STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

STAFF REPORT FOR REGULAR MEETING FEBRUARY 7- 8, 2008

ITEM NUMBER: 12

SUBJECT: Low Threat and General Discharge Cases

DISCUSSION

Statewide General NPDES Permit for Discharges from Utility Vaults

Southern California Edison [Sandy Cheek 805/542-4633]

Central Coast Regional Water Quality Control Board (Central Coast Water Board) staff enrolled Southern California Edison in the Statewide General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Waters CAG990002 on December 14, 2007. Southern California Edison was previously enrolled in Order No. 2001-11-DWQ. Southern California Edison's regionwide, periodic, unscheduled discharges will be from utility vaults impacted by storm water or intruded ground water discovered during routing maintenance work. Enrollment requires Southern California Edison to comply with Monitoring and Reporting Program No. 2006-0008- DWQ.

Statewide General NPDES Permit for Discharges from Utility Vaults

AT&T Corporation [Sandy Cheek 805/542-4633]

Central Coast Water Board staff enrolled AT&T Corporation in the Statewide General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Waters CAG990002 on January 4, 2008. AT&T Corporation was previously enrolled in Order No. 2001-11-DWQ. AT&T Corporation occasionally removes water from manholes, utility vaults, and other underground structures as a result of stormwater inflow from surface, subterranean seepage, and/or irrigation runoff. Enrollment requires AT&T Corporation to comply with Monitoring and Reporting Program No. 2006-0008- DWQ.

CORRECTIVE ACTION PLAN APPROVAL

Corrective Action Plan Approval, Brothers Country Corner Market, 202 Buena Vista Drive, Watsonville, Santa Cruz County [John Mijares 805/549-3696]

On September 26, 2007, Central Coast Water Board staff approved a corrective action plan submitted by RRM on behalf of Mr. Idris Mohssin (responsible party) and the Brothers Country Corner Market. The site is an operating retail gasoline station and convenience store. Site

improvements include a convenience store building, a single dual-chamber 12,000 gallon underground storage tank (UST), and one product island with two dispensers. The existing UST replaced two 6,000-gallon USTs in 1998. Analytical results of soil and groundwater samples, collected during the UST replacement and subsequent investigations, indicated petroleum hydrocarbons have contaminated both soil and groundwater. Results of the fourth quarter 2007 groundwater monitoring detected the following maximum concentrations of gasoline hydrocarbons (TPHg), benzene, toluene, ethylbenzene, xylenes, and methyl tertiary-butyl ether (MTBE): 36,000 micrograms per liter (µg/l); 4,100 µg/l; 3,800 µg/l; 3,400 µg/l; 11,000 µg/l and 3,100 µg/l; respectively.

In January 2007, RRM installed four soil vapor extraction wells (SVE-1 through SVE-4) to depths of 15 feet below ground surface (bgs) in the area of the product dispenser island. Results of soil samples collected from the well borings showed TPHg, benzene, MTBE, and tertiary butyl alcohol (TBA) at maximum concentrations of 5,800 milligrams per kilogram (mg/kg), 0.005 mg/kg, 4.9 mg/kg, and 0.059 mg/kg, respectively. The bulk of the hydrocarbon impact is situated between the dispenser island and Calabasas Road. RRM conducted a soil vapor extraction (SVE) feasibility test on March 14, 2007. Results of the feasibility test indicate that SVE can effectively treat impacted soil beneath the existing dispenser island. The results further indicate that dual-phase extraction can effectively remove and treat highly impacted groundwater, facilitate dewatering and expose a greater portion of the extraction well screen thereby increasing soil vapor flow and contaminant mass removal. In addition, groundwater extraction will provide plume migration control. Therefore, RRM proposes dual phase extraction (DPE) system for remediating soil and groundwater contamination.

The DPE system will simultaneously extract soil vapor and groundwater using a positive displacement vacuum pump and an air/water separator to separate groundwater from the soil vapor. The soil vapor will be treated through a catalytic oxidizer prior to discharge to the atmosphere under a permit from the Monterey Bay Unified Air Pollution Control District. The extracted groundwater will be routed through a bag filter, a series of three granular activated carbon vessels, and discharged to the sanitary sewer under permit from the County of Santa Cruz Sanitation District. The treatment equipment will be placed on a trailer and enclosed in a gated compound located at the northwest portion of the site.

The scope of work will involve installation of a full-scale DPE system, installation of an additional DPE well in the area of the former UST, and installation of two deeper groundwater monitoring wells (to evaluate the deeper migration of petroleum hydrocarbons beneath Calabasas Road).

Central Coast Water Board staff approved the corrective action plan and notified neighboring property owners, tenants and other interested parties in a September 26, 2007 letter. We have not received any comments on our public notice regarding the approval of the proposed corrective action plan.

CASE RECOMMENDED FOR CLOSURE

Former Desert Petroleum #780, 570 Main Street, Watsonville, Santa Cruz County [John Mijares, (805) 549-3696]

Staff recommends closure of this UST case where groundwater sample results indicated groundwater contamination remains at a concentration greater than Central Coast Water Board cleanup goal of 5 µg/L for MTBE. Other petroleum hydrocarbon constituents were either not

detected or were below their respective cleanup goals. MTBE was detected in only one monitoring well (MW-9) at a concentration of 14 µg/L in March 2007 when the last monitoring was conducted. Maximum MTBE concentrations declined from 910 µg/L to 14 µg/L between October 1996 and March 2007.

