

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

STAFF REPORT FOR REGULAR MEETING OF DECEMBER 1-2, 2005

Prepared on November 2, 2005

ITEM NUMBER: 16

SUBJECT: Low Threat Cases

DISCUSSION:

Statewide General Waste Discharge Requirements for Discharges to Land by Small Domestic Wastewater Treatment Systems, Water Quality Order No. 97-10-DWQ

Low Threat and General Discharge Cases
University of California, Santa Barbara,
Sedgwick Reserve, Santa Barbara County
[Todd Stanley; 805/542 -4769]

The University of California, Santa Barbara (UCSB) owns and operates an ecological research and education center known as the Sedgwick Reserve. The 20-year old Reserve is located on approximately 6,000 acres near Los Olivos in Santa Barbara County.

UCSB proposes to modify the existing Ranch Compound area by building a conference and administration building, an ecological research laboratory (domestic wastewater only), and residential facilities for visiting researchers and students. In addition, UCSB proposes to replace the individual septic tanks serving existing buildings with a new centralized collection, treatment, and disposal system with an estimated peak flow of 7,000 gallons per day.

The existing facility is not regulated by the Central Coast Water Board. The proposed facility meets the enrollment criteria of the State Water Board Water Quality Order No. 97-10-DWQ, *General Waste Discharge Requirements for Discharges to Land by Small Domestic Wastewater Treatment Systems* (General Order).

On November 1, 2005, staff enrolled UCSB's Sedgwick Reserve under the General Order.

Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality, Water Quality Order No. 2003-0003-DWQ

The Paso Robles Hot Springs and Spa, San Luis Obispo County, [Tom Kukol 805/549-3689]

On October 31, 2005, staff enrolled the *Paso Robles Hot Springs and Spa, San Luis Obispo County* under Water Quality Order No. 2003-0003-DWQ, *Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality* (Low Threat General Permit). The *Paso Robles Hot Springs and Spa* will discharge approximately 4,000 gallons per day of mineral bath water from their commercial operation into a 16,000,000 gallon reservoir. Water from the reservoir will be used on the 240-acre site for aesthetics, landscape irrigation, fire protection, and wildlife habitat. The source water comes from on-site supply wells and is heated using a heat exchanger and boiler system. The source water does not originate in the area's geothermal zone.

Enrollment under the Low Threat General Permit requires the *Paso Robles Hot Springs and Spa* and its authorized project representatives to comply with the Monitoring and Reporting Program for Order No. 2003-0003-DWQ (MRP), and the Discharge Monitoring Plan required by the Order and submitted with the Notice of Intent.

The Ravine Water Park, San Luis Obispo County, [Tom Kukol 805/549-3689]

Staff enrolled the Ravine Water Park, San Luis Obispo County under Water Quality Order No. 2003-0003-DWQ, *Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality* (Low Threat General Permit) on November 1, 2005. The Ravine Water Park will discharge up to 20,000 gallons per day of recreational water park pool water to construction sites for dust control and construction compaction. The discharge is planned for the summer season.

Enrollment under the Low Threat General Permit requires the Ravine Water Park and its authorized project representatives to comply with the Monitoring and Reporting Program for Order No. 2003-0003-DWQ (MRP), and the Discharge Monitoring Plan required by the Order and submitted with the Notice of Intent.

General NPDES Permit for Low Threat Discharges, Order No. 01-119

ExxonMobil Santa Ynez Unit Production Facility, Water Supply Well 8P-2 Testing Project, Santa Barbara County [Todd Stanley, 805/542-4769]

ExxonMobil applied for authorization to discharge development and pump testing water during the construction of a new drinking water supply well at their Santa Ynez Unit Facility. The new supply well will replace an existing well located approximately 150 feet away, and will extract water from the same aquifer. The discharge to Las Flores Creek is scheduled to occur during daytime over approximately two weeks, and will occur through an energy dissipation structure to prevent erosion at the discharge point.

Staff's review of the application indicates the proposed discharge is appropriate for enrollment under the General Order. Staff enrolled ExxonMobil under the General Order in November 2005.

