STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

STAFF REPORT FOR REGULAR MEETING SEPTEMBER 7-8, 2006
Prepared August 2, 2006

ITEM NUMBER: 3

SUBJECT: **Low Threat and General Discharge Cases**

DISCUSSION

Corrective Action Plan Approvals

Renco Encoders, Inc., 26 Coromar Drive, Goleta, Santa Barbara County [Thea Tryon 805/542-4776]

The Renco Encoders site occupies approximately 3.5 acres of land at 26 Coromar Drive in Goleta, California (site). Since 1972, a variety of electronics manufacturing businesses have operated at the site. Chlorinated solvents were used during metal cleaning and plating processes and the waste stream generated during the cleaning process was directed through floor drains to underground sumps. These activities resulted in the release of chlorinated solvents to soil and groundwater.

On February 13, 2001, Renco Encoder's consultant and joint responsible party, LFR Levine-Fricke (LFR), submitted a remedial action plan (RAP) for the site. The RAP was approved by Water Board staff on March 8, 2001. The RAP proposed remediation through soil vapor extraction (SVE) and injection of Hydrogen Release Compound (HRC®), a carbon source to enhance bioremediation. From 2001 through 2004, with Water Board concurrence, LFR performed SVE near the site building and injected HRC® to the shallow aquifer. Despite the injections and source removal via SVE, chlorinated solvents continued to be detected in shallow groundwater beneath the site.

On August 12, 2005, LFR submitted a phase II remedial action plan amendment (RAP Amendment). LFR proposed to inject emulsified oil substrate (EOS®) into the shallow water-bearing zone to degrade and destroy chlorinated solvents in groundwater beneath the site. EOS® is a reagent that generally consists of emulsified food-grade oil (edible oil), lactate, amino acids, trace minerals, and B vitamins. Water Board Staff approved the RAP Amendment on October 24, 2005, provided that Monitoring and Reporting Program (MRP) No. R3-2005-0143 was implemented.

Prior to implementation of the RAP Amendment, LFR submitted a second phase II remedial action plan amendment (Second RAP Amendment) on March 22, 2006. In the Second RAP Amendment, LFR proposes injection of EHC™ reagent at two localized locations as a supplement to the widespread EOS® injections. The EHC™ reagent is a patented combination of controlled-release solid carbon and zero-valent iron that stimulates reductive dechlorination.

Neither reagent is hazardous or toxic, and both are specifically designed to create subsurface conditions that will degrade and destroy the chlorinated solvents remaining in groundwater.

Prior to implementing the corrective action plan LFR and Water Board staff prepared a public notice, which was sent on June 1, 2006, to all landowners and residents and occupants impacted or likely impacted by groundwater contamination within a 500-foot radius of the Renco facility. No comments were received from the public.

Consequently, the Second RAP Amendment was approved by Water Board staff on July 10, 2006. Staff also updated MRP No. R3-2005-0143 to include quarterly groundwater monitoring requirements after reagent injections. LFR implemented the Second RAP Amendment on July 10, 2006.

Former Exxon Service Station, 225 North Main Street, Salinas, Monterey County [John Goni 805/542-4628]

On May 3, 2006, Central Coast Water Board staff received a corrective action plan from Hydro Analysis, Inc. submitted on behalf of the responsible party, Sturdy Oil Company. The subject site was a gasoline service station whose underground storage tanks (USTs) were removed on November 1, 1993. Results of subsurface investigations indicated that soil in the area of the former dispensers and USTs is impacted with petroleum hydrocarbons. Similarly, groundwater investigations and periodic monitoring detected petroleum hydrocarbons and methyl tertiary-butyl ether beneath the site and portions of North Main Street.

The original cleanup strategy for this case was to allow natural attenuation of the petroleum hydrocarbons. After several years of groundwater monitoring, it became apparent that more active cleanup action was needed. Hydro Analysis conducted a soil vapor extraction test and confirmed that soil vapor extraction is an acceptable method of cleanup. A soil vapor extraction system has been proposed with installation of six soil vapor extraction wells. Extracted soil vapor will be treated with activated carbon and the treatment system will be permitted with the Monterey Bay Unified Air Pollution Control District.

Water Board staff approved the corrective action plan and notified neighboring property owners, tenants and other interested parties in an August 14, 2006 letter.

Low Threat Discharges to Surface Water (R3-2001-119)

Carpinteria Valley Water District, Carpinteria, Santa Barbara County [David LaCaro 805/549-3892]

Staff modified Carpinteria Valley Water District's enrollment of discharges covered under the National Pollutant Discharge Elimination System (NPDES) General Permit for Low Threat Discharges to Surface Water (General Permit) Order No. 01-119. The General Permit allows discharges that are identified in finding 3 of the General Permit to be discharged to waters of the state, provided that certain requirements are met. According to the district's Notice of Intent, dated May 3, 2006, the district proposes to enroll additional discharges resulting from routine maintenance of potable water supply systems, hydrostatic testing of potable water supply vessels, and fire hydrant testing and flushing activities.

The General Permit Monitoring and Reporting Program (MRP) was modified to fit the characteristics of the discharges. Settleable solids, pH, total dissolved solids, temperature, Oil/Grease, color, acute toxicity, dissolved oxygen, and total fecal coliform were removed from Section A.2, *Discharge Monitoring*, because the discharge is comprised of potable water.

The District, as part of its application, submitted analytical result from existing monitoring wells located in Capinteria Valley. Analytical results demonstrated that levels of metals, organics, and other constituents required by section A of the General Permit were detected below MCLs and Basin Plan Objectives (Table 3-8).

San Benito County Water District Monitoring Well Installation, Development, Test Pumping, and Purging, , San Benito County, [Cecile DeMartini 805/542-4782]

Regional Board staff received a Notice of Intent (NOI) application from the San

Benito County Water District (SBCWD) regarding the installation, development, test pumping, and purging of a groundwater monitoring well in Hollister, California. According to the NOI, the SBCWD proposes installing a new deep nested groundwater monitoring well in the Hollister area approximately one-half mile northwest of the intersection of Fairview and Fallon roads and approximately two miles northeast of the Hollister Municipal Airport. The nested groundwater monitoring well site is located on an agricultural field owned by a Mr. Grant Brians.

The SBCWD will install an 18-inch boring to a depth of approximately 650 feet below ground surface (bgs). Another 350 feet will be advanced with an eight-inch boring for a total depth of 1,000 feet. The SBCWD proposes to install a 12-inch well casing to 650 bgs with an additional three nested wells (2-inch diameter steel tubing) installed into the boring and screened at multiple intervals. Well screen placement will occur after determination of aquifer and geological locations.

Exterior annulus filter packs, interior annulus coarse pea gravel backfill, and bentonite seals between each screened interval will be set to provide complete separation and eliminate potential cross-flow between multiple aquifers encountered throughout the boring. A minimum five feet of fine sand will be set above the coarse pea gravel around each screened interval, followed by a minimum of five feet of hydrated bentonite pellets. Cement grout will be tremied into the interior annulus from the top of hydrated bentonite pellets to a minimum of 10-feet below the next screened aquifer.

Groundwater extraction will occur within the Hollister Area Subbasin which contains elevated total dissolved solids (TDS), boron, and nitrate. With the exception of TDS and nitrates, other anthropogenic contamination is not of a concern, based on previous aquifer analysis.

Water discharges generated during well development (mechanical swabbing and pumping), aquifer testing, and initial and ongoing well sampling will be disposed of into an adjacent drainage canal along Arroyo Dos Picachos creek.

