

STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION

STAFF REPORT FOR REGULAR MEETING MARCH 20-21, 2008

ITEM NUMBER: 23

SUBJECT: Cleanup Cases, Closures, and Corrective Action Plan Approvals

DISCUSSION

Staff Closed Cases

Former Illicit Methamphetamine Production Lab at 270 Highway 183 (Castroville Highway), Castroville, Monterey County (Site) [David Schwartzbart, (805) 542-4643]

An illicit methamphetamine production lab, discovered and dismantled at the Site in March 1999, resulted in release of volatile organic compounds (VOCs), primarily Freons, to soil and to shallow groundwater. In March 1999, Freon 11 and acetone were detected in the Site domestic supply well, completed in a deeper water bearing zone, but no Freon 11 or acetone was detected there since. Surface water samples of Alisal Slough, almost adjacent to the Site, contained no detectable waste constituents.

In 2002, approximately 77 cubic yards of contaminated soil were excavated, aerated and backfilled or spread onsite under direction of Monterey County Health Department, Division of Environmental Health staff. During March 2003, low concentrations of Freon 113 and Freon 141b were detected in grab groundwater samples from boreholes.

Waste concentrations in impacted shallow groundwater steadily and rapidly decreased through time, to the extent that no contaminants were detected above their California Code of Regulations Title 22 drinking water Maximum Contaminant Level (MCLs) in March 2003. No contaminants were detected in shallow groundwater during the next two monitoring events (both in 2007).

Central Coast Water Board staff will close this Site Cleanup Program case after receiving and approving monitoring well destruction certification and the case closure summary form. All impacted media (soil and groundwater) meet cleanup standards:

Corrective Action Plan Approval

Marty Franich Chrysler Dodge Jeep, 555 Auto Center Drive, Watsonville, Santa Cruz County (John Mijares 805-549-3696)

On October 19, 2007, Weber, Hayes & Associates (WHA) submitted a *Corrective Action Plan* (CAP) on behalf of Marty Franich Chrysler Dodge Jeep. The CAP proposes a method to clean

up hydrocarbon impacted soil and groundwater at the above-referenced site. Previous soil and groundwater investigations have defined the extent of petroleum hydrocarbons in soil, and categorized groundwater into two separate zones: an upper A-zone where groundwater was found at an average depth of approximately 16 feet to 20 feet below ground surface (bgs), and a lower B-zone where groundwater was found at an average depth of approximately 45 feet to 55 feet bgs. Various groundwater investigations and monitoring events have defined the extent of petroleum hydrocarbon plumes in the A-zone and the B-zone. Groundwater samples collected from the A-zone contained Total Petroleum Hydrocarbons as gasoline (TPHg), benzene, methyl tertiary-butyl ether (MTBE), and tertiary butyl ether (TBA) above the groundwater cleanup goals of 1,000 micrograms per liter ( $\mu\text{g/L}$ ), 1  $\mu\text{g/L}$ , 5  $\mu\text{g/L}$ , and 12  $\mu\text{g/L}$ , respectively. Groundwater samples collected from the B-zone contained TPHg and benzene above the groundwater cleanup goals.

WHA evaluated two alternatives for removing petroleum hydrocarbons at the site. These are High-Vacuum Dual-Phase Extraction (HVDPE) and soil excavation combined with groundwater pump and treat. Based on technical and economic evaluation of these corrective action options, WHA selected HVDPE as the most cost-effective remedial action to reduce petroleum hydrocarbons concentrations to meet the soil and groundwater cleanup goals.

The proposed HVDPE system uses a very high vacuum (up to 28 inches of mercury) to remove volatile petroleum hydrocarbons from the unsaturated zone soil and remove the upper (and usually most hydrocarbon-contaminated) groundwater. A catalytic oxidizer will remove petroleum hydrocarbons from the extracted vapor and granular activated carbon filters will remove petroleum hydrocarbons from the extracted hydrocarbon-impacted groundwater. The treated groundwater will be discharged to the City of Watsonville sanitary sewer. The HVDPE Remediation System will consist of the following:

- A total of seven dual phase extraction wells. Five are already installed and two additional extraction wells will be installed.
- A liquid ring pump capable of extracting approximately 250 cubic feet per minute of soil vapor.
- Three 2,000-pound granular activated carbon filters placed in series for the treatment of hydrocarbon-impacted groundwater.
- A drain pipe from the remediation compound to the sanitary sewer lateral at the site for the discharge of treated groundwater to the sanitary sewer.
- A catalytic oxidizer for the removal of hydrocarbons from the extracted soil vapor.
- A control system with built in interlocks that will shut down the liquid ring pump if there is high pressure in the carbon canisters or the catalytic oxidizer shuts down.