Various owners have operated the subject site as a gasoline service station since 1923. In 1979, Desert Petroleum purchased the property and operated as Desert Petroleum Station #780. Desert Petroleum, the responsible party, ceased operation at the site in December 1990 and commissioned the removal of five USTs in October 1991. The gasoline USTs had capacities of 2,000, 4,000, 10,000, and 12,000 gallons. The waste oil tank had a capacity of 250 gallons. Results of soil samples collected after removal of the USTs, showed maximum concentrations of gasoline hydrocarbons at 6,300 mg/kg and benzene at 12 mg/kg. Santa Cruz County Environmental Health Services has established soil cleanup goals of 100 mg/kg gasoline hydrocarbons and 0.1 mg/kg for benzene.

In June 1993, Weber Hayes and Associates (WHA) conducted a Phase 2 Environmental Site Assessment. WHA supervised the advancement of four exploratory borings and collected soil and groundwater samples. Analytical results of soil samples showed maximum concentrations of benzene and gasoline hydrocarbons at 1.5 mg/kg and 1,200 mg/kg, respectively. Analytical results of groundwater samples showed maximum concentrations of benzene and gasoline hydrocarbons at 2,200 µg/L and 19,000 µg/L, respectively. MTBE was not included in the list of analyte contaminants during the investigation.

In September 1996, Desert Petroleum commissioned the installation of six monitoring wells at the site. Results of initial groundwater sampling showed maximum concentrations of benzene, gasoline hydrocarbons, and MTBE at 690 µg/L, 9,100 µg/L, and 910 µg/L, respectively. The wells have been monitored and sampled on a quarterly basis, since their installation.

In June 2000, Desert Petroleum commissioned the excavation of approximately 500 cubic yards of petroleum-impacted soils from the former USTs and dispenser areas. In addition, Western Geo-Engineers (environmental consultant to Desert Petroleum) supervised the removal of approximately 1,900 gallons of gasoline-impacted groundwater from the excavation pit. Desert Petroleum commissioned the destruction of three monitoring wells (MW-2, MW-3, and MW-5) prior to soil excavation because two of the existing monitoring wells (MW-2 and MW-5) were inside the proposed excavation area. After the excavation was completed, Western Geo-Engineers supervised the installation of replacement monitoring wells (MW-8 and MW-9). Western Geo-Engineers concluded the excavation had removed the majority of gasoline-impacted soils and only residual soil contamination of <100 mg/kg gasoline hydrocarbons remained along the capillary fringe and bottom of the excavation pit. Desert Petroleum commissioned backfilling of the excavation with clean soil. The detected concentrations of petroleum hydrocarbons and MTBE in groundwater have been declining following the remedial excavation.

In May 2005, Desert Petroleum commissioned the advancement of two geoprobe borings downgradient of well MW-9 to determine the downgradient extent of the gasoline hydrocarbon and MTBE plume. The first boring was located approximately 100 feet south-southeast of MW-9, while the second boring was located approximately 120 feet southeast of MW-9. Analytical results of groundwater samples collected from the borings did not detect gasoline hydrocarbons, benzene or MTBE, which indicates the plume is localized within the area of well MW-9 (see attachment 1). As part of this field work, Desert Petroleum also commissioned the destruction

of three monitoring wells (MW-6, MW-7, MW-8) since the detected concentrations of petroleum hydrocarbons and MTBE, in these wells, had been steadily declining and were not detected for at least one year prior to well destruction.

The City of Watsonville has a water supply well approximately 2,200 feet south of the site. The MTBE plume is not expected to impact this well because of its distance and the protection afforded by its sanitary seal, low residual MTBE concentration at MW-9, and its localized extent. The depth to groundwater varies from 17 to 46 feet below ground surface. The flow direction generally varies to the southeast and southwest at a gradient of approximately 0.02 feet per foot.

We recommend closure of this case based on the following:

1. The source of contamination was removed with the excavation of approximately 500 cubic yards of gasoline-impacted soil and removal of approximately 1,900 gallons of gasoline-impacted groundwater in June 2000;
2. The extent of MTBE plume has been fully delineated, localized in a small area in the vicinity of well MW-9, and the detected concentration of 14 µg/L is slightly above the cleanup goal of 5 µg/L;
3. Groundwater data indicate that source removal and natural attenuation processes have significantly reduced concentrations of contaminants in groundwater and that natural attenuation is expected to continue; and
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.

On November 26, 2007, Water Board staff notified the site's property owner (current fee title holder) regarding the proposed case closure pursuant to Section 13307.1 of the Porter Cologne Water Quality Control Act and Section 25296.20 of the California Health and Safety Code. In addition, as part of our effort to increase public participation we also notified the Santa Cruz County Health Services Agency, the landowners, businesses, and residents within 200 feet of site regarding the proposed case closure. We have not received any comments or objections to the proposed case closure from any of the parties mentioned above.

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 direct the RP to proceed with case closure activities including completion of a case closure summary report and destruction of monitoring wells. The Executive Officer will issue a final case closure letter, upon receipt of a well destruction report documenting the proper destruction of all monitoring wells.

Attachment 1 – Site Plan with Former Tank and Dispenser Locations