

STATE OF CALIFORNIA  
 CALIFORNIA WATER QUALITY CONTROL BOARD  
 CENTRAL COAST REGION

STAFF REPORT FOR REGULAR MEETING OF MARCH 24-25, 2005

Prepared on February 24, 2005

ITEM: 12

SUBJECT: LOW THREAT AND GENERAL DISCHARGE CASES

DISCUSSION

Low Threat and General Discharge Cases

General Waste Discharge Requirements for Wineries:

Small Winery Waivers, [Matt Thompson, 805/549-3159]

The Regional Board adopted *General Waste Discharge Requirements for Discharges of Winery Waste* (General Winery WDR) on November 1, 2002. A component of the General Winery WDR authorizes the Executive Officer to grant waivers of Waste Discharge Requirements to small wineries that pose little or no threat to water

quality. The General Winery WDR defines a “small winery” as one that crushes less than or equal to 80 tons of grapes per year, or produces less than or equal to 5,000 cases or 13,000 gallons of wine per year. In general, small wineries generate 200 to 300 gallons-per-day (long-term average) of process wastewater, most of which originates from equipment (tanks, barrels, floors, etc.) cleaning. Waivers expire five years from the date granted or whenever the winery no longer meets the definition of small, whichever is sooner.

The following table identifies wineries granted Small Winery Waivers between November 1, 2004, and February 16, 2005.

Facility Name	Facility Location	Facility Owner	Production and Discharge Description	Date Waiver Granted
Gelfand Vineyards	5530 Dresser Ranch Place, Paso Robles, San Luis Obispo County	Leonard and Jan Gelfand	Gelfand Vineyards produces up to 1,500 cases of wine per year and generates minimal winery process wastewater. Winery wastewater from equipment, floor and barrel cleaning flows through screens to a settling tank, where the clear liquids will be pumped into a small trailer for immediate application to vineyard roads for dust control. The solids will be composted in the vineyard. Depth to groundwater beneath the disposal area is greater than 100 feet. Solids are disposed in the vineyard.	December 1, 2004
Cass Vineyards	777 Geneseo Road, Paso Robles	Geneseo Partners LLC	Cass Vineyards produces less than 5,000 cases of wine per year and generates up to 500 gallons per day of winery process wastewater. Process wastewater is screened by basket strainers, settled in a 4,500-gallon septic tank equipped with an effluent filter, and disposed to two 370-lineal foot leachfields. The disposal area is greater than 100 feet from any water supply wells or water bodies. Depth to	January 20, 2005

Facility Name	Facility Location	Facility Owner	Production and Discharge Description	Date Waiver Granted
			groundwater beneath the disposal area is estimated to be greater than 100 feet. Pomace and lees are composted and distributed throughout the vineyards.	
Falcon Nest Vineyard and Winery	5185 Union Road, Paso Robles	Francesco Grande	Falcon Nest Vineyard and Winery produces less than 5,000 cases of wine per year and generates up to 500 gallons per day of winery process wastewater. Process wastewater is screened by basket strainers, settled in a septic tank and disposed to two 100-lineal foot leachfields. The disposal area is greater than 100 feet from any water supply wells or water bodies. Depth to groundwater beneath the disposal area is estimated to be greater than 100 feet. Pomace and lees are composted and distributed throughout the vineyards.	February 16, 2005
Salamandre	108 Don Carlos Drive, Aptos, Santa Cruz County	Wells Shoemaker, MD	Salamandre Wine Cellars produces up to 1,020 cases of wine annually. The process produces minimal wastewater. No wastewater is discharged to surface waters, and pomace is added to an olive orchard as soil amendment.	December 6, 2004
Penman Springs Vineyard Winery	1985 Penman Springs Road Paso Robles	Carl E. McCasland	Penman Springs Vineyard Winery produces up to 1,200 cases of wine per year and generates minimal winery process wastewater. Winery wastewater from equipment, floor and barrel cleaning flows to the vineyard for supplemental irrigation water. The solids will be composted in the vineyard. Depth to groundwater beneath the disposal area is greater than 20 feet.	January 3, 2005
PM Staiger	1300 Hopkins Gulch Road, Boulder Creek, Santa Cruz County	Paul Staiger	The winery produces up to 300 cases of wine annually, and generates up to 2,000 gallons of wastewater during the crush season. The wastewater is allowed to simply soak into the ground. The local groundwater is at least 400 feet below the ground surface, and the nearest stream is more than 1,000 feet away.	January 28, 2005
Silver Mountain Vineyards	Box 3636, Santa Cruz Mountains	Jerold O'Brien	Silver Mountain Vineyards produces up to 4,000 cases of wine annually. Process wastewater is disposed of in the vineyard, where it simply soaks into the ground. Depth to groundwater beneath the disposal area is unknown. Pomace and lees are incorporated into their vineyards.	January 28, 2005
Lockshaw Winery	4550 Oak Flat Road, Paso Robles	James J. Lockshaw	Lockshaw Winery produces less than 5,000 cases of wine per year. Process wastewater will be processed using a septic tank and leachfield system. The disposal area is greater than 100 feet from any water supply wells or water bodies.	February 9, 2005