On December 5, 2007, the Water Board's Executive Officer approved the corrective action plan and notified the site's property owner (current fee title holder), the Santa Cruz County Health Services Agency, the landowners, businesses, and residents within 200 feet of site regarding the approval of the corrective action plan pursuant to Section 13307.1 of the Porter Cologne Water Quality Control Act and Section 25296.20 of the California Health and Safety Code. Water Board staff received one inquiry regarding our public notification. Water Board staff provided the caller with background information of the case and the elements of the approved corrective action. Water Board staff also e-mailed the approval letter to the caller and encouraged him to contact us with any additional questions or comments. To date we have not received any additional comments regarding the approved corrective action plan.

### Cases Recommended for Closure

**Cavalli/Former Mobil Oil, 5103 Carpinteria Avenue, Carpinteria, Santa Barbara County [John Mijares, (805) 549-3696]**

Central Coast Water Board staff and the Santa Barbara County Fire Prevention Division (FPD) staff recommend closure of this underground storage tank (UST) case where groundwater sample results indicated groundwater contamination remains at a concentration greater than the Central Coast Water Board cleanup goal of 5 µg/L for MTBE. Five µg/L of MTBE is the California Secondary MCL based on the taste and odor threshold. Results of the last monitoring event in October 2007 show MTBE at a concentration of 6.0 µg/L and 9.1 µg/L in two monitoring wells. Other petroleum hydrocarbon constituents were below their respective reporting limits. Concentrations of MTBE, during the last four quarters of monitoring, did not exceed its Primary MCL of 13 µg/L in any of the monitoring wells.

The site was a former gasoline station that operated from 1942 until 1987. The station was decommissioned in 1987 and site was occupied by a restaurant until 2006. The site building is currently vacant. The site lies within a commercial corridor along Carpinteria Avenue, with private residences located southwest of the site. An active gasoline station is located directly across Maple Avenue to the northwest.

FPD files indicate two USTs were removed from the site in October 1987. Contaminated soil was removed immediately following the tank removal. No groundwater samples were collected at that time, as groundwater was below the vertical extent of soil contamination. Based upon soil confirmation sample results, Santa Barbara County issued a case closure letter for the site in 1988.

During a Phase II investigation in 2006, the responsible party commissioned the advancement of six borings at the site. Soil and groundwater samples were analyzed for Total Petroleum Hydrocarbons as gasoline, diesel, and motor oil, volatile organic compounds, and polychlorinated biphenyls. No constituents of concern were detected above FPD's soil cleanup goals. However, elevated concentrations of MTBE and ethylene dichloride (EDC) were detected in groundwater samples. Based upon these data, FPD reopened the site in 2006. In February 2007, the responsible party commissioned the installation and sampling of three groundwater wells (MW-1, MW-2, and MW-3). EDC and MTBE were detected in some of the wells. In April 2007, the responsible party commissioned the installation of three additional wells (MW-4, MW-5, and MW-6) to delineate the lateral extent of groundwater contamination. No residual soil contamination above FPD's cleanup goals was detected in any of the borings drilled during these three rounds of assessment. Groundwater sampling results for four quarters suggests that concentrations of MTBE are stable and decreasing.

The site lies within the Carpinteria Groundwater Basin (3-18). The "Water Quality Control Plan, Central Coast Region" (Basin Plan) designates groundwater beneficial uses in this Basin to be domestic and municipal supply, agricultural supply, and industrial supply. Therefore, the groundwater cleanup goal for MTBE is 5.0 µg/L based on the California Secondary MCL. Groundwater at the site is at approximately 12 to 16 feet below ground surface. Groundwater flow in the shallow zone is to the northwest. Based upon October 2007 groundwater data, the flow gradient was 0.003 ft/ft.

The closest municipal production well is the Carpinteria Valley Water District's "Lyons Well", located approximately  $\frac{3}{4}$  mile northeast of the site. The residual MTBE contamination is not expected to impact this well based on its distance and cross-gradient location from the site.

Central Coast Water Board staff and Santa Barbara County FPD staff recommends closure of this case based on the following:

1. The limited extent of MTBE groundwater contamination has been fully characterized;
2. The concentrations of 6.0  $\mu\text{g/L}$  and 9.1  $\mu\text{g/L}$  MTBE in two wells are only slightly above the cleanup goal of 5  $\mu\text{g/L}$ ;
3. Natural attenuation processes are expected to eventually reduce the MTBE concentrations to below the groundwater cleanup goal;
4. Case closure is consistent with State Board Resolution No. 92-49, Section III.G., which allows consideration of cost effective abatement measures where attainment of reasonable objectives, less stringent than background water quality, does not unreasonably affect present or anticipated beneficial uses of groundwater, and will not result in water quality less than that prescribed by the Basin Plan.

Water Board staff has evaluated remaining MTBE concentrations with respect to possible indoor air impacts. Comparison of these concentrations with corresponding environmental screening level for indoor air impacts indicate no significant threat to human health or the environment.

The recommended case closure is consistent with closure of similar low risk petroleum hydrocarbon cases by the Water Board in the past. Unless the Water Board objects, the Executive Officer will issue a concurrence letter to Santa Barbara County Fire Department to proceed with case closure activities including destruction of monitoring wells.