REVIEW SUMMARY REPORT – ADDITIONAL WORK
PRELIMINARY REVIEW – JANUARY 2016

Agency Information

Agency Name: Central Valley Regional Water Quality Control Board (Regional Water Board)	Address: 11020 Sun Center Drive, #200 Rancho Cordova, CA 95670
Agency Caseworker: Michael Smith	Case No.: 500043

Case Information

USTCF Claim No.: 9492	GeoTracker Global ID: T0609900041
Site Name: ARCO #6161	Site Address: 210 North Golden State Blvd., Turlock, CA 95380
Responsible Party: Atlantic Richfield, Co, Attn: John Scance	Address: PO Box 1257 San Ramon, CA 94583
USTCF Expenditures to Date: $0	Number of Years Case Open: 28

To view all public documents for this case available on GeoTracker use the following URL:
http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0609900041

Summary

The Low-Threat Underground Storage Tank (UST) Case Closure Policy (Policy) contains general and media-specific criteria, and cases that meet those criteria are appropriate for closure pursuant to the Policy. This case does not meet all of the required criteria of the Policy. Highlights of the case follow:

This case is an active commercial petroleum fueling facility. An unauthorized release was reported in March 1987 after a release was identified during construction activities. One waste oil UST was removed in September 1987 and unknown volume of impacted soil was excavated to a depth of 8 feet below ground surface (bgs) and disposed offsite in September 1987. In January and February 1991, six USTs (four gasoline, two waste oil) were removed and an unknown volume of impacted soil was excavated to a depth of 17.5 feet bgs and disposed offsite. Groundwater extraction was conducted between April 1992 and February 1996, which removed 12 million gallons of contaminated groundwater. Soil vapor extraction was conducted between March 1993 and April 1996, which reportedly removed 7,672 pounds of total petroleum hydrocarbons as gasoline (TPHg). Groundwater extraction was again conducted between 2000 and 2004, which removed 54,950 gallons of contaminated groundwater. Ozone sparging was conducted between November 2007 and May 2008, which sparged 10 gallons of H_2O_2. Dual phase extraction was conducted between January and February 2009, which removed 306 pounds of TPHg. Soil vapor extraction and air sparging were conducted in January 2013, which reportedly removed 19 pounds of TPHg. Active remediation has not been conducted at the Site for the past two years. Since 1987, 21 groundwater monitoring wells have been installed and monitored; three wells have been abandoned. According to groundwater data, water quality objectives have not been achieved.

The petroleum release is limited to the soil and shallow groundwater. According to data available in GeoTracker, there are no public water supply wells or surface water bodies within 1,000 feet of

the defined plume boundary. No other water supply wells have been identified within 1,000 feet of the defined plume boundary in files reviewed. The unauthorized release is located within the service area of a public water system, as defined in the Policy. The affected shallow groundwater is not currently being used as a source of drinking water, and it is highly unlikely that the affected shallow groundwater will be used as a source of drinking water in the foreseeable future. Other designated beneficial uses of the affected shallow groundwater are not threatened, and it is highly unlikely that they will be, considering these factors in the context of the site setting.

Rationale for Closure under the Policy

- General Criteria: The case does not meet all eight Policy general criteria. Whether free product has been removed to the maximum extent practicable is unknown due to several highly contaminated groundwater monitoring wells in the source area becoming dry since 2013.
- Groundwater Specific Criteria: The case does not meet Policy criteria because the contaminant plume that exceeds water quality objectives is greater than 100 feet in length, while the maximum dissolved concentration of benzene is greater than 3,000 micrograms per liter (µg/L).
- Vapor Intrusion to Indoor Air: This active fueling facility meets the Active Commercial Petroleum Fueling Facility Exception. Exposure to petroleum vapors associated with historical fuel system releases is comparatively insignificant relative to exposures from small surface spills and fugitive vapor releases that typically occur at active fueling facilities.
- Direct Contact and Outdoor Air Exposure: The case meets Policy Criterion 3a. Maximum concentrations in soil are less than those in Policy Table 1 for Commercial/Industrial use, and the concentration limits for a Utility Worker are not exceeded. There are no soil sample results in the case record for naphthalene. However, the relative concentration of naphthalene in soil can be conservatively estimated using the published relative concentrations of naphthalene and benzene in gasoline. Taken from Potter and Simmons (1998), gasoline mixtures contain approximately 2 percent benzene and 0.25 percent naphthalene. Therefore, benzene can be used as a surrogate for naphthalene concentrations with a safety factor of eight. Benzene concentrations from the Site are below the naphthalene thresholds in Policy Table 1. Therefore, the estimated naphthalene concentrations meet the thresholds in Table 1 and the Policy criteria for direct contact by a factor of eight. It is highly unlikely that naphthalene concentrations in the soil, if any, exceed the threshold.

Objections to Closure and Responses

In a letter dated August 26, 2015, the Regional Water Board staff denied a case closure request and directed the responsible party to sample groundwater for poly-aromatic hydrocarbons (PAHs), chlorinated hydrocarbons and metals near the former waste oil UST.

RESPONSE: Although the Policy requires PAH analysis where waste oil USTs are suspected source of release, the PAH sampling is collected from shallow soil not groundwater. Additionally, under the Policy, non-petroleum related constituents are generally not subject to investigation in a petroleum UST release case.

Recommendation

The State Water Board staff recommends shallow soil sampling for PAH analyses at the former waste oil UST location. Additionally, the dry wells AT-17 and AT-21 should be replaced with deeper wells to assess current groundwater conditions at the source area.

01/14/16

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for 1/14/16

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