**Rancho de Solis, Gilroy, Santa Clara County**  
**[Matthew Keeling 805/549-3685]**

Regional Board staff enrolled Rancho de Solis under the General Waste Discharge Requirements for Discharges of Winery Waste (General WDRs) on January 12, 2005. Rancho de Solis Winery is located at 3920 Hecker Pass Highway in Gilroy.

Rancho de Solis Winery currently crushes approximately 100 tons of grapes and produces 5,000 to 6,000 cases of wine per year. Peak winery process wastewater flows are approximately 200 gallons per day (gpd) during the crush season, and approximately 150 gpd (average) during the non-crush season. Winery process wastewater is collected in a designated on-site septic system for treatment and disposal. Domestic wastewater is handled separately and is discharged to another on-site septic system on the winery property.

Large solids (pomace) including grape skins, stems, and seeds are primarily removed from the wine presses prior to wash down activities and remaining solids are separated and screened from wash down water in a separation tank. Lees (wine sediment) are also physically removed from tanks prior to wash down activities. Pomace and lees are either spread on an adjacent field or hauled off-site for composting by a local composting facility.

One water supply well currently provides potable and winery process water to the winery facility. The existing water supply well is very old, is assumed to be approximately 50 to 100 feet deep, and is located approximately 130 feet from the leachfield. First encountered groundwater generally occurs at 50 feet or greater below ground surface. The winery is currently in the process of installing a deeper potable water supply well adjacent to the existing well in response to Santa Clara County Health Department requirements.

Although wine production for the winery is on the cusp of requirements for the Small Winery Waiver, disposal of wastewater via a designated septic system and depth to groundwater of between 50 to 100 feet below ground surface at the winery preclude enrollment of this facility under the Small Winery Waiver.

Enrollment under the General WDRs requires Rancho de Solis Winery to follow Monitoring and Reporting Program (MRP) No. R3-2003-0084. The MRP has been modified for Rancho de Solis Winery. Specifically, Disposal Area Monitoring, Disposal Area Soils Monitoring, and Groundwater Monitoring requirements have been removed from the MRP due to the nature of the facility's discharge. Effluent Monitoring Requirements, with the addition of settleable solids analysis, and Septic System Monitoring remain intact. Regional Board staff will begin regular compliance inspections of Rancho de Solis Winery this fall/winter.