General Waste Discharge Requirements for Closed, Inactive, or Abandoned Non-Hazardous Landfills Order No. R3-2004-0006

California Army National Guard, Camp San Luis Obispo-Sutter Avenue Closed Class III Landfill, San Luis Obispo County [Thea Tryon, 805/549-3694]

Central Coast Water Board staff received a revised Report of Waste Discharge from the California Army National Guard (Discharger) to enroll the Camp San Luis Obispo - Sutter Avenue Closed Landfill (Landfill) into General Waste Discharge Requirements (WDR) Order No. R3-2004-0006. The Landfill is currently regulated under pursuant to WDR Order No. 94-79.

General Waste Discharge Requirements Order No. R3-2004-0006 was adopted, by the Central Coast Water Board, on February 6, 2004 in an effort to consolidate post-closure maintenance of closed, abandoned or inactive nonhazardous solid waste landfills within the Central Coast Region.

The 5.2-acre Landfill is located 500 feet west of the O'Connor Way entrance to Camp San Luis Obispo, and one mile south of State Highway 1. The Landfill is located in the southwest corner of Camp San Luis Obispo in a flat, low-lying area of the Poison Oak Creek valley. Land use within 1,000 feet of the Landfill includes agriculture and industrial.

A trench and cover waste disposal method was used at this Landfill from approximately 1970 until 1985. An estimated 36,000 cubic yards of nonhazardous waste was disposed during the Landfill's operational period. The Landfill was not constructed with an engineered bottom liner, system, leachate collection, or leak detection system. However, the base of the Landfill is reportedly comprised of a three-foot thick layer of impermeable clay. A final cover was constructed in 1996 in accordance with Central Coast Water Board approved final closure and post-closure maintenance plan. The final cover consists of a 24-inch foundation layer, a 60-mil flexible membrane liner barrier layer of high density polyethylene, a lateral drainage layer of non-woven polypropylene fabric, and an 18-inch vegetative cover layer.

A total of nine isolated gas vents were installed in the final cover. The gas vents were installed

as a precautionary measure, as significant landfill gas generation was not anticipated during the post-closure period. Soil gas measurements indicate that methane generation and migration are not currently occurring.

Landfill groundwater monitoring began at five monitoring wells, in 1990 (MW-1 through MW-5). Three additional wells were installed in 1994 (MW-6 through MW-8). A non-statistical evaluation of the groundwater data in 1994 indicated that volatile organic compounds (VOCs) had impacted groundwater quality and migrated beyond the northern Landfill boundary. A subsequent downgradient groundwater quality assessment was conducted in 1995, which included the collection of six hydropunch groundwater samples. Based on the hydropunch analytical results of data, two downgradient monitoring wells (MW-9 and MW-10) were installed. The only VOCs detected in groundwater on a consistent basis are 1,4-dichlorobenzene, carbon tetrachloride and chloroform. The concentrations of these compounds are very low (below maximum contaminant levels) and no VOCs have been detected in downgradient monitoring wells MW-9 and MW-10 since 1996.

Currently, the landfill's post closure land use consists of non-irrigated open space. No change in land use is anticipated.

Water Board staff finds that this Landfill meets the requirements for enrollment into General WDR No. R3-2004-0006. Staff has modified the Monitoring and Reporting Program included with General Order No. R3-2004-0006 to be consistent with the existing Monitoring and Reporting Program Order No. 94-79 (revised May 10, 2002). Enrollment in the General Order with modified Monitoring and Reporting Program is effective upon rescission of Waste Discharge Requirements Order No. 94-79, Agenda Item No. 23.

Waiver of Waste Discharge Requirements, Resolution R3-2002-0115

Tres Hermanas Winery, Santa Maria, Santa Barbara County [Matt Thompson 805/549-3159]

Regional Board staff tentatively enrolled Tres Hermanas Winery under the General Waiver Resolution No. 2002-0115 on October 25, 2005. Tres Hermanas Winery is located at 9660 Foxen Canyon Road, Santa Maria, Santa Barbara County.