Due to the large volume of pumped groundwater, the preferred method of discharging to land is not an option. The point of discharge is the Arroyo Dos Picachos creek. The receiving waters is Tequisquita Slough.

Drilling fluids used to install the well will be a mixture of natural bentonite clay and potable water; drilling fluids will not contain other chemicals or preservatives. The first flush of discharge water from the well will be retained onsite through the use of tanks or a lined temporary onsite retention pond and will not be discharged directly to surface waters. Drilling mud and fluids will be contained and recirculated in a closed-loop system.

Well development and aquifer testing will produce a maximum discharge flow rate of approximately 1,000 GPM. Aquifer testing will occur 10 hours a day for each developed aquifer throughout a period of one-month. Total volumes could range from 30,000 gallons to 600,000 gallons per aquifer test.

Periodic well sampling events will occur up to four times per year. Purge volumes will equal approximately 350 gallons for each of the screened intervals (maximum of four). Estimated total purge volumes per sampling event is 1,400 gallons.

Best management practices for erosion control, including energy dissipaters, such as geotextile barriers, gravel bags or plastic tarps, are required as necessary at the discharge point and at locations where the discharge enters Tequisquita Slough.

The first 500 gallons of purge water from each screened aquifer will be retained, sampled, and analyzed for constituents

and parameters as stated in the modified Monitoring and Reporting Program Order No. 01-119 prior to final discharge into Arroyo Dos Picachos. Larger sediment removal via settling within one or two tanks and a bag filter unit should prove adequate to prevent discharge of sediment. If necessary, a flocculent approved by the Water Board may be added to a second tank to precipitate the finer solids.

The SBCWD will use a State of California laboratory certified for each respected analytical method for all water samples analysis. Water Board staff will not allow discharge of purge water resulting in a parameter concentration above stated water quality objectives for Tequisquita Slough. The failed purge water will need to be disposed of in an appropriate manner and facility.

Well purge water may be discharged to Arroyo Dos Picachos once the SBCWD have provided sufficient data that purge water will meet all Tequisquita Slough water quality objective parameters.

If groundwater well is disinfected with chlorine, then dechlorination of extracted well water will occur within the tanks prior to discharge if total residual chlorine is detected at a concentration of 0.02 mg/l or more. Dechlorinated discharges will use either undiluted Captor 30% calcium thiosulfate liquid or Vita-D-Chlor (ascorbic acid) tablets, or similar products.

The SBCWD has agreed to comply with the terms of the General Permit, and will implement mitigation measures to avoid or reduce significant impacts. Collected data will be reported to Water Board staff on a semi-annual basis. Water Board staff notified the SBCWD of its enrollment in the General Low Threat Permit on July 27, 2006.

Public Comments

Comments were received from the Monterey County Water Resources Agency (MCWRA) in the form of verbal contact in response to the enrollment letter sent to the Discharger on July 10, 2006. The following discussion outlines staff responses to comments and action taken. Portions of the MCWRA's comments have been paraphrased and/or quoted.

MCWRA Verbal Comment No. 1: MCWRA states, "Bullet number five of page 2 of the enrollment letter does not explicity say wells will be purged a minimum of three well volumes or until parameters stabilize prior to sampling."

Staff Response: Staff concurs with MCWRA's comment. The SBCWD states a minimum of 350 gallons will be purged from each screened interval for a total of 1,400 gallons (4 screened intervals x 350 gallons). Although not explicitly stated, based on a 2-inch well diameter (0.17 gallons per linear foot), 350 gallons equates to approximately three well volumes of 686 linear feet of screened area or 6.8 well volumes of 100-feet of screened area. Staff will verify these calculations with the MCWRA prior to the first well purge.

MCWRA Verbal Comment No. 2: MCWRA states, "Bullet number four of page 3 of the enrollment letter does not clearly state the method used to retain purge water prior to disposal to Arroyo Dos Picachos for each sampling event beyond initial start-up."

Staff Response: Staff requires the first 500 gallons of purge water to be retained, sampled, and analyzed for constituents and parameters prior to final discharge into Arroyo Dos Picachos. Additionally, Staff requires the San Benito County Water District provide sufficient data to the Water Board that purge water will meet all Tequisquita Slough water quality objective parameters prior to discharge. These requirements are presented on page 3 bullet numbers three and five.

Santa Barbara Airport, Santa Barbara, Santa Barbara County [David LaCaro 805/549-3892]

Central Coast Water Board staff enrolled the Santa Barbara Airport dewatering project under the National Pollutant Discharge Elimination System (NPDES) General Permit for Low Threat Discharges to Surface Water (General Permit) Order No. 01-119. The General Permit allows discharges that are identified in finding 3 of the General Permit to be discharged to waters of the state, provided that certain best management practices met.
Tecolotito Creek will be relocated approximately 1,700 feet to the west of its present alignment providing space for the Runway No. 7-25 extension project. In addition to the Tecolotito Creek relocation, Carneros Creek will be extended to the west relocating its confluence with Tecolotito Creek. Relocating both creeks will require excavation activities and reconnections with the upstream and downstream portions of the existing creek reaches. Excavation activities will require dewatering. Dewatering will be conducted on an as-needed basis with portable pumps that will be moved through each phase of the project. Groundwater collected through the dewatering process will be pumped to one or more aboveground settling tank(s). Water from the tank(s) will be pumped to a sand filter removing particles down to 70 microns and then through a bag filter removing particles of approximately 25 microns. Treated water from the bag filter will discharge to the primary discharge point located down gradient from the original confluence of Carneros and Tecolotito Creeks. Anticipated production rates will be approximately 208 gallons per minute with a flow volume of approximately 100,000 gallons per day. A secondary discharge point will be used once the creeks have been relocated. The secondary discharge point will be located at the downstream portion of Tecolotito Creek providing continuous channel flow. Energy dissipation and/or other methods of erosion control will be provided for the discharge location.
Staff modified the General Permit Monitoring and Reporting Program (MRP) to fit the characteristics of the discharges. Total chlorine residual, Oil/Grease, acute toxicity, and total fecal coliform were removed from Section A.2, *Discharge Monitoring*, because the discharge is comprised of groundwater.

Marina Shores LP, Carpinteria, Santa Barbara County [David LaCaro 805/549-3892]

Central Coast Water Board staff enrolled Marina Shores, L.P. into the National Pollutant Discharge Elimination System (NPDES) General Permit for Low Threat Discharges to Surface Water (General Permit) Order No. 01-119 on August 4, 2006. The General Permit allows discharges that are identified in finding 3 of the General Permit to be discharged to waters of the state, provided that certain best management practices are met. Staff understands the project includes the following:

During construction of the subterranean parking facilities and foundation elements at the Soares Beach Home, located at 4815 Sandyland Road, Carpenteria, the Discharger will use temporary wells to dewater the site.
The Discharger will be discharging to a nearby storm drain located at 198 Holly Avenue, Carpinteria. The storm drain discharges to the Carpenteria Salt Marsh. Once dewatering begins, the Discharger will notify water board staff with flow rates. Staff's review of the Marina Shores, L.P. application indicates the proposed discharge is appropriate for enrollment under the General Order. By letter dated August 4, 2006, staff notified Marina Shores, L.P. of its enrollment.