**Cases Recommended for Closure:**

**Circle N Land, 9590 El Camino Real,**  
**Atascadero, San Luis Obispo County [Corey**  
**Walsh 805/542-4781]**

Staff recommends closure of this underground storage tank (UST) case where groundwater sample results indicate groundwater pollution remains at concentrations greater than Regional Board cleanup goals for total petroleum hydrocarbons (TPH), benzene, and 1,2-dichloroethane (EDC). Concentrations of up to 1,710 micrograms per liter ( $\mu\text{g/L}$ ) TPH reported as gasoline and 1,300  $\mu\text{g/L}$  TPH as diesel remain in one monitoring well (MW-3). Benzene was detected in four wells and ranged in concentration from 1.4  $\mu\text{g/L}$  to 31  $\mu\text{g/L}$  (highest concentration in MW-1), and EDC was detected in three wells and ranged in concentration from 1.3  $\mu\text{g/L}$  to 6.4  $\mu\text{g/L}$  (highest concentration in MW-3). Attachment 1 presents a *Groundwater Contour and Concentration Map*. Fuel oxygenates have been analyzed and have been below cleanup goals, or have not been detected, since November 2003.

A site history review indicates that in July 1982, one 5,000-gallon, one 10,000-gallon, and one 3,000-gallon UST were abandoned in-place under County Health Department direction. In 1989, two of these USTs were removed and the third 3,000-gallon tank was left in-place beneath an existing building as illustrated on Attachment 2. The site is currently developed with a restaurant, apartments, offices and parking lot. Depth to groundwater was observed from approximately 2 feet to 11 feet below ground surface (bgs) and the groundwater

flow direction is generally to the west at an approximate gradient of 0.05 ft/ft. The nearest water supply well is reported to be Atascadero Mutual Water Company Well 2A, located approximately 9,700 feet north of the site near the Salinas River. The residual petroleum hydrocarbons remaining are unlikely to impact this well considering the well location, distance and construction, river location, and groundwater flow direction.

Remedial actions including soil vapor extraction (SVE), air sparging (AS), and mobile high vacuum dual phase extraction (HVDPE) have been conducted at the site. In September 1998, SVE and AS activities were initiated at the site. Due to low influent vapor concentrations the SVE system was shut down in August 2001. Approximately 1,729 pounds of petroleum hydrocarbons were removed by the SVE system during this period. The AS system was shut down in March 2002 to evaluate post remediation plume stability. Mobile HVDPE activities were conducted at the site monthly between February and July 2003 and again in October 2003. During each HVDPE event, a vacuum truck was brought to the site to extract, under high vacuum, groundwater and soil vapors. Approximately 2,235 gallons of petroleum hydrocarbon contaminated groundwater was removed.

Between August and October 2004, eight direct-push Geoprobe® soil borings were advanced to evaluate current soil conditions at the site. The boring results indicate that the extent of petroleum hydrocarbons is adequately defined, although soil contamination likely extends off-site along a portion of the eastern property boundary and El Camino Real. Attachment 2, *TPH Soil Isoconcentration*, illustrates the area where soil contaminant concentrations exceed the action level of 100 milligrams per kilogram (mg/kg). It is important to point out however, that benzene, toluene, ethylbenzene, and xylenes (BTEX) and fuel oxygenates were either not detected, or were detected at concentrations below action levels. Sample results indicate the remaining soil contamination is limited in extent and found between approximately 5.5 feet and 16 feet bgs and ranged in concentration from 190 mg/kg to 830 mg/kg TPH reported as gasoline, and from 140 mg/kg to 1,160 mg/kg TPH as diesel. Attachments 3 and 4, *Cross Section A-A'* and

*Cross Section B-B'* illustrate the extent of TPH soil contamination above cleanup guideline levels. (Please note, the lines of cross-section are illustrated on Attachment 2).

The site lies within the Atascadero Hydrologic Subarea (3-9.81) of the Salinas Hydrologic Unit, which the "Water Quality Control Plan, Central Coast Region" (Basin Plan) designates groundwater beneficial uses to be domestic and municipal supply, agricultural supply, and industrial supply. Therefore, the groundwater cleanup goals for the constituents of concern are as follows: 1,000 µg/L TPH, 1 µg/L benzene, and 0.5 µg/L EDC. The TPH cleanup goals have been established based on taste and odor thresholds, and benzene and EDC cleanup goals are based on the California Primary Maximum Contaminant Level (MCL). Primary MCLs are based on health effects data, and contain other information relating to technical and economic feasibility of attainment in a water distribution system.