Tres Hermanas Winery will produce approximately 10,000 cases of wine per year. The process wastewater treatment and disposal system is based on an estimated peak flow of 600 gpd. Large solids are separated from wastewater by floor drain screens. Wastewater will settle in a 2,000-gallon septic tank. Wastewater will be disposed in a dual leachfield system, consisting of a total of 250 lineal feet of leachline. The dual system will have a diverter valve.

Staff recommends the Regional Board concur with enrolling Tres Hermanas Winery's wastewater discharge under General Waiver Resolution No. 2002-0115.

Staff Closed Cases

ExxonMobil Service Station No. 18-L6B, 6990 El Camino Real, Atascadero, San Luis Obispo County [Corey Walsh 805-542-4781]

A release of gasoline was discovered during a facility upgrade in December 2002. Soil contamination was observed during removal of product piping and dispensers. Soil sample results indicate maximum soil concentrations of 320 milligrams per kilogram (mg/kg) total petroleum hydrocarbons reported as gasoline (TPH-g), 730 mg/kg TPH as diesel, 4.7 mg/kg methyl tertiary-butyl ether (MTBE), and 47 mg/kg tertiary-butyl alcohol (TBA). Approximately 130 tons of contaminated soil were removed and disposed. The site is currently a service station that operates three gasoline underground storage tanks (UST), one diesel UST, and associated piping and fuel dispensing equipment.

In March 2004, further investigation was conducted and three groundwater monitoring wells were installed to evaluate the extent of soil and groundwater contamination. Additional investigation was conducted in January 2005 and included drilling of four soil borings. Soil and

three hydropunch groundwater samples were collected and analyzed.

Maximum groundwater contaminant concentrations indicated 410 micrograms per liter ($\mu\text{g/L}$) TPH-g, $<0.5 \mu\text{g/L}$ benzene, $16.2 \mu\text{g/L}$ MTBE, and $115 \mu\text{g/L}$ TBA. However, groundwater sampling results from September 12, 2005, indicate that all monitoring wells are below Water Board cleanup goals for the constituents of concern at the site. Current sample results indicate TPH-g, benzene, MTBE and TBA maximum concentrations of $<50 \mu\text{g/L}$, <0.5 , $1.7 \mu\text{g/L}$, and $<10 \mu\text{g/L}$, respectively.

Depth to underlying groundwater ranges from approximately 10 feet (ft) to 19 ft below ground surface, and the groundwater flow direction is toward the northwest at an approximate gradient of 0.01 ft/ft. The nearest active water supply well, Atascadero Mutual Water Company well No. 1, is approximately one mile north of the site and Atascadero Unified School District operates an irrigation well approximately 2,000 feet north of site. The residual petroleum hydrocarbons remaining are unlikely to impact these wells considering the groundwater flow direction, distances, and low remaining contaminant concentrations.

Based on the soil cleanup actions and the groundwater monitoring results, there is no threat to groundwater quality, and no further soil or groundwater investigation or cleanup is necessary. The San Luis Obispo County Division of Environmental Health agrees with this determination. The property owner has been notified of the proposed case closure. The responsible party will be directed to destroy all monitoring wells and 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.

Former French Laundry, 740 Front Street, Santa Cruz, Santa Cruz County [Tom Sayles 805-542-4640]

A historical 1915 Sanborn Fire Insurance map indicated that a 300-gallon gasoline underground storage tank (UST) and a fuel oil UST were located on the subject property. A 1928 Sanborn Fire Insurance map does not include any

information on the USTs and there are no records to confirm the removal or in-place abandonment of these tanks. Soil and groundwater investigations were completed on March 3 and April 5, 2001. Analytical results indicated maximum concentrations of 9,000 milligrams per kilograms (mg/kg) total petroleum hydrocarbons as diesel (TPH-D) and 6,700 mg/kg total petroleum hydrocarbon as motor oil (TPH-MO) in the soil. Maximum concentrations of 57,000 micrograms per liter ($\mu\text{g/L}$) TPH-D and 58,000 $\mu\text{g/L}$ TPH-MO were detected in groundwater. Based on these results, excavation of impacted soil was completed in November 2003. Approximately 250 tons of hydrocarbon-impacted soil and approximately 15,600 gallons hydrocarbon-impacted groundwater were removed and properly disposed offsite.