Discharges of Highly Treated Groundwater to Surface Water (R3-2001-0134)

Whittaker Facility Hollister, San Benito County [Kristina Seley (805) 549-3121]

Whittaker Corporation (Whittaker) submitted a Notice of Intent (NOI) to comply with the Central Coast Water Board's Order No. 01-134, NPDES No. CAG993002, General Permit for Discharges of Highly Treated Groundwater to Surface Waters (General Permit). The discharge consists of groundwater extracted from six on-site wells that will capture and treat groundwater migrating from the Whittaker Ordnance Site. The treatment system proposed in the NOI consists of granular activated carbon for volatile organic compound (VOC) removal and a bioreactor for perchlorate and hexavalent chromium remediation. The treated groundwater will be discharged approximately 2,000 feet north of the site into the San Benito River via public right-of-way storm drains. Staff approved the NOI and anticipates enrolling Whittaker in the General Permit prior to the September 8, 2006 board meeting.

Recent zone-specific sampling and analysis has shown that trichloroethene [TCE; 5,030 micrograms per liter (µg/L)], vinyl chloride (VC; 10 µg/L) 1,1-dichloroethene (1,1-DCE; 13 µg/L), cis-1-2-dichloroethene (cis-1,2-DCE; 60 µg/L), perchlorate (1,200 µg/L), and hexavalent chromium (30 µg/L) are present in Unit 1 and 3 aquifer wells.

A maximum discharge flow rate of approximately 105 gallons per minute (GPM) is expected during groundwater extraction. Groundwater extraction and treatment is expected to occur 24 hours per day year with a total discharge volume of approximately 4.5 million gallons per month.

Whittaker must comply with the General Permit standards, prohibitions, and requirements to protect water quality. Whittaker must also comply with Monitoring and Reporting Program (MRP) No. 2006-0061. Central Coast Water Board staff has modified MRP No. 2006-0061 to specifically address the expected discharge. The modified MRP includes weekly monitoring for the first year of operation, and monthly thereafter. If performance monitoring indicates a discharge standard has been exceeded, Whittaker has a contingency plan to shut down the system and operate it in recycle mode until permit requirements are met. Whittaker must treat groundwater to levels below any applicable regulatory standards including maximum contaminant levels for VOCs. In addition to the General Permit discharge standards for VOCs, Whittaker must meet discharge limits for perchlorate and hexavalent chromium. Based on the effectiveness of the treatment system, treated groundwater is expected to be below detection levels for perchlorate.

As part of the enrollment process, Water Board staff also required Whittaker to notify nearby property owners. In our February 16, 2006 *Public Notice of Remedial Design/Remedial Action Work Plan*, Central Coast Water Board staff notified the public of the treatment system design and discharge location. A single comment was received from the San Benito County Water District (SBCWD) regarding the discharge. In summary, the SBCWD 1) assumed Whittaker will not discharge harmful constituents and 2) suggested Whittaker consider the merits of groundwater injection at the site. To address the first concern, Whittaker assured the SBCWD that their discharge will comply with General Permit conditions and Whittaker will not discharge treated water containing constituents of concern greater than effluent limits included in the General Permit. In response to the second concern, Whittaker expects that, due to ephemeral surface-water flow characteristics of the San Benito River during significant portions of the year, discharge from the treatment system will pond within the riverbed and percolate into the subsurface. Whittaker considered the idea of groundwater reinjection, but rejected the idea because it would

complicate the optimization of the groundwater extraction system.

Discharges to Land with Low Threat to Water Quality (2003-0003-DWQ)

Pajaro Watershed Groundwater Desalination Feasibility Study, San Benito County Water District, San Benito County, [Cecile DeMartini 805/542-4782]

Water Board staff enrolled the San Benito County Water District's Pajaro Watershed Groundwater Desalination Feasibility Study under Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality (Low Threat General Permit) Order No. 2003-0003-DWQ on June 12, 2006. The Pajaro Watershed Groundwater Desalination Feasibility Study will discharge up to 36,000 gallons per day of extracted, treated, and recombined groundwater to a riverwash area via spray irrigation. Groundwater will be treated with a pilot reverse osmosis unit. After treated water has been sampled and analyzed, the permeate and reject waters will be recombined at a steady level in order to produce similar extracted groundwater characteristics. The designated riverwash disposal irrigation area is approximately 100 feet away from the San Benito River. Discharge of treated and/or recombined irrigation water shall cease upon San Benito River surface waters coming within 75 feet of the irrigated disposal area. Discharged treated and/or recombined irrigation water shall not cause ponding, threaten a discharge to surface waters, nor discharge to areas not described in the submitted Notice of Intent application. The feasibility study will determine whether desalination of the groundwater supply within the San Juan Basin can be utilized as a beneficial water supply. Treated groundwater will be tested for various constituents to include total dissolved solids, pH, dissolved organic carbon, alkalinity, turbidity, and various ion concentrations. The feasibility study is scheduled to run for approximately 12 months from date of startup.

Enrollment under the Low Threat General Permit requires the San Benito County Water District and its authorized project representatives to comply with the Monitoring and Reporting Program for Order No. 2003-0003-DWQ, and the Discharge Monitoring Plan required by the Order as submitted with the Notice of Intent. Collected data will be reported to Water Board staff on a quarterly basis.

General Waiver of Waste Discharge Requirements for Waste Piles (Resolution No. R3-2005-006) and Beneficial Reuse (Resolution No. R3-2005-005) at Oil Fields

E&B Natural Resources Management Company, South Cuyama Oilfield, Santa Barbara County [Rich Chandler 805/542-4627]

On July 11, 2006, Water Board staff enrolled E&B Natural Resources Management Company under the General Conditional Waiver of Waste Discharge Requirements for the Management of Petroleum-Impacted Soils at Authorized Waste Pile Management Facilities on Active Oil Leases and Fee Properties in the Central Coast (general WDRs for waste pile facilities). E&B plans to operate a waste pile management facility in the northeast corner of the South Cuyama Unit within the South Cuyama Oilfield that is approximately 3.36 acres in size. E&B plans to temporarily store crude oil impacted soil removed from tank bottoms and pipeline leaks and spills, drilling mud, and spent aggregate before disposing these materials offsite.

E&B's application included a compliance plan, management practices plan, and property owner notification documentation. Prior to enrollment, Water Board staff sent E&B's application package to the Division of Oil and Gas and Geothermal Resources (DOGGR), Santa Barbara County Fire Prevention Division, and

Santa Barbara County Building and Planning Department (Santa Barbara County agencies) for a 30-day review and comment period. The agencies did not have any comments on E&B's enrollment application.

As a condition of enrollment under the general WDRs for waste pile facilities, E&B is required to submit information on the originating source of petroleum-impacted soil, chemical characterization of petroleum impacted material, and annual monitoring reports by October 1 of each calendar year summarizing its preparedness measures to prevent discharges from the waste pile management facility during the rainy season.

Plains Exploration and Production Company, Arroyo Grande Oilfield, San Luis Obispo County [Rich Chandler 805/542-4627]

On July 10, 2006, Water Board staff enrolled Plains Exploration and Production Company (PXP) under the general WDRs for waste pile facilities. PXP's waste pile management facility on the Maino Lease will be approximately 1.5 acres in size and will temporarily store crude oil impacted soil removed from the vicinity of various wellheads at the oilfield. PXP will perform chemical analysis of soil samples to confirm that no hazardous waste is placed in the waste pile management facility.

On July 10, 2006, Water Board staff also enrolled PXP under the General Conditional Waiver of Waste Discharge Requirements for the Reuse of Non-hazardous Crude Oil Impacted Soil and Non-hazardous Spent Sandblasting Aggregate on Active Leases (general WDRs for reuse). PXP plans to place eligible reuse material on various roads and well pads throughout the oilfield for dust control and erosion prevention.

PXP's applications for enrollment under both general WDRs at oil fields included compliance plans, management practices plans, and property owner notification documentation.