The recommendation for closure is based on the following:

- (1) the majority of contaminant mass has been removed using various remedial actions,
- (2) remaining groundwater pollution above cleanup goals is limited in extent, not moving, and decreasing in concentration,
- (3) remaining soil contamination above action levels is confined in extent and limited to total petroleum hydrocarbons (TPH) and does not contain benzene, EDC or fuel oxygenates,
- (4) observed decreasing concentration trends indicate the plume will continue to attenuate and meet groundwater cleanup goals,
- (5) the remaining hydrocarbon constituents are unlikely to reach a drinking water supply well,
- (6) EDC concentrations are above the state MCL of 0.5 µg/L in three wells onsite, and only slightly above the Federal MCL of 5.0 µg/L in one well. EDC has not been detected downgradient of these wells, and is expected to continue to decline in concentration through natural attenuation mechanisms, such as volatilization, dispersion, dilution, advection, adsorption, and biodegradation. EDC concentrations have been below 10 µg/L since November

2003, and have declined from a maximum concentration of 240 µg /L in August 15, 2001, and

- (7) closure is consistent with Section III.G. of State Board Resolution No. 92-49, allowing the consideration of cost effective abatement measures for a site 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.

In addition, staff has evaluated remaining groundwater concentrations with respect to possible indoor air impacts, and soil concentrations with respect to direct human exposure, indoor air impacts, and potential leachability to groundwater. Comparison of these soil and groundwater concentrations with corresponding environmental screening levels (ESLs) for residential land use and construction worker direct exposure scenarios indicate no significant threat to human health and the environment. Direct exposure screening levels for construction workers and utility trench workers indicate total petroleum hydrocarbons (TPH) of up to 6,000 mg/kg require no special worker health and safety protection. Current site information indicate a maximum soil concentration of 1,160 mg/kg TPH as diesel.

Because a UST has been abandoned in-place and residual contamination remains at the site in both soil and groundwater at concentrations greater than cleanup goals, a deed restriction will be recorded with the property. As a condition of case closure, the deed restriction will indicate the location of the remaining UST, the location of soil and groundwater pollution, and include a restriction on the installation of groundwater wells at the site. Future site disturbance will require proper soil waste disposal.

The responsible party and property owner are aware of the recommended case closure as required by the Health and Safety Code. In addition, San Luis Obispo County Division of Environmental Health as the lead agency for soil investigation and cleanup activities has concurred with site closure. However, Atascadero City Planning will be providing comments to the

proposed closure and have indicated concerns for the management of remaining soil contamination located within City right-of-way.

The primary MCL for EDC is extremely low and equal to the practical quantitation limit of most laboratories. The MCL is the concentration required to be met by a water purveyor at the point of distribution or the "tap". Although remaining concentrations of 1,710 µg/L TPH-g and 1,300 µg/L TPH-d, 31 µg/L benzene, and 6.4 µg/l EDC are greater than their respective cleanup goals, site closure is consistent with past closure of similar low risk petroleum hydrocarbon cases by the Regional Board. Unless the Regional Board objects, and pending appropriate recording of the deed restriction and monitoring well destruction, the Executive Officer will issue a case closure letter pursuant to California Underground Storage Tank Regulations.