On January 14, 2004, four groundwater monitoring wells were installed to evaluate the extent of soil and groundwater contamination. The initial groundwater sample results detected maximum concentrations of $1,500 \mu\text{g/L}$ TPH-D and $1,500 \mu\text{g/L}$ TPH-MO in one monitoring well. All other groundwater sample results were below this Central Coast Water Board's cleanup goals; benzene and methyl tertiary-butyl ether were not detected. The maximum concentration of TPH-D was $221 \mu\text{g/L}$, and $943 \mu\text{g/L}$ TPH-MO on September 1, 2005.

A quarterly groundwater monitoring program was implemented to confirm the initial results from the monitoring wells. Samples collected during the third quarter 2005, indicate that all hydrocarbon constituents are below cleanup goals and/or laboratory detection limits.

The depth to underlying groundwater is approximately 10 to 12 feet below ground surface. Groundwater flow is generally to the southeast with a gradient of 0.0009 foot per foot. The nearest water supply well is located greater than 1 mile from the site.

Based on the results of the soil and groundwater cleanup and the quarterly groundwater monitoring results, there is no threat to groundwater quality and no further investigation or cleanup is necessary. The Santa Cruz County Environmental Health Services Agency agrees

with this determination. The property owner/site operator has been notified of case closure and has been directed to destroy all monitoring wells. Staff will close this case, and 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.

Cases Recommended for Closure

Toyota of Santa Barbara, 5611 Hollister Avenue, Goleta, Santa Barbara County [John Mijares, (805) 549-3696]

Staff recommends closure of this underground storage tank (UST) case where groundwater sample results indicate groundwater concentrations greater than Central Coast Water Board (Water Board) cleanup goals for total petroleum hydrocarbons as gasoline (TPHg), ethylbenzene, and total xylenes in one monitoring well and one Geoprobe groundwater sample. During the last groundwater monitoring event in March 2004, a maximum TPHg concentration was detected in MW-1 (shown on Attachment 1) at 1,100 micrograms per liter ($\mu\text{g/L}$). Other petroleum hydrocarbons were either not detected or were below their respective cleanup goals in all monitoring wells including MW-1. Analytical results from a grab groundwater sample collected on August 25, 2005, from Geoprobe boring GP-12 (shown on Attachment 2) indicated TPHg at 25,300 $\mu\text{g/L}$, ethylbenzene at 3,300 $\mu\text{g/L}$, and xylenes at 3,500 $\mu\text{g/L}$. Other petroleum hydrocarbons were either not detected or were below their respective cleanup goals in three additional Geoprobe borings and in GP-12. It is important to point out that Geoprobe boring GP-12 was installed approximately 15 feet from MW-1. It has been Water Board staff's observation that grab groundwater samples (e.g., collected from a Geoprobe) typically indicate higher concentrations than samples collected from permanently installed monitoring wells. This observation is supported by empirical data in this case where an initial grab sample collected in September 1996 indicated a TPHg concentration of 34,000 $\mu\text{g/L}$ relative to a sample collected from MW-1 (installed in August 1998) with a corresponding concentration of 4,500 $\mu\text{g/L}$ TPHg (Attachment 3).

In April 1996, the Responsible Party authorized removal of one 2,000-gallon gasoline UST, one 1,000-gallon waste oil UST, and related piping from the Toyota of Santa Barbara car dealership maintenance area. Results of soil investigations indicated that the principal constituents of concern were TPHg and benzene. Concentrations of these compounds were detected in excess of soil cleanup guidelines near the former UST to approximately 20 feet downgradient at depths ranging from 7 feet below ground surface (bgs) to the top of the water table encountered at 12 feet to 14 feet bgs. The depth to groundwater is approximately 11 feet to 14 feet and flows to the southwest at a gradient ranging from 0.005 to 0.009 feet per foot. The nearest water supply well is located approximately 600 feet to the northeast. The residual hydrocarbons remaining in-place are not expected to impact this well because of the low concentrations and groundwater flow direction.