Prior to approving PXP's enrollment, Water Board staff sent PXP's application to DOGGR for a 30-day review and comment period. DOGGR did not have any comments on PXP's application.

As a condition of enrollment under the general WDRs for waste pile facilities, PXP is required to submit information on the originating source of petroleum-impacted soil, chemical characterization of petroleum impacted material, and annual monitoring reports by October 1 of each calendar year summarizing its preparedness measures to prevent discharges from the waste pile management facility during the rainy season.

Water Board staff notified both DOGGR and San Luis Obispo County Division of Environmental Health on PXP's enrollment under the general oil field WDRs.

Plains Exploration and Production Company, Lompoc Oilfield, Santa Barbara County [Rich Chandler 805/542-4627]

On July 11, 2006, Water Board staff enrolled PXP under the general WDRs for waste pile facilities for the operation of a waste pile management facility on the Hill Fee property in the Lompoc Oilfield. The waste pile management facility will be approximately 0.3 acres in size and will temporarily store crude oil impacted soil removed from tank bottoms and pipeline leaks and spills, drilling mud, and spent aggregate. PXP's application included a compliance plan, management practices plan, and property owner notification documentation. PXP will perform chemical analysis to confirm that no hazardous waste is placed in the waste pile management facility.

Prior to enrollment, Water Board staff sent PXP Energy's application package to DOGGR and Santa Barbara County

agencies for a 30-day review. The agencies did not have any comments on PXP's enrollment application.

As a condition of enrollment under the general WDRs for waste pile facilities, PXP is required to submit information on the originating source of petroleum-impacted soil, chemical characterization of petroleum impacted material, and annual monitoring reports by October 1 of each calendar year summarizing its preparedness measures to prevent discharges from the waste pile management facility during the rainy season.

BreitBurn Energy Company, LP, Orcutt Hill Oilfield, Santa Barbara County [Rich Chandler 805/542-4627]

On July 11, 2006, Water Board staff enrolled BreitBurn Energy Company, LP under the general WDRs for waste pile facilities for the operation of a waste pile management facility on the Newlove Fee property Hill Fee property in the Orcutt Hill Oilfield. BreitBurn Energy's waste pile management facility will be approximately 0.7 acres in size and temporarily store crude oil impacted soil removed from tank bottoms and pipeline leaks and spills, drilling mud, and spent aggregate. BreitBurn's application included a compliance plan, management practices plan, and property owner notification documentation.

Prior to enrollment, Water Board staff sent BreitBurn Energy's application package to DOGGR and Santa Barbara County agencies for a 30-day review and comment period. The agencies did not have any comments on BreitBurn Energy's enrollment application.

As a condition of enrollment under the general WDRs for waste pile facilities, BreitBurn is required to submit information on the originating source of petroleum-impacted soil, chemical characterization of petroleum impacted material, and annual monitoring reports by October 1 of each calendar year summarizing its preparedness measures to prevent discharges from the waste pile management facility during the rainy season.

General Waiver of Waste Discharge Requirements (Resolution No. R3-2002-115)

Celite Corporation, Lompoc, Santa Barbara County [David LaCaro 805/549-3892]

Central Coast Water Board staff recommends that Celite Corporation's, Lompoc Plant process water discharges to Upper 44 pond, Lower 44 pond, and New Telford Pond under the General Waiver for Waste Discharge Requirements Resolution No. R3-2002-0115 (General Waiver).

Wash water from various processes contains non-recoverable diatomatious earth (DE). The water and DE are held in suspension and pumped as slurry to the Upper and Lower 44 ponds. The ponds provide evaporation and settling of process water from various processes. Discharges to Upper and Lower 44 ponds are generated from the Silicate Plant, Celpure Plant, Cleanable High Efficiency Air Filtration System (CHEAFS), Heavy Duty Garage, and the Celite Specialties Facility.

The New Telford Ponds are a series of four ponds used for evaporation and settling. The ponds are located at the southern side of the quarry and do not discharge to waters of the state. Slurry water from the Powder Mill Central Waste System is pumped directly via a 340-gallon per minute pump directly to the New Telford Ponds. The materials collected in the process water are composed of undesirable DE particles processed at the Powder Mill.

Quarry 23 Waste Disposal area is used to dispose of off-specification products. Off-specification materials are hauled and

dumped via on-site Celite vehicles. Staff contains these products in either paper or plastic bags, which comprise less than one percent of the total volume of waste.

Staff has reviewed the Woodward and Clyde, October 1992 *Water Quality Investigation* document. This document concludes that there is no hydrologic connection between the pond systems and groundwater basins found within the Celite quarry boundaries. Therefore, staff concurs the pond discharges do not pose a significant threat to groundwater.

Staff understands that these discharges are composed of clay residue slurry and pose no significant threat to water quality. This waiver enrollment is conditional upon compliance with General Waiver General Waiver Conditions (Attachment A1, Section A) and Inert Waste Conditions (Attachment A1, Section C.2.).

Clos Pepe Vineyards, Lompoc, Santa Barbara County [David LaCaro 805/549-3892]

Staff tentatively enrolled Clos Pepe Vineyards, 4777 W. Highway 246, Lompoc, Santa Barbara County, under the General Waiver Resolution No. 2002-0115 on June 30, 2006. Clos Pepe Vineyards will produce up to 10,000 cases of wine annually, and generate 600 gallons per day of process wastewater (average) during the harvest season. Wastewater will be generated from barrel/tank and floor washing. Process wastewater will be settled in a 1,500-gallon septic tank equipped with an effluent filter, and disposed in two 125 linear foot leachfields. The dual system will be rotated annually. The depth to groundwater is greater than 40 feet below ground surface. Stems, seeds, and skins (pomace) will be filtered through floor screens. The pomace will be removed from the screens and composted at the site. Domestic discharges will be separate from winery wastewater dischargers. Domestic wastewater will be discharged to an on-site disposal system, which will be regulated by Santa Barbara County Environmental Health Services.

Clos Pepe Vineyard's waiver is contingent on satisfaction of the following conditions: Clos Pepe Vineyards shall comply with the Prohibitions, Recommendations, and Specifications of the General Waiver Conditions (Attachment A1, Section A).

Pomace, lees, bentonite, and diatomaceous earth shall be excluded from the process wastewater systems to the extent practicable.

Any incidence of overflow from the wastewater system shall be reported to the Executive Officer within 24 hours.

Central Coast Water Board staff shall be allowed to visit Clos Pepe Vineyards in the future to ensure continued compliance with these conditions.

RECOMMENDATION

Staff recommends the Regional Board concur with waiving waste discharge requirements for Clos Pepe Vineyards under these conditions. This conditional waiver will expire September 8, 2011.

General WDRs for Residential On-Site Wastewater Systems within the Bayview Heights and Martin Tracts, Order No. 00-12

Schwarz-Warren Lot, Bayview Heights, Los Osos, San Luis Obispo County [Allison Millhollen, 805/549-3882]

Staff enrolled parcel (APN) 074-324-003, owners James A. Schwarz and Deborah J. Warren, under the General Waste Discharge Requirements Permit for Residential On-Site Wastewater Systems within the Bayview Heights and Martin Tract (Order No. 00-12) on June 29, 2006. The parcel and proposed onsite system meet the requirements of Order 00-12 and the Basin Plan. Enrollment under the Low Threat General Permit requires the discharger to comply with Monitoring and

Reporting Program No. 00-12 (MRP). The MRP requires weekly inspection of the disposal area for surfacing effluent, saturated surface areas, and odors. Annual submittal of self-monitoring reports is also required of the Discharger.