**Former Shell-Branded Service Station, 1060 Fairview Avenue, Salinas, Monterey County [John Goni 805/542-4628]**

Staff recommends closure of this leaking underground storage tank case and rescission of two outstanding Cleanup or Abatement Orders, CAO 86-216 and CAO 86-269. Concentrations of petroleum hydrocarbon constituents, including fuel oxygenates, are below cleanup goals in all but one monitoring well at this site. Monitoring well MW-18 contains residual concentrations of total petroleum hydrocarbons (TPH) at 12 milligrams per liter (mg/L), benzene at less than 5 micrograms per liter (µg/L), ethylbenzene at 1,200 µg/L, and xylenes at 1,800 µg/L. Closure of this case is recommended because the remaining contaminant concentrations are decreasing and are localized to the area near one monitoring well on the site.

This site is a former Shell-branded service station at the intersection of Fairview Avenue and the Highway 101 off-ramp. The site is currently a fenced vacant lot bounded by commercial and residential properties. The site is underlain by sand with clay interbeds from the surface to approximately 55 feet below ground surface (bgs), clay with sand interbeds from 55 to 80 feet bgs, sand from 80 to 85 feet bgs, and clay from 85 to 95 feet bgs. The depth to groundwater has historically varied from 41 to 51 feet bgs, and the flow direction has varied considerably. The nearest water supply

well is reportedly approximately 1000 feet southwest of the site, approximately 500 feet deep, has a 118 foot sanitary seal, and is perforated from 244 to 482 feet bgs. The residual petroleum hydrocarbons are unlikely to impact this well considering the distance, groundwater flow direction, well construction and chemical characteristics (including concentrations) of the contaminants.

An unauthorized release was reported in July 1985 for an estimated 1,900 gallons of gasoline from a pump failure. Eighteen monitoring wells were subsequently installed during several stages of investigation from 1985 through 1987. CAO No. 86-216 was issued to Shell on June 3, 1986, ordering an investigation to delineate the full extent of impacted groundwater, and CAO No. 86-269 was issued on September 5, 1986, ordering cleanup, and establishing groundwater cleanup goals of 7 µg/L benzene, 1000 µg/L toluene, 6,200 µg/L xylene, and 20 mg/L for TPH. These goals were set at 10 times the State Department of Health Services' action levels in effect at the time. In 1987 a cleanup plan was implemented involving groundwater extraction and treatment in accordance with a National Pollutant Discharge Elimination System Permit. The treatment system operated from May 1987 until October 1992, and removed approximately 7,000,000 gallons of impacted groundwater, and 566 gallons of free product from the subsurface.

The underground storage tanks (UST) and appurtenances were replaced in 1994 with doubled-walled tanks and piping. In 2000, the service station was demolished and UST's and piping were removed. Groundwater monitoring continued in order to evaluate groundwater conditions and the effectiveness of the cleanup. Monitoring well S-18 is the only well containing residual petroleum hydrocarbon concentrations above cleanup goals. When last monitored well S-18 contained TPH at 12 mg/L, benzene at less than 5 µg/L, ethylbenzene at 1,200 µg/L, and xylenes at 1,800 µg/L. The contaminant concentrations have declined in this monitoring well from 1996 maximum concentrations of 57 mg/L for TPH, 39 µg/L benzene, 4,000 µg/L ethylbenzene, and 14,000 µg/L xylenes.

The site lies within the Chular Hydrologic Area of the Salinas Hydrologic Unit (309.20), for which

the "Water Quality Control Plan, Central Coast Region" (Basin Plan) designates groundwater as having beneficial uses of domestic and municipal supply, agricultural supply, and industrial supply. Therefore, current cleanup goals for common hydrocarbon constituents are as follows: 1.0 mg/L-TPH, 1 µg/L-benzene, 150 µg/L-toluene, 300 µg/L-ethylbenzene, 1,750 µg/L-xylenes, and 5 µg/L-methyl *tertiary*-butyl ether (MTBE). Cleanup goals for MTBE and TPH have been established based on taste and odor thresholds (not health risks.)