Natural attenuation processes appear to have been effective in reducing soil and groundwater contamination. Petroleum hydrocarbon concentrations have declined steadily since groundwater monitoring started in 1998. Historical groundwater data are shown on Attachment 3. Monitoring well MW-1, installed adjacent to the former UST, is the well with the highest concentrations of petroleum hydrocarbons. Since installation of MW-1 in 1998, the highest detected concentration of TPHg was 7,000 $\mu\text{g/L}$ in September 2000. Sampling results for MW-1 in March 2004 indicated a TPHg concentration of 1,100 $\mu\text{g/L}$ and benzene, toluene, ethylbenzene and xylenes (BTEX) were not detected or were below cleanup goals. In addition, TPHg, BTEX and methyl tertiary-butyl ether (MTBE) were either not detected or below the cleanup goals in all other monitoring wells.

In August 2004, an additional soil and groundwater investigation was conducted to characterize the concentrations of residual soil contaminants, evaluate the full extent of groundwater contamination, and evaluate if case closure is warranted. Fifteen Geoprobe soil borings were advanced at the locations shown on Attachment 4 with two soil samples collected at each location. Results of laboratory testing detected TPHg at concentrations ranging from

28 to 1,090 milligram per kilogram (mg/kg) in samples collected near the capillary fringe. Although TPHg concentrations in three soil borings exceeded a soil cleanup guideline of 100 mg/kg, the volume of impacted soil is estimated to be 13 cubic yards. Benzene and fuel oxygenates (including MTBE) were not detected at concentrations above the laboratory reporting limits in any of the soil samples collected.

TPHg, ethylbenzene and xylenes were detected at maximum concentrations of 25,300 µg/L; 3,300 µg/L; and 3,500 µg/L, respectively in one grab groundwater sample collected from GP-12. However, these constituents were not detected at concentrations in excess of their respective cleanup goals in the other three Geoprobe samples or in any downgradient monitoring wells. These data indicate that the extent of residual hydrocarbon-impacted groundwater is limited to a small area near the former UST. In addition, benzene, toluene, and MTBE were not detected at concentrations above the laboratory reporting limits in any of the Geoprobe samples collected.

The site lies within the Goleta Groundwater Basin (3-16). 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 common petroleum hydrocarbons are as follows: 1,000 µg/L (TPHg), 1.0 µg/L benzene, ethylbenzene 300 µg/L, xylenes 1,750 µg/L, and 5.0 µg/L for methyl tertiary-butyl ether (MTBE). The TPHg and MTBE cleanup goals have been established based on taste and odor thresholds, not health risks; the benzene, ethylbenzene, and total xylenes goals are based on the California Primary Maximum Contaminant Levels.

Santa Barbara County Fire Department, Fire Prevention Division, and Water Board staff recommend closure of this case and request the Central Coast Water Board concurrence based on the following:

1. The tanks and source of contamination were removed;

2. The reduction in TPHg concentrations from 7,000 µg/L in September 2000 to 1,100 µg/L in March 2004 in MW-1;
3. Soil and groundwater data indicate that natural attenuation processes are reducing concentrations of contaminants in soil and groundwater and are expected to continue;
4. Benzene has not been detected above laboratory reporting limits since February 2003;
5. MTBE has not been detected above the cleanup goal and the other fuel oxygenates have not been detected above laboratory reporting limits;
6. The extent of soil and groundwater contamination has been fully defined and is localized to a small area; and
7. 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.

In addition, Water Board staff has evaluated remaining groundwater and soil concentrations with respect to direct human exposure, possible indoor air impacts, and potential leachability to groundwater. Comparison of these concentrations with corresponding environmental screening levels for residential land use and construction worker direct exposure scenarios indicate no significant threat to human health or the environment.

The property owner has been notified of the proposed case closure. 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 and well destruction.

Attachments:

1. Groundwater Elevations and Flow Direction, March 2004
2. Detected Analytes in Groundwater
3. Historical Groundwater Analytical Data
4. Detected Analytes in Soil