General Order for Discharges of Fruit and Vegetable Processing Waste, Order No. R3-2004-0066

D'Arrigo Brothers Co., Spreckles, Monterey County [Matthew Keeling 805/549-3685]

Regional Board staff enrolled D'Arrigo Brothers Co. (Discharger) produce cooling facility (Facility) under the General Waste Discharge Requirements for Discharges of Fruit and Vegetable Processing Waste, Order No. R3-2004-0066, on July 10, 2005. This is a new facility.

The Discharger owns and operates a produce cooling facility at 20911 Harris Road, Spreckles, that began operations in July 2006. The processing season is from March to November, with reduced activities from December to February. The process wastewater is generated primarily from vegetable wash water, cooling tower drainage, vacuum tube sump drainage, broccoli icing, and refrigeration defrost condensate. Based on data provided by the Discharger, the process wastewater will likely be of relatively low organic strength. The proposed process wastewater system includes drain collection sumps, drain piping, pump station, prescreening device, silt/grit separator, and a 190,000-gallon storage/holding pond. The pond is sufficient to hold wastewater through the wet months (March through November). The process wastewater will then be pumped into water trucks and used for dust control on approximately 28 acres of agricultural roads owned by the Discharger adjacent to the facility. Solids will be collected and disposed of at the local landfill.

The City of Spreckels adopted an Environmental Impact Report for the project on March 29, 2001 and the Monterey County Planning Commission approved the project in March 2002. Therefore, provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et. seq.) in accordance with Section 15321, Article 19, Chapter 3, Division 6, Title 14 of the California Code of Regulations have been satisfied.

Enrollment under the General WDRs requires the Discharger to comply with Monitoring and Reporting Program (MRP) No. R3-2004-0066. Staff modified the MRP to eliminate content not relevant to the facility (such as monitoring frequencies for larger fruit and vegetable processors). Water supply quality, production, chemical usage, effluent, and disposal area monitoring are required. Groundwater and disposal area soils monitoring are not required due to the reuse of process wastewater for dust control on roads. However, disposal area monitoring requires the Discharger to keep a record of the time, location, and amount of process wastewater applied for dust control. In addition, reporting has been reduced from semiannual to annual for the Facility. Regional Board staff will regularly inspect the facility to ensure continued compliance with the General WDRs.

Staff Closed Cases

Portola Motors, 500 Auto Center Drive, Watsonville, Santa Cruz County, [John Mijares 805-549-3696]

The site is currently used by Watsonville Cadillac-Buick as an auto dealership and service facility. The property owner removed two gasoline USTs and a waste oil UST from the site between August 1986 and September 1995. Impacted soil was excavated from beneath the gasoline USTs between December 1993 and September 1995. Soil samples collected in 1995 from the south and west sidewalls

of the UST excavation contained maximum concentrations of gasoline at 210 milligrams per kilogram (mg/kg), benzene at 1.3 mg/kg and methyl tertiary-butyl ether (MTBE) at 21 mg/kg. However, soil samples collected in July 2005 from a boring for monitoring well MW-5 (approximately 10 feet downgradient of the former UST excavation) did not contain petroleum hydrocarbons above laboratory detection limits. A grab groundwater sample collected in July 2001 from boring B-1 contained 3,100 micrograms per liter (µg/L) of MTBE and 19 µg/L of tertiary amyl methyl ether; no other petroleum hydrocarbons were detected. The grab groundwater sample results may not have been representative of natural groundwater conditions because petroleum hydrocarbons were not detected from any of the four on-site monitoring wells from May 2002 through February 2006.

The depth to groundwater is approximately 40 to 65 feet below ground surface and flows to the southwest at a gradient of 0.007 feet per foot. The nearest City of Watsonville water supply well is located approximately 5,000 feet south of the site.

Based on the removal of the USTs, excavation of impacted soil, and soil and groundwater data indicate that petroleum hydrocarbons are not detected, or are below laboratory detection limits, no further investigation or cleanup is necessary. We have notified the Santa Cruz County Health Services Agency, the property owner and other interested parties of our plan to close this case. We have not received comments or objections to the planned closure of this case. The responsible party has been directed to destroy all monitoring wells. Water Board 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.

Watsonville Nurseries, 110 Whiting Road, Watsonville, Santa Cruz County, [John Mijares 805-549-3696]

The site is an operating plant nursery. In April 1995, the property owner removed six USTs and five cubic yards of gasoline-impacted soil from beneath one of the USTs. Additional excavation of impacted soil in June 1995 by the responsible party, removed another 20 cubic yards. Soil samples collected from the base and sidewalls of the excavation indicated that concentrations of gasoline hydrocarbons (TPHg) and benzene exceeded cleanup goals. Methyl tertiary-butyl ether was not detected above laboratory reporting limits, or was below cleanup goals, in soil and groundwater samples. Petroleum hydrocarbons were also detected in soil samples from a boring (MW-1) advanced adjacent to the excavation. However, petroleum hydrocarbons were not detected in soil samples collected from five other borings at the site, indicating that the extent of petroleum-impacted soil was limited to the area near the former excavation.

Initial groundwater sampling data from monitoring well MW-1, adjacent to the former USTs, indicate TPHg, benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations exceeding groundwater cleanup goals of 1,000 micrograms per liter (µg/L), 1 µg/L, 150 µg/L, 300 µg/L, and 1,750 µg/L, respectively. Monitoring well MW-2 located approximately 15 feet downgradient of the former UST has been dry since 2000. However, prior to 2000 there was enough water to sample MW-2 for five quarters. During this time, only benzene was detected at concentrations between 4 µg/L and 51 µg/L.

The responsible party commissioned a third round of excavation in October 2005, and removed approximately 180 cubic yards of gasoline-impacted soil using large-diameter augers to a depth of 45 feet below ground surface. Monitoring well MW-1, which was 40 feet deep and

located near the former USTs, was destroyed during the excavation. The excavation removed gasoline-impacted soil in the vicinity and beneath MW-1. Soil samples collected from the bottom of the auger excavations contained only trace amounts of petroleum hydrocarbons at concentrations below soil cleanup goals.

Groundwater monitoring data on December 5, 2005, indicate that MW-2 was still dry and that concentrations of TPHg and benzene in downgradient well MW-4 (approximately 60 feet from the former USTs) were below laboratory detection limits. Following the December 2005 groundwater sampling, three borings were advanced near the excavation and former USTs to 54 feet below ground surface and temporary wells were installed to collect groundwater samples. No groundwater was observed in any of the borings after waiting up to one week, indicating that groundwater that was historically in this area is temporary in nature, is a perched groundwater zone that is limited in extent, and/or had been removed with the soil during the excavation in October 2005.

The depth to groundwater is generally 35 to 45 feet below ground surface and flows to the southwest at a gradient of 0.007 feet per foot. The nearest City of Watsonville water supply well is located approximately 5,000 feet south of the site.

Based on the removal of the USTs, excavation of impacted soil, and the fact that residual concentrations of petroleum hydrocarbons in soil and groundwater meet cleanup goals, no further investigation or cleanup is necessary. We have notified the Santa Cruz County Health Services Agency, the property owner and other interested parties of our plan to close this case. In response, we received a request from one of the adjacent neighbors to sample his water supply well. The well was sampled, and results indicate that petroleum hydrocarbon constituents were below laboratory detection limits. The neighbor was notified of the well sampling result. The responsible party has been directed to destroy all monitoring wells. Water Board 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

Former Lighthouse Alliance Site, 191 Lighthouse Avenue, Monterey, Monterey County [Wei Liu 805-542-4648]

Staff recommends closure of this underground storage tank (UST) case where groundwater sample results indicate groundwater pollution remains in groundwater at a concentration slightly greater than the Central Coast Water Board's cleanup goal for methyl tertiary butyl ether (MTBE) at 6.3 micrograms per liter (µg/L) in one monitoring well. All other hydrocarbon constituents were below detection limits or this Water Board's cleanup goals.