Staff recommends the case for closure based on the following: (1) the contaminant mass has been removed to the extent practical, (2) the contaminant plume is well defined, localized, and confined to one onsite well, (3) the contaminants are marginally above the cleanup goals, and (4) based on historical monitoring data, the contaminant concentrations are expected to continue to decrease with time through natural attenuation. The County of Monterey issued a closure letter for the soil portion of this case on July 17, 2003. The current property owner, the responsible party, and responsible party's consultant have been notified of Regional Board staff's recommended closure of this case.

Closure is consistent with Section III.G., State Board Resolution No. 92-49, allowing consideration of cost effective abatement measures for a site 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 prescribed by the Basin Plan.

If the Regional Board does not object to staff's recommendation, the Executive Officer will issue a letter rescinding CAO's 82-216 and 82-269 and directing further closure activities pursuant to the California Underground Storage Tank Regulations.

**Americold Site (Crosetti-Encinal), 125 Salinas Road, Pajaro, Monterey County [John Goni 805/542-4628]**

Staff recommends closure of this leaking underground storage tank case where, with a few exceptions, concentrations of petroleum hydrocarbon constituents have attenuated to non-

detectable concentrations or to concentrations below water quality objectives. Fuel oxygenates (including MTBE) have not been detected at this site. Annual sampling results from May 2004 indicate a maximum concentration of total petroleum hydrocarbons (TPH) at 5.5 milligrams per liter (mg/L) and benzene at 60 micrograms per liter ( $\mu\text{g/L}$ ) in monitoring well A-8. Monitoring well A-6 (approximately 35 feet south of well A-8) also contains a maximum concentration of 2.8  $\mu\text{g/L}$  benzene.

The site is a former gasoline service station located on Salinas Road approximately one half mile south of the Pajaro River and is currently used for unpaved parking. Groundwater generally occurs approximately seven feet below ground surface and flows in a westerly direction at a gradient of 0.009 ft/ft. The site is underlain by a predominately fine grained clay unit with thin interspersed layers of sands. The nearest water supply well is reportedly 1300 feet to the southeast, and is perforated from 160 feet to 200 feet below the ground surface. The residual petroleum hydrocarbons are unlikely to impact this well considering the distance, groundwater flow direction, well construction and chemical characteristics (including concentrations) of the contaminants.

The underground storage tanks, and approximately 2,450 cubic yards of contaminated soil were removed in 1989. Approximately 15,000 gallons of contaminated groundwater were also removed using two on-site groundwater extraction wells. At the time of excavation, gasoline impacted soil remained near the capillary fringe and Salinas Road. Six borings installed across the street did not detect petroleum contaminants in groundwater, and a soil sample collected from the Salinas Road right-of-way near the site during a storm drainage improvement project also did not detect petroleum contaminants. TPH concentrations have declined from the site's maximum of 29 mg/L (February 1998 in well A-8) to 5.5 mg/L currently, and benzene concentrations have declined from a maximum of 2,100  $\mu\text{g/L}$  to 60  $\mu\text{g/L}$ . Benzene concentrations also declined from 2,700  $\mu\text{g/L}$  to 2.8  $\mu\text{g/L}$  during the same time frame in well A-6.

The site is within the Watsonville Hydrologic Area of the Pajaro River Hydrologic Unit (305.10), for which the "Water Quality Control Plan, Central

Coast Region" (Basin Plan) designates groundwater as having beneficial uses of domestic and municipal supply, agricultural supply, and industrial supply. Therefore, current cleanup goals for common hydrocarbon constituents are as follows: 1.0 mg/L-total petroleum hydrocarbons (TPH), 1  $\mu\text{g/L}$ -benzene, 150  $\mu\text{g/L}$ -toluene, 300  $\mu\text{g/L}$ -ethylbenzene, 1,750  $\mu\text{g/L}$ -xylenes, and 5  $\mu\text{g/L}$ -methyl tertiary-butyl ether (MTBE). Cleanup goals for MTBE and TPH have been established based on taste and odor thresholds and not health risks.

