

State Water Resources Control Board

UNDERGROUND STORAGE TANK (UST) CASE CLOSURE SUMMARY

Agency Information

Agency Name: Orange County Health Care Agency (County)	Address: 1241 East Dyer Road, Suite 120 Santa Ana, CA 92705
Agency Caseworker: Dan Weerasekera	Case No.: 94UT055

Case Information

UST Cleanup Fund (Fund) Claim No.: NA	Global ID: T0605900040
Site Name: Mobil #18-JMY	Site Address: 3470 Fairview Road Costa Mesa, CA 92626 (Site)
Responsible Party: Circle K Stores Inc. Attention: Ms. Annette Toale	Address: 1130 West Warner Road Tempe, AZ 85254
Fund Expenditures to Date: NA	Number of Years Case Open: 26

[GeoTracker Case Record](http://geotracker.waterboards.ca.gov/?gid=T0605900040): <http://geotracker.waterboards.ca.gov/?gid=T0605900040>

Summary

The Low-Threat Underground Storage Tank 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 meets all of the required criteria of the Policy.

The Site is an active commercial petroleum fueling facility. An unauthorized release was reported in April 1993 following the removal of four USTs (three gasoline and one waste oil). During UST removal, affected soil was removed up to 13 feet below ground surface below ground surface. From March 1997 through December 1999, approximately 300,000 gallons of contaminated groundwater pumped from the former UST cavity. Between February 1998 and September 1999, periodic multi-phase extraction events were conducted, removing approximately 1,200 pounds of vapor-

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phase petroleum hydrocarbons and 2,100 gallons of contaminated groundwater. From March 2000 through August 2014, a groundwater pump-and-treat system extracted a total of 2,684,970 gallons of contaminated groundwater from beneath the Site. Between June 2016 and May 2017, three air sparging-enhanced soil vapor extraction events removed approximately 1.37 pounds of vapor-phase petroleum hydrocarbons. Detections of dissolved methyl tertiary butyl ether (MTBE) exceeding the water quality objective (WQO), but significantly less than 1,000 micrograms per liter, were detected in two wells located on the Site.

The contaminant plume that exceeds WQOs is greater than 100 feet, but less than 250 feet, in length and the nearest surface water body and water supply well are each less than 1,000 feet from the defined plume boundary. There is no free product nor detectable dissolved benzene remaining. The highest concentration of MTBE is significantly less than 1,000 µg/L. If not for the sensitive receptors, the plume would meet the criteria in Class 2 of the Policy. However, the contaminant plume is fully defined and is shrinking in size after significant mass removal by remediation. The surface water body is a concrete-lined drainage channel that does not come in contact with groundwater and is located upgradient to crossgradient of the defined plume boundary. The water supply well is located approximately 600 feet downgradient from the defined plume boundary but is screened well below the depth of the impacted water-bearing zone. Given the plume data, the distance of the supply well from the plume, and the screen depth of the supply well, it is unlikely the plume will impact the supply well. Remaining petroleum constituents are limited, stable, and decreasing. Additional assessment would be unnecessary and will not likely change the conceptual model. Any remaining petroleum constituents do not pose significant risk to human health, safety, or the environment under current conditions.

Rationale for Closure Under the Policy


- General Criteria – Site **MEETS ALL EIGHT GENERAL CRITERIA** under the Policy
- Groundwater Media-Specific Criteria – Groundwater Media-Specific Criteria – Site meets the criteria in **Class 5**. The regulatory agency determines, based on an analysis of Site-specific conditions that under current and reasonably anticipated near-term future scenarios, the contaminant plume poses a low threat to human health, safety, and to the environment and water quality objectives will be achieved within a reasonable time frame.
- Petroleum Vapor Intrusion to Indoor Air – Site meets the **EXCEPTION** for vapor intrusion to indoor air. Exposure to petroleum vapors associated with historical fuel system releases are comparatively insignificant relative to exposures from small surface spills and fugitive vapor releases that typically occur at active fueling facilities.

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- Direct Contact and Outdoor Air Exposure – Site **meets Criteria 3 (a)**. Maximum concentrations of petroleum constituents in soil from confirmation soil samples are less than or equal to those listed in Table 1 of the Policy. 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% benzene and 0.25% naphthalene. Therefore, benzene concentrations 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 Table 1 of the Policy. Therefore, estimated naphthalene concentrations meet the thresholds in Table 1 and the Policy criteria for direct contact with a safety factor of eight. It is highly unlikely that naphthalene concentrations in the soil, if any, exceed the threshold.

Recommendation for Closure

The corrective action performed at this Site ensures the protection of human health, safety, and the environment. The corrective action performed at this Site is consistent with chapter 6.7 of division 20 of the Health and Safety Code, implementing regulations, applicable state policies for water quality control and applicable water quality control plans. Case closure is recommended.

Reviewed By: 
Matthew Cohen, PG No. 9077
Senior Engineering Geologist



10/11/19
Date