Three gasoline USTs (6,000, 8,000, and 10,000 gallons in capacity) and one 350-gallon waste oil UST were removed in June 1999. In April 2002, one additional 250-gallon UST was discovered and removed. Soil samples collected from below the USTs indicated maximum concentrations of 6,400 milligrams per kilograms (mg/kg) total petroleum hydrocarbons as gasoline (TPH-g), 49 mg/kg benzene, and 20 mg/kg MTBE. Groundwater samples collected from the excavation during the UST removal detected up to 82,000 micrograms per liter (µg/L) TPH-g, 4,300 µg/L benzene, and 43,000 µg/L MTBE.

The responsible party submitted a Corrective Action Plan (CAP) in April 2001, recommending excavation of contaminated soil. Approximately 2,340 tons of soil was removed during the remedial activities. The responsible party's consultant subsequently installed four groundwater monitoring wells to

evaluate the effectiveness of the cleanup and to monitor groundwater quality. After remedial excavation and installation of the monitoring wells, initial sample results detected TPH-g, benzene, and MTBE at maximum concentrations of 2,940 µg/L, 13 µg/L, and 1,820 µg/L, respectively. A quarterly groundwater monitoring program was implemented in November 2002 to monitor the contaminant concentrations with respect to time.

Results of soil and groundwater confirmation sampling and subsequent groundwater monitoring indicate that soil and groundwater contaminants are confined to a small area near the property boundary and the street where excavation could not be performed. Two additional monitoring wells were installed downgradient of this area in October 2003. Subsequent quarterly groundwater monitoring confirmed that the extent of the residual groundwater contamination is laterally defined and only present in one monitoring well. To accelerate the natural bio-degradation of the residual contaminant levels near the one impacted well, oxygen releasing compound (ORC) "socks" were placed in MW-4 between February 2004 and January 2005. The most recent sampling data for samples collected on February 2006, indicate a maximum concentration of 6.3 µg/L MTBE in MW-4. All other gasoline constituents were below detection limits or this Water Board's cleanup goals.

The site lies within the Monterey Peninsula Subarea of the Salinas Hydrologic Unit, which the "Water Quality Control Plan, Central Coast Region" (Basin Plan) designates groundwater as having beneficial uses for domestic and municipal supply, agricultural supply, and industrial supply. Therefore, cleanup goal for the MTBE is 5 µg/L.

Depth to underlying groundwater is approximately 2 to 5 feet below ground surface. Groundwater flow is generally to the northeast with a gradient of 0.06 feet per foot. The nearest water supply well is located approximately 1,600 feet from the site. The remaining MTBE is unlikely to reach the drinking water supply well due to the distance and low remaining concentration.

Our recommendation for closure is based on the following:

1) The source of the leak, the former USTs, has been removed,
2) The majority of the contamination mass has been removed through excavation to the extent practical,
3) Enhanced bio-remediation processes using ORC have further reduced the residual MTBE concentration to a level that is slightly above the cleanup goal (from a maximum of 3,140 µg/L MTBE in MW-4 in April 2003, to 6.3 µg/L, in February 2006),
4) 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.

In addition, Water Board 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 for residential land use and construction worker direct exposure scenarios indicate no significant threat to human health or the environment.

Based on the results of the tank removal, contaminated soil excavation, ORC

application, the decreasing trend in MTBE concentrations and the recent groundwater monitoring data, there is no threat to groundwater quality and no further groundwater investigation or cleanup is necessary. Monterey County Health Department staff agrees with this determination. The responsible party and fee titleholder has been notified of this proposed case closure. Unless the Water Board objects, and pending proper monitoring well destruction, the Executive Officer will issue a formal case closure letter.

Courtesy Motors, 527 Chapala Street, Santa Barbara, Santa Barbara County [John Mijares, (805) 549-3696]

Staff recommends closure of this underground storage tank (UST) case where groundwater sample results indicated that groundwater contamination remains at concentrations greater than Central Coast Water Board (Water Board) cleanup goals of 1 microgram per liter (µg/L) for benzene and 5 µg/L for methyl tertiary-butyl ether (MTBE). Other petroleum hydrocarbon constituents were either not detected or were below their respective cleanup goals. In January 2006, the last site monitoring event, benzene was detected in dewatering well DW-1 at a concentration of 3.7 µg/L and MTBE was detected in monitoring well MW-7 at 6.3 µg/L. The subject site is currently operated as a used car dealership.

The responsible party removed a leaking 550-gallon gasoline UST in April 1988, and soil and groundwater assessment began in 1989. The responsible party has commissioned the following corrective action activities at the site:

- Excavation and disposal of approximately 332 tons of contaminated soil 1992;
- Installation of a groundwater pump and treat system in 1998, which resulted in the removal and treatment of approximately six million gallons of contaminated groundwater;
- Subsurface injection of hydrogen peroxide and Fenton's reagent from 2000 to 2003 to oxidize petroleum hydrocarbons; and
- Additional removal of approximately 660 tons of residual contaminated soil by excavation and bucket augering techniques in 2005.

Approximately 97% of the contaminated soil was removed, leaving approximately 20 cubic yards of impacted soil. The residual contaminated soil is anticipated to attenuate over time. The residual benzene and MTBE concentrations in groundwater are isolated, limited in extent, and exhibit decreasing concentration trends. Natural attenuation is expected to reduce benzene and MTBE concentrations to below water cleanup goals over time.

The depth to groundwater is approximately 10 feet and flows to the east at a gradient of 0.0066 feet per foot. The nearest water supply well is located approximately 1500 feet to the northeast of the site. Considering this distance and the low concentrations of benzene and MTBE, the residual contamination is not expected to impact this well.

The site lies within the Santa Barbara Groundwater Basin (3-17). 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 goal for benzene is 1.0 µg/L based on the California Primary Maximum Contaminant Level (MCL) and 5 µg/L for MTBE based on the California Secondary MCL.

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

1. The tank, main mass of contaminated soil, and six million gallons of contaminated groundwater have been removed or remediated;
2. The extent of soil and groundwater contamination have been fully characterizeand are localized to limited areas;
3. The residual concentrations of benzene (3.7 µg/L) and MTBE (6.3 µg/L) are only slightly above the cleanup goals of 1 µg/L and 5 µg/L, respectively and 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.

Water Board staff has evaluated the 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 for commercial land use and construction worker direct exposure scenarios 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.

Former Unocal Service Station, 4299 State Street, Santa Barbara, Santa Barbara County [John Mijares, (805) 549-3696]

Staff recommends closure of this underground storage tank (UST) case where groundwater sample results indicated the 1,2-dichloroethane (EDC) remains at concentrations greater than the Central Coast Water Board (Water Board) cleanup goal of 0.5 microgram per liter (µg/L). Other petroleum hydrocarbon constituents were either not detected, or were below their respective cleanup goals, for the last seven years. In February 2006, the most recent monitoring event, EDC was detected in monitoring wells MW-11, PZ-2, and PZ-3 at concentrations of 1.6 µg/L, 1.9 µg/L, and 1.1 µg/L, respectively.