Staff recommends closure of this case based on the following: (1) the contaminant mass has been removed to the extent practical, (2) the contaminant plume is localized, well defined, and confined to an area around two onsite wells, (3) the contaminants concentrations are not significantly above the clean-up levels, (4) based on historical monitoring data, the contaminant concentrations are expected to continue to decrease through natural attenuation and meet groundwater cleanup goals, and (5) the Monterey County Health Department closed the soil portion of this case in a letter dated May 23, 1997. The current property owner/responsible party, and responsible party's consultant have been notified of Regional Board staff's recommended closure of this case.

Closure is consistent with Section III.G., State Board Resolution No. 92-49, allowing consideration of cost effective abatement measures for a site 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 prescribed by the Basin Plan.

Unless the Regional Board objects, and pending appropriate monitoring well destruction, the Executive Officer will issue a case closure letter pursuant to California Underground Storage Tank Regulations.

**Former Pajaro Chevron, 424 Salinas Road, Pajaro, Monterey County [John Goni 805/542-4628]**

Staff recommends closure of this underground storage tank case where, with a few exceptions, concentrations of petroleum hydrocarbon

constituents have attenuated to non-detectable concentrations or to concentrations below water quality objectives. Fuel oxygenates (including MTBE) have not been detected at this site. Annual sampling results from May 2004 indicate a maximum concentration of total petroleum hydrocarbons (TPH) at 6 milligrams per liter (mg/L) and benzene at 17 micrograms per liter ( $\mu\text{g/L}$ ) in monitoring well MW-4. Monitoring well MW-5 (approximately 60 feet south of well MW-4) also contains a maximum contaminant concentration of TPH at 2.1 mg/L, and benzene at less than 5  $\mu\text{g/L}$ . The County of Monterey concurs with this case closure recommendation.

The site is a former service station located on Salinas Road approximately one half mile south of the Pajaro River, and is currently a "mini-mart" with paved parking. The depth to groundwater has varied from four to ten feet below ground surface, and flows in a southerly direction at a gradient of 0.007 ft./ft. The site is underlain by a predominately fine grained clay unit, with sand and sandy clay for the first six to seven feet, then by clay. The nearest water supply well is reportedly 1300 feet to the south east, and is perforated from 160 feet to 200 feet below the ground surface. The residual petroleum hydrocarbons are unlikely to impact this well considering the distance, groundwater flow direction, well construction and chemical characteristics (including concentrations) of the contaminants.

The underground tanks and approximately 65 cubic yards of contaminated soil were removed in 1991. Analytical testing confirmed a release of gasoline contaminants to soil. Subsequent investigative borings and five groundwater monitoring wells also detected gasoline contaminants in groundwater. TPH concentrations have declined from the site's maximum of 48 mg/L (February 1997 in well MW-4) to 6 mg/L currently, and benzene concentrations declined from a maximum of 280  $\mu\text{g/L}$  to 17  $\mu\text{g/L}$ . TPH concentrations have also declined from 11.7 mg/L to 2.1 mg/L and benzene concentrations from 10  $\mu\text{g/L}$  to less than 5  $\mu\text{g/L}$  during the same time frame in well MW-5.

The site is within the Watsonville Hydrologic Area of the Pajaro River Hydrologic Unit (305.10), for which the "Water Quality Control Plan, Central Coast Region" (Basin Plan) designates

groundwater as having beneficial uses of domestic and municipal supply, agricultural supply, and industrial supply. Therefore, current cleanup goals for common hydrocarbon constituents are as follows: 1.0 mg/L–total petroleum hydrocarbons (TPH), 1  $\mu\text{g/L}$ –benzene, 150  $\mu\text{g/L}$ –toluene, 300  $\mu\text{g/L}$ –ethylbenzene, 1,750  $\mu\text{g/L}$ –xylenes, and 5  $\mu\text{g/L}$ –methyl *tertiary*-butyl ether (MTBE). Cleanup goals for MTBE and TPH have been established based on taste and odor thresholds and not on health risks.

