

State Water Resources Control Board

**REVIEW SUMMARY REPORT – CLOSURE
THIRD REVIEW – SEPTEMBER 2015**

Agency Information

Agency Name: Sonoma County Department of Health Services (County)	Address: 625 Fifth Street Santa Rosa, CA 95404
Agency Caseworker: Darcy Bering	Case No.: 00002349

Case Information

USTCF Claim No.: 936	GeoTracker Global ID: T0609700229
Site Name: Annapolis Milling Company	Site Address: 1 Soda Springs Road Annapolis, CA 95412
Responsible Party: Phillip Campbell Annapolis Milling Co. Inc.	Address: Private Residence
USTCF Expenditures to Date: \$531,227	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=T0609700229

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 meets all of the required criteria of the Policy. Highlights of the case follow:

This case is currently a private residence, according to GeoTracker, and formerly a lumber mill. An unauthorized release was reported in November 1989 following the removal of three USTs (one gasoline, two diesel). Approximately 1,850 cubic yards of impacted soil were removed from an excavation measuring approximately 100 feet long by 30 feet wide by 21 feet deep in 1990; 50 cubic yards were aerated and reused, the remainder was disposed offsite. Ozone sparging was conducted from January 2004 through May 2007. Active remediation has not been conducted at the Site for the past eight years. Since 1990, eight groundwater monitoring wells have been installed and irregularly monitored. According to groundwater data, water quality objectives have been achieved or nearly achieved for all constituents except for 1,2 dichloroethane (1,2 DCA) in a limited number of wells.

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. One onsite domestic supply well is located approximately 800 feet northwest (crossgradient) of the defined plume boundary and one onsite domestic well is located approximately 700 feet southeast (crossgradient) of the defined plume boundary. Both domestic wells were sampled in February 2015 and indicated no detectable petroleum hydrocarbon constituents or 1,2 DCA.

The unauthorized release is not 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 impacted groundwater are not threatened, and it is highly unlikely that they will be, considering these factors in the context of the site setting. Remaining petroleum hydrocarbon constituents are limited and stable, and concentrations are decreasing. Corrective actions have been implemented and additional corrective actions are not necessary. Any remaining petroleum hydrocarbon constituents do not pose a significant risk to human health, safety or the environment.

Rationale for Closure under the Policy

- **General Criteria:** The case meets seven of eight Policy general criteria. The unauthorized release is not located within the service area of a public water system.
- **Groundwater Specific Criteria:** The case meets Policy Criterion 1 by Class 5. There are two onsite domestic supply wells located less than 800 feet from the defined plume boundary. If not for the presence of these domestic supply wells, the case would meet policy Criterion 1 by Class 2. The contaminant plume that exceeds water quality objectives is less than 250 feet in length. There is no free product. The dissolved concentration of benzene is less than 3,000 micrograms per liter ($\mu\text{g/L}$), and the dissolved concentration of methyl tertiary butyl ether (MTBE) is less than 1,000 $\mu\text{g/L}$. The plumes for the other contaminants of concern at this Site, tertiary butyl alcohol (TBA) and 1,2-DCA, are less than 250 feet in length, defined and indicate decreasing trends. The two onsite domestic supply wells were sampled in February 2015 and indicated no detectable petroleum hydrocarbon constituents, TBA or 1,2 DCA.
- **Vapor Intrusion to Indoor Air:** The case meets Policy Criterion 2a by scenario 3a. The maximum benzene concentration in groundwater is less than 100 $\mu\text{g/L}$. The minimum depth to groundwater is greater than 5 feet, overlain by soil containing less than 100 milligrams per kilogram (mg/kg) of total petroleum hydrocarbons (TPH).
- **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.

Recommendation

The State Water Board staff recommends that the County staff pursue closure under Resolution 92-49.

Determination

The Fund Manager has prepared this review summary report summarizing the reasons for this determination, provided the Review Summary Report to the applicable Regional Water Board and Local Oversight Agency Program, as appropriate, with an opportunity for comment on the Review Summary Report.

Pursuant to Health and Safety Code as of the date of the signature of the Fund Manager below, neither the Regional Water Board or the Local Oversight Program shall issue a corrective action directive or enforce an existing corrective action directive for the tank case until the board issues a decision on the closure of the tank case, unless one of the following applies:

- (A) The Regional Water Board or Local Oversight Program agency demonstrates to the satisfaction of the Fund Manager that there is an imminent threat to human health, safety, or the environment;
- (B) The Regional Water Board or Local Oversight Program agency demonstrates to the satisfaction of the Fund Manager that other site-specific needs warrant additional directives during the period that the State Board is considering case closure;
- (C) After considering responses to the Review Summary Report and other relevant information, the Fund Manager determines that case closure is not appropriate; or
- (D) The Regional Water Board or Local Oversight Program agency closes the tank case but the directives are necessary to carry out case-closure activities.

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Fund Manager

_____ Date

**Objections to Closure and Response
Regarding Annapolis Milling Company.
1 Soda Springs Road, Annapolis, CA
Claim 936**

The County objects to UST case closure (May 13, 2015 Path to Closure Plan) for the following reasons:

- Comment 1: The unauthorized release is not located within the service area of a public water system. This impediment cannot be removed; the site will have to meet resolution 92-49.
Response 1: The Low Threat Closure Policy states that case closure outside of areas with a public water system should be evaluated based upon the fundamental principles in this Policy and a site specific evaluation of developing water supplies in the area. Resolution 92-49 is an alternative policy under which UST cases can be closed. State Board staff recommends that the County pursue closure under Resolution 92-49.

- Comment 2: A conceptual site model that assesses the nature, extent, and mobility of the release has not been developed.
Response 2: The supporting data and analyses used to develop the conceptual site model (CSM) are not required to be contained in a single report and may be contained in multiple reports submitted to the regulatory agency over a period of time. Adequate data has been uploaded to GeoTracker to develop a CSM.

- Comment 3: The contaminant plume that exceeds water quality objectives is not stable or decreasing in areal extent, and does not meet all of the additional characteristics of one of the five classes of sites. The plume length is greater than 100 feet and the nearest supply well is less than 1,000 feet from the plume boundary.
Response 3: The contaminants of concern for this site are 1,2 DCA and TBA. Since analyses for 1,2-DCA began in 2001, 1,2-DCA detections have been limited to well MW-1 and MW-5, with one exception (MW-2 in November 2001). The extent of the 1,2-DCA plume is defined, the plume is stable and its concentrations are decreasing. Resolution 92-49 does not require that the requisite level of water quality be met at the time of case closure; it specifies compliance with cleanup goals and objectives within a reasonable timeframe. There is no water quality objective for TBA, and water purveyors can deliver groundwater with up to 1,200 µg/l of TBA, well beyond the current maximum TBA concentration of 620 µg/l. The two onsite domestic supply wells are located cross gradient of the plume, and a significant change in hydrogeological conditions would have to occur to cause groundwater to flow toward either domestic supply well. The data indicate that natural attenuation is occurring and that elevated concentrations will reduce to below water quality objectives within a reasonable timeframe.