The subject site is currently occupied by a tire and auto shop in the southern portion of the property and by an auto lube shop in the northern portion of the property. A service station occupied at the site from 1947 to 1975, and was operated by Unocal from 1957 to 1975. Unocal removed three 10,000-gallon USTs in December 1986, and excavated gasoline-impacted soil 15 feet below ground surface. Unocal subsequently commissioned a site assessment in 1987 to delineate the extent of groundwater contamination. In March 1992, another 1,400 cubic yards of gasoline-impacted soil were excavated in the vicinity of the former USTs.

Since February 1999, gasoline constituents, with the exception of EDC, were not detected above laboratory detection limits or were below water cleanup goals in all monitoring wells associated with the site. In August 2003, approximately 200 pounds of hydrogen release compound (HRC) were injected into the shallow aquifer to accelerate the attenuation of EDC. As stated above, the highest concentration of EDC detected

during the last monitoring event in February 2006 was 1.9 µg/L. Concentrations of EDC have declined from a site maximum of 240 µg/L in April 1991 to 1.9 µg/L.

The depth to groundwater is approximately 9 to 14 feet and predominantly flows to the south/southeast at a gradient of 0.006 feet per foot. The nearest water supply well is located approximately 1000 feet to the northwest and upgradient of the site. Considering this distance and the low concentrations of EDC, the residual contamination is not expected to impact this well.

The site lies within the Santa Barbara Groundwater Basin (3-17). 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 goal for EDC is 0.5 µg/L based on the California primary maximum contaminant level (MCL).

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

5. The tank and the majority of contaminated soil have been removed or remediated;
6. Residual gasoline hydrocarbon concentrations have significantly decreased from 1994 to 2005 due to active cleanup and natural attenuation processes, which are expected to continue;
7. The extent of soil and groundwater contamination have been fully characterized and are limited in extent;
8. The residual concentrations of EDC (maximum of 1.9 µg/L) are only slightly above the MCL of 0.5 µg/L and are expected to continue to decline, and
9. 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 the 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 for commercial land use and construction worker direct exposure scenarios 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.

<u>EZ Serve Station No. 100981, 4901 Soquel Drive, Soquel, Santa Cruz County [Tom Sayles 805-542-4640]</u>

Staff recommends closure of this underground storage tank (UST) case where groundwater sample results indicate that pollution remains at a concentration slightly greater than the cleanup goal for tert-butyl alcohol (TBA). The maximum TBA concentration was 15 micrograms per liter (µg/L) for samples collected on April 26, 2006. All other petroleum hydrocarbon constituents,

including MTBE, were below detection limits or this Water Board's cleanup goals.

Historical site documents indicate that one 10,000-gallon, two 4,000-gallon USTs, and one 250-gallon waste oil UST were removed on October 31, 1989. Initial soil samples collected from the tank excavation indicated maximum concentrations of total petroleum hydrocarbons as gasoline (TPH-g), and benzene at 2,900 milligrams per kilograms (mg/kg), and 120 mg/kg, respectively. The responsible party commissioned installation of three soil borings on October 24, 1990. Maximum concentrations in soil were 5,300 mg/kg TPH-g and 12 mg/kg benzene. Maximum concentrations in groundwater samples were 8,500 µg/L TPH-g and 330 µg/L benzene.

The responsible party's consultant installed a total of eight groundwater-monitoring wells between October 24, 1990, and June 13, 1995. Quarterly groundwater monitoring has been on-going since 1990. The maximum concentration of TPH-g was detected on September 11 1992 at 60,000 µg/L, and the maximum concentration of benzene was on July 4, 1993, at 15,000 µg/L. The site's maximum concentration of MTBE was 35 µg/L on March 18, 1996.

The removal of the USTs and approximately 2,500 gallons of groundwater during feasibility studies, and natural attenuation have reduced petroleum hydrocarbon constituent concentrations to non-detectable, or to concentrations below cleanup goals, with the exception of 15 µg/L TBA in one monitoring well.

The site lies within the Santa Cruz Hydrologic Unit, which the "Water Quality Control Plan, Central Coast Region" (Basin Plan) designates groundwater as having beneficial uses for domestic and municipal supply, agricultural supply, and industrial supply. Therefore, the cleanup goal for TBA is 12 µg/L.

Depth to groundwater is approximately 27 to 33 feet below ground surface. Groundwater flow is generally to the southeast with a gradient of 0.05 feet per foot. The nearest water supply well is located more than ½ mile from the site.

Our recommendation for closure is based on the following:

5) The source of the leak, the former USTs, have been removed,
6) The extent of contamination remaining above the cleanup goal is localized in extent, and confined to one well at the site,
7) Historic groundwater monitoring trends indicate that natural attenuation processes have been successful in reducing petroleum hydrocarbon concentrations to levels that are below (or approaching) the cleanup goals,
8) The remaining TBA concentration above the cleanup goal will continue to decline and the contamination is unlikely to reach a drinking water supply well,
9) 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.

Water Board 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 for residential land use and

construction worker direct exposure scenarios indicate no significant threat to human health or the environment.

Water Board staff has notified all current fee titleholders of the subject site and neighboring properties potentially impacted by releases from the USTs, allowing for public comment prior to case closure. Water Board staff has not received objections to the proposed case closure.

Based on the removal of the tanks, the groundwater extractions, natural attenuation processes, and groundwater monitoring data, there is no threat to groundwater quality and no further groundwater investigation or cleanup is necessary. The Santa Cruz County Environmental Health Services Agency agrees with this determination. Unless the Water Board objects, and pending proper monitoring well destruction, the Executive Officer will issue a formal case closure letter.

Former Exxon Service Station, 1010 K Street, San Miguel, San Luis Obispo County [Corey Walsh 805/542-4781]

Staff recommends closure of this underground storage tank (UST) case where sample results indicate pollution remains at concentrations greater than Central Coast Water Board (Water Board) cleanup goals for methyl tertiary-butyl ether (MTBE) in soil, and benzene in groundwater.

The soil cleanup goal for MTBE is exceeded in one sample collected at a depth of 15 feet below ground surface (bgs) at a concentration of 4.22 milligrams per kilogram (mg/kg), which exceeds the generally applied cleanup goal of 0.05 mg/kg. This sample was collected during installation of monitoring well MW-1; however, this well never contained groundwater. Another well was installed near MW-1, and the initial groundwater sample results indicated a concentration of 0.7 micrograms per liter (µg/L) MTBE, although MTBE has never been detected since. The groundwater cleanup goal for benzene is exceeded in one monitoring well sample at a concentration of 1.4 µg/L, which is slightly above the cleanup goal of 1.0 µg/L.

The subject site is a former retail gasoline service station that is currently occupied by a bakery. The service station operated at the site from 1977 until 1996. The tanks remained in-place and inactive until April 2000 when they were removed under a supplemental environmental project agreement (with a third party) in lieu of assessment of administrative civil liability for failure to submit a required monitoring report for a different case.

The responsible party conducted an initial soil and groundwater investigation involving installation of eight soil borings and one groundwater monitoring well. Further investigations were conducted with the installation of 12 groundwater monitoring wells. The results of soil sampling conducted in 2004 and 2005 indicate maximum remaining soil contaminant concentrations of 87 mg/kg gasoline petroleum hydrocarbons and 4.22 mg/kg MTBE.

Recent groundwater sampling results from July 13, 2006, indicate that groundwater samples collected from all monitoring wells are below Water Board cleanup goals, or detection limits, for total petroleum hydrocarbons and other hydrocarbon constituents, including fuel oxygenates, except for 1.4 µg/L benzene in MW-8. The depth to groundwater ranges from approximately 17 to 42 feet bgs. The flow direction is generally to the southeast at a gradient of approximately 0.005 feet/foot. The nearest active municipal drinking water well (San Miguel No. 3) is approximately 2,000 feet northeast of the site, and is perforated from 85 to 300 feet bgs. The site lies within the Atascadero Hydrologic Subarea (3-9.81) of the Salinas Hydrologic Unit. The Central Coast Basin Plan designates groundwater beneficial uses to be domestic and municipal supply, agricultural supply, and industrial supply.