Staff recommends closure of this case based on the following: (1) the contaminant mass has been removed to the extent practical, (2) the contaminant plume is localized, well defined, and confined to an area around two onsite wells, (3) the contaminants concentrations are not significantly above the clean-up levels, and (4) based on historical monitoring data, the contaminant concentrations are expected to continue to decrease through natural attenuation and meet groundwater cleanup goals.

The current property owner, the responsible party, and responsible party's consultant have been notified of Regional Board staff's recommended closure of this case.

Closure is consistent with Section III.G., State Board Resolution No. 92-49, allowing consideration of cost effective abatement measures for a site 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 prescribed by the Basin Plan.

Unless the Regional Board objects, and pending appropriate monitoring well destruction, the Executive Officer will issue a case closure letter pursuant to California Underground Storage Tank Regulations.

**Yeh Residence, 1632 Cliff Drive, Santa Barbara, Santa Barbara County [Sheila Soderberg 805/549-3592]**

On February 8, 2005, Santa Barbara County Fire Protection Division (County Fire) requested Regional Board staff's concurrence for case closure for the Yeh Residence, located at 1632

Cliff Drive in Santa Barbara. Regional Board staff concurs that this case should be closed.

The Yeh Residence, located in the La Mesa area of downtown Santa Barbara, was developed on former oil field property. During a home addition project in Spring 2004, crude-oil contaminated soil was discovered beneath the planned footprint of the new addition. Further subsurface investigation revealed that there were two sumps located on the subject property. The extent of petroleum-impacted soil was characterized vertically and laterally. The West Sump was excavated and contaminated soil was disposed of offsite June through October 2004. Petroleum contaminated soil from the East Sump could not be excavated, because it is located beneath the existing residence. County Fire estimates that approximately 1,920 cubic yards of petroleum-impacted soil remains beneath the residence. In order to evaluate the potential human health impact of the sump to residents, the Yeh family's consultants prepared a Human Health Risk Assessment, which was reviewed by County Fire's toxicologist. As part of the residence's scheduled remodel, County Fire will require that a vapor barrier be installed beneath the footprint of the existing residence and planned addition. The Yeh family will be required to periodically inspect the vapor barrier under the residence.

In a groundwater grab sample collected May 18, 2004, benzene was detected at 1.1 micrograms per liter (ppb), which is above the Dept. of Health Services Maximum Contaminant Level (MCL) for benzene (1 ppb). A groundwater monitoring well, MW-1, was installed down gradient of the sump. On October 7, 2004, petroleum hydrocarbons as crude oil (C8-C40) were detected at 360 ppb in a groundwater sample collected from MW-1. Benzene, toluene, and other petroleum hydrocarbon constituents were not above laboratory detection limits during the October 7, 2004, groundwater-sampling event. The well was re-sampled on October 21, 2004, and petroleum hydrocarbon constituents were below laboratory detection limits.

County Fire considers this site to be a low risk case based on the reasons discussed above and because no drinking water wells are located within one mile of the site. In addition, the closest municipal wells are located in a different hydrogeologic unit. The responsible party has agreed to record a deed notice regarding the remaining residual petroleum hydrocarbon in soil. The notice requires that if development occurs, this area should not be disturbed, or if this area is excavated, then the soils shall be tested for contamination. If petroleum impacts are still present, the petroleum-impacted soils shall be properly disposed of offsite. In addition, County Fire plans to hold a public hearing identifying that a deed notice to the record will be recorded for the subject property. Because petroleum-impacted soil extends from Yeh property onto an adjoining property, County Fire plans to contact the Yeh's neighbors to perform additional investigation of the East Sump.

#### ATTACHMENTS

1. Groundwater Contour and Concentration Map for Circle N Land Co.
2. TPH Soil Iso Concentration Map For Circle N Land Co.
3. Cross Section A-A' for Circle N Land Co.
4. Cross Section B-B' for Circle N Land Co.