is located near the Tank Farm's former office area, approximately 2200 feet south, and is not used for drinking water purposes.

In 2005, Unocal merged with Chevron. Chevron staff submitted a *Case Closure Summary and Request for Site Closure Report* to the Central Coast Water Board on July 25, 2007. Central Coast Water Board staff reviewed that report, as well as the analytical results from the site. Groundwater concentrations are non-detect for all chemicals of concern. Residual soil contamination is heavily weathered and limited in extent. Future development plans show expansion of Prado Road and a parking lot to be constructed over the area with residual contamination. Chevron will be recording a Covenant and Environmental Restriction for the subject property to ensure proper handling of the site soils should future site actions require exposing residual contamination.

Central Coast Water Board staff recommend closure of this case based on the following:

1. The extent of the residual contaminants in soil is limited and contained within the footprint of appropriate (i.e., commercial) future development.
2. Groundwater samples were non-detect for contaminants of concern. Remaining hydrocarbon constituents in soil are highly weathered and unlikely to reach surface waters or drinking water supply wells.
3. The property owner and neighbors within 200 feet of the property have been informed of this proposed site closure. As of the date of this report, we have received no comments objecting to this proposed closure.
4. A Covenant and Environmental Restriction will be recorded for the property to prevent exposure to residual soil contamination on the property, and to ensure proper handling of the soils should future site development require exposing residual contamination.
5. Natural attenuation processes are expected to eventually reduce concentrations of total petroleum hydrocarbons to below soil cleanup goals in a reasonable time; and
6. Case closure is consistent with State Board Resolution No. 92-49, Section III.G., which allows consideration of cost effective abatement measures where attainment of reasonable objectives, less stringent than background water quality (if applicable), does not unreasonably affect present or anticipated beneficial uses of groundwater, and will not result in water quality less than that prescribed by the Basin Plan.

The recommended case closure is consistent with closure of similar petroleum hydrocarbon cases by the Central Coast Water Board in the past, including the adjacent former Martinelli property. Unless the Central Coast Water Board directs staff otherwise, the Executive Officer will issue a case closure letter, pending proper well abandonment and recordation of the Covenant and Environmental Restriction.

#### **UNDERGROUND STORAGE TANK CASE CLOSURE**

**San Paso Truck Stop, 81 Wellsona Road, Paso Robles, San Luis Obispo County [Corey Walsh 805/542-4781]**

Staff has included this placeholder at the request of the Water Board. Staff anticipates receiving soil and water quality data from the responsible party, evaluating the effectiveness of cleanup efforts. If these data confirm soil and groundwater risk at this site has been mitigated, this site will be recommended for closure through a supplemental sheet.