Quarterly groundwater monitoring data have indicated low or non-detectable levels of petroleum hydrocarbons. The volume of MTBE-impacted soil above the generally applied cleanup goal is limited in extent and past groundwater monitoring data indicated that leaving this soil in place will not pose a significant threat to groundwater quality. Therefore, we have no further requirements for groundwater monitoring, investigation, or cleanup.

Our recommendation for closure is based on the following:

Remaining groundwater pollution above cleanup goals is limited in extent, is only detected in one well, and is only slightly above cleanup goals,
Remaining hydrocarbon constituents are unlikely to reach a drinking water supply well,
The volume of residual contaminated soil is limited and is not leaching or threatening groundwater quality, and
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.

Water Board staff has evaluated remaining soil and groundwater concentrations with respect to direct human exposure, indoor air impacts, gross contamination, and leaching potential in soil. Comparison of these residual soil and groundwater concentrations with corresponding environmental screening levels for a commercial land use scenario indicate no significant threat to human health or the environment.

Based on the groundwater monitoring results, there is no significant threat to groundwater resources. In addition, San Luis Obispo County Division of Environmental Health Services, as the lead agency for soil investigation and cleanup activities, agrees with case closure. The property owner/responsible party and adjacent property owners/tenants have also been notified of the pending case closure. Unless the Water Board objects, and pending monitoring well destruction, the Executive Officer will issue a case closure letter pursuant to California Underground Storage Tank Regulations.

Former Dewar Property; 840 Paso Robles Street, Paso Robles, San Luis Obispo County [Corey Walsh 805-542-4781]

Staff recommends closure of this underground storage tank (UST) case where soil sample results indicate pollution remains at concentrations greater than Central Coast Water Board (Water Board) cleanup goals for gasoline and diesel petroleum hydrocarbons. In addition, groundwater sample results indicate that diesel, and methyl tertiary-butyl ether (MTBE) are greater than groundwater cleanup goals. Analytical results indicate diesel, and MTBE at maximum concentrations of 1,700 micrograms per liter (µg/L), and 7.5 µg/L, respectively. Other typical petroleum hydrocarbon constituents of concern (e.g., benzene, toluene, ethylbenzene, xylenes, and other fuel oxygenates) are below cleanup goals or were not detected in groundwater samples. Attachment 1, *TPH Gasoline & Diesel Concentration*, presents the groundwater flow direction and contaminant concentrations for samples collected on June 9, 2006. Attachment 2, Soil excavation boundary, sample locations, and cross-section locations presents the location of samples collected in October 2002. Attachment 3, Cross Sections A-A' and B-B' presents contaminant concentrations within the excavation bottom and side walls.

The site is a former bulk fuel facility that operated six underground storage tanks (USTs) from the 1950's until 1994 when they were removed. The tanks formerly

contained gasoline, diesel, and Stoddard solvent, and ranged in size from 6,000-gallons to 12,000-gallons. The site is currently occupied by an industrial park with various uses including an automotive wheel alignment shop.

In April 1994 during removal of the USTs, soil samples were collected under San Luis Obispo County oversight, and the results indicated that underlying soil and groundwater were impacted with petroleum hydrocarbons. Groundwater and free product were observed in the UST excavation, and results of a grab groundwater sample indicated 27,000 µg/L of gasoline and 7,200 µg/L of diesel hydrocarbons.

Soil samples collected on June 1994, indicated maximum concentrations of diesel at 3,300 milligrams per kilogram (mg/kg), gasoline at 1,700 mg/kg and benzene at 0.11 mg/kg. Groundwater sample results indicated maximum gasoline at 4,100 µg/L, diesel at 25,000 µg/L, and benzene at 280 µg/L.

The responsible party conducted soil remedial excavations in two main phases. The first phase was during removal of the six USTs in April 1994, and a second phase in October 2002. Approximately 2,500 cubic yards of soil were excavated during the UST removal phase, were bio-remediated, and disposed of on-site with San Luis Obispo County Health Services approval. In 2002 during the subsequent excavation, approximately 3,600 tons were excavated and disposed off-site at EnviroCycle in McKittrick. However, soil removal was limited to on-site excavation, and soil samples collected in December 2002, indicate residual gasoline concentrations of 500 milligrams per kilogram (mg/kg) at 12.5 feet below ground surface (bgs), and diesel concentrations of 2,600 mg/kg at 12 feet bgs, and 9,000 mg/kg at 8 feet bgs. These diesel concentrations were from samples collected near the southern property line so that the contamination appears to extend south of the subject property below adjacent properties (Arbor Tree Surgery) at 802 Paso Robles Street, and (Mr. Mike Caruana property) at 828 Paso Robles Street as illustrated on Attachment 3.

Shallow groundwater beneath the site has generally fluctuated between 10 feet and 18 feet below ground surface, and generally flows to the east/northeast at approximately 0.04 feet per foot. The site lies within the Atascadero Hydrologic Subarea (3-9.81) of the Salinas Hydrologic Unit. 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 gasoline and diesel constituents are as follows: 1,000 µg/L total petroleum hydrocarbons and 5 µg/L MTBE. The petroleum and MTBE cleanup goals have been established based on taste and odor thresholds, not health risks.

The nearest water supply wells are three inactive City of Paso Robles municipal supply wells located approximately 2,100 feet south of the site. These wells have not operated for approximately ten years. The residual petroleum hydrocarbons remaining are unlikely to impact these wells considering the groundwater flow direction, well distances, and low remaining contaminant concentrations. The nearest surface water is the Salinas River, which is approximately 1,000 feet east of the site.

The groundwater plume extent has been adequately characterized and is generally contracting or declining in size and concentration, and historical monitoring data indicate the petroleum hydrocarbon concentrations are expected to continue to decrease with time. Therefore, based on the information provided, we have no further requirements for soil or groundwater monitoring, investigation or cleanup of the site.

Our recommendation for closure is based on the following:
Remaining groundwater pollution above cleanup goals is limited in extent and decreasing in concentration,
Contaminated soil mass has been removed from the site to the extent practical,
Remaining hydrocarbon constituents are unlikely to reach a drinking water supply well, or the Salinas River,
San Luis Obispo County Health Services, as the lead agency for soil investigation and cleanup activities, agrees with case closure, and
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, Water Board staff has evaluated remaining soil and groundwater concentrations with respect to direct human exposure, indoor air impacts, gross contamination, and leaching potential in soil. Comparison of these residual soil and groundwater concentrations with corresponding environmental screening levels for a commercial land use scenario indicate no significant threat to human health or the environment. However, because of the residual soil contamination remaining in the subsurface near the southern property line, Water Board staff will require post closure site management requirements including proper handling of residual soil and groundwater contamination which may be brought to the surface during futured development activities such as grading, excavation, construction dewatering, or the installation of water wells. Water Board staff will outline these post closure site management requirements in the letter transmitting the case closure letter and include them in the case closure summary which will be posted in GeoTracker. The levels of residual contamination and associated risk of being brought to the surface are expected to reduce with time. The property owner and adjacent property owners have been notified of the proposed case closure, and of the site management requirements.

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

Attachments

1. *TPH Gasoline & Diesel Concentration (Figure 5)*
2. Soil excavation boundary, sample locations, and cross-section locations (Figure 6)
3. Cross Sections A-A', B-B' (Figure 7)