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SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

REVIEW SUMMARY REPORT – ADDITIONAL WORK FIFTH REVIEW – JANUARY 2015

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: Christopher Flower	Case No.: 5T24000246

Case Information

USTCF Claim No.: 14827	GeoTracker Global ID: T0604700110
Site Name: Hughes Property	Site Address: Private residence
Responsible Party: Robert C. Hughes	Address: 1620 Rose Ave Merced, CA 95340
USTCF Expenditures to Date: \$556,765	Number of Years Case Open: 26

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=T0604700110

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 a single family residence. An unauthorized release was reported in April 1989 following the removal of a 550-gallon gasoline UST in March 1989. An unknown amount of impacted soils was removed and disposed offsite in 1989. Pilot testing of soil vapor extraction (SVE) was conducted from November 15 to 18, 2010. Full scale SVE occurred from November 2011 till May 2014. Approximately 5,000 pounds of hydrocarbons have reportedly been removed. Active remediation has not been conducted at the Site for the past eight months. Since 2001, nine groundwater monitoring wells have been installed and irregularly monitored. According to available groundwater data, the downgradient extent of impacts to groundwater is currently unknown.

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 Site. No other water supply wells have been identified within 1,000 feet of the Site 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.

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

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Rationale for Closure under the Policy

- General Criteria: The case meets all of the eight Policy general criteria.
- Groundwater Specific Criteria: The case does not meet the Policy Criterion because the plume boundary in the downgradient direction remains undefined.
- Vapor Intrusion to Indoor Air Specific Criteria: The case meets Policy Criterion 2b. A site-specific human health risk assessment of potential exposure to petroleum hydrocarbons as a result of vapor intrusion (ATC Associates Inc, 2010) found that maximum concentrations of the residual petroleum hydrocarbons will have no significant risk of adversely affecting human health.
- Direct Contact and Outdoor Air Exposure Specific Criteria: The case meets Policy Criterion 3a. Maximum petroleum hydrocarbon concentrations in soil are less than those in Policy Table 1 for Residential 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

The Regional Water Board objects to UST case closure (November 18, 2104 letter) because:

- The downgradient extent of the dissolved petroleum hydrocarbon phase plume has not defined.
RESPONSE: The State Water Board concurs.

Recommendation

The State Water Board generally concurs with the Regional Water Board's directive dated November 18, 2014 to the Responsible Party for the downgradient delineation of the dissolved phase plume and the use of grab groundwater samples in that effort. However, the State Water Board recommends that:

- The plume delineation culminates with the installation of a sentinel groundwater well at the plume's leading edge.

S. M

1/23/15

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