UNDERGROUND STORAGE TANK (UST) CASE CLOSURE SUMMARY

Agency Information

Agency Name: Orange County Health Care Agency Division of Environmental Health	Address: 1241 E. Dyer Rd. Suite 120 Santa Ana, CA 92705
Agency Caseworker: Dan Weerasekera	Case No.: 88UT188

Case Information

UST Cleanup Fund (Fund) Claim No.: 4589	Global ID: T0605900845
Site Name: Shell Oil	Site Address: 6022 Chapman Garden Grove, CA 92845
Responsible Party Equilon Enterprises LLC dba Shell Oil Products US Attention: Andrea Wing	Address: 20945 South Wilmington Avenue Carson, CA 90810
Fund Expenditures to Date: $700,964	Number of Years Case Open: 31

GeoTracker Case Record: https://geotracker.waterboards.ca.gov/?gid=T0605900845

Summary

This case has been proposed for closure by the State Water Resources Control Board at the request of the Orange County Healthcare Agency, which concurs with closure.

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 because they pose a low threat to human health, safety, and the environment. The Site meets all of the required criteria of the Policy and therefore, is subject to closure.

The Site is currently occupied by a fast food restaurant. An unauthorized release was reported in August 1989 following the removal of three gasoline underground storage tanks (USTs) and one waste oil UST. Approximately 12,000 cubic yards of petroleum impacted soil were over-excavated to a total depth of 13 feet below ground surface (bgs) and transported offsite for disposal.

Approximately 2,000,000 gallons of groundwater was extracted, treated, and discharged under permit into the storm drain on site between 1992 and June 1996, when it was shut down due to extraction system damage caused by construction activities. Soil vapor extraction (SVE) was conducted between October and December 1993, running for approximately 550 hours and reportedly removing just 30 pounds of vapor-phase petroleum hydrocarbons. Approximately 10 feet of oxygen compound release socks were positioned in the saturated zones of five wells with high petroleum constituent concentrations from 1997 until 2000. Benzene concentrations decreased from July 1996 to January 2000 and have remained stable since. A bio-sparge pilot test was performed in September 2010. Results from this pilot project indicated that conditions supported bios-sparging. However, an extended test in 2011 found that bio-sparging was not an effective remedial alternative for the site. In February 2016 an air-sparge dual phase extraction pilot test was performed using a mobile extraction unit.

Elevated diisopropyl ether (DIPE) concentrations were fund in groundwater. However, the DIPE plume appears to be stable and not a threat to drinking water. The nearest drinking water well is located greater than 3,000 ft from the plume boundary. While the residual impacts in shallow ground water indicate a potential vapor intrusion threat direct measurement of soil vapor concentrations and subsequent risk evaluations demonstrated that there is a low risk of vapor intrusion for the existing site use. Maximum concentrations of petroleum constituents in soil from soil samples are less than or equal to those listed in Table 1 of the Policy. There are no results for PAHs but soil impact in the vicinity of the waste oil tank appear limited and PAH concentrations are not expected to be elevated.

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 – Site meets the criteria in **Class 2**. The contaminant plume that exceeds water quality objectives is less than 250 feet in length. There is no free product. The nearest existing water supply well or surface water body is greater than 1,000 feet from the defined plume boundary. The dissolved concentration of benzene is less than 3,000 micrograms per liter (µg/L), and the dissolved concentration of MTBE is less than 1,000 µg/L.
- Petroleum Vapor Intrusion to Indoor Air – Site meets **Criteria 2 (b)**. A Site–specific risk assessment for the vapor intrusion pathway was conducted under the policy and demonstrates that human health is protected to the satisfaction of the regulatory agency.
- Direct Contact and Outdoor Air Exposure – Site meets **Criteria 3 (b)**. Maximum concentrations of petroleum constituents in soil are less than levels that a site

specific risk assessment demonstrates will have no significant risk of adversely affecting human health.

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: _____ April 5, 2021
Matthew Cohen, PG No. 9077 Date
Senior Engineering Geologist