STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

STAFF REPORT FOR REGULAR MEETING OCTOBER 17, 2008

ITEM NUMBER: 6

SUBJECT: Low Threat and General Discharge Cases

DISCUSSION

General NPDES Permit for Discharges with Low Threat to Water Quality

Davenport County Sanitation District, Santa Cruz County [Mike Higgins 805-542-4649]

On September 2, 2008, Davenport County Sanitation District (Discharger) submitted a Notice of Intent and fee for enrollment under the Low-Threat Discharge General Permit, WDR Order No. R3-2006-0063. The Discharger proposes to discharge backwash filtrate from its water treatment plant to a man-made water storage pond. The pond has been used to store excess water diverted from San Vicente Creek using pipelines. The District hopes the discharge will replace some of the creek waters, which may soon be returned to the creek to enhance aquatic habitat in the creek.

The District hopes the discharge will replace enough water diverted from the pond to continue to support habitat in the pond. The filtrate will be potable water with a low level of naturally-occurring solids. Occasionally, due to runoff during rain events, the pond may overflow to the Pacific Ocean.During overflow to the ocean, Revised Monitoring and Reporting Program No. R3-2006-0063 requires the Discharger to monitor the discharge for flow, pH, dissolved oxygen, and turbidity.

General WDRs for Small Domestic Wastewater Systems

Shandon Roadside Rest Area, Shandon, San Luis Obispo County [Tom Kukol 805/549-3689]

The California Department of Transportation's (CalTrans) project to improve Highway 46 east includes the replacement of the Shandon Roadside Rest Area's on-site wastewater treatment system. Because of high nitrogen loading rates, Water Board staff worked with CalTrans to develop an on-site system that significantly removes nitrogen, while having low operation and maintenance requirements. CalTrans enlisted the aid of preeminent scholars and consultants to design the on-site system. The system's predicted average flow will be 4,300 gallons per day. The treatment system consists of the following:

- 25,000-gallon septic tank
- 12,000-gallon recirculation tank
- Re-circulating gravel filter
- Subsurface wetlands used to drive the de-nitrification reaction with the use of organic matter
- Gravity fed to absorption chambers.

On September 22, 2008, Water Board staff enrolled the facility under Water Quality Order No. 97-10-DWQ, "General Waste Discharge Requirements for Discharges to Land by Small Domestic Wastewater Treatment Systems" (General Requirements) adopted by the State Water Resources Control Board on November 18, 1997. Only domestic wastewater treatment and disposal systems with a maximum average daily flow of 20,000 gallons or less can be regulated by these General Requirements. Finding 2 of Water Quality Order No. 97-10-DWQ states, "Discharges to land from small domestic wastewater treatment and disposal systems have certain common characteristics, such as similar constituents, concentration of constituents, disposal techniques, flow ranges and they require the same or similar treatment standards. These types of discharges are more appropriately regulated under general Waste Discharge Requirements."

The proposed discharge will comply with Water Board standards, prohibitions, and requirements to protect water quality. Staff has modified the Monitoring and Reporting Program included with Order No. 97-10-DWQ specifically for the discharge.

General WDRs for discharges of Winery Waste

Kendall-Jackson Monterey Winery, Monterey County [Tom Kukol 805/549-3689]

Kendall-Jackson Monterey Winery currently discharges, under the General Winery Waste Discharge Requirements, from their winery located at 37300 Doud Road in Soledad. Kendall-Jackson Monterey Winery proposes to expand annual winery production from 1,577,000 cases to 2,300,000 cases. The winery expects to generate an annual average wastewater flow of approximately 63,000 gallons per day, an average crush flow of 125,000 gallons per day, and a peak crush flow of 350,000 gallons per day. Pretreatment consists of solids separation from the winery wastewater through drain screens and a rotary screen. Kendall-Jackson Monterey Winery composts screened solids and applies them to the vineyard soil according to best management practices. Wastewater treatment occurs in two aerated facultative ponds. Treated wastewater is recycled as irrigation water on a 280-acre vineyard. On September 19, 2008, Water Board staff enrolled the proposed expanded discharge under the General Winery WDRs. As a condition of enrollment, Kendall Jackson Monterey Winery must comply with Monitoring and Reporting Program No. R3-2008-0018, which has been modified specifically for Kendall Jackson Monterey Winery.

General Waiver for Specific Types of Discharges

Former Chevron Service Station No. 9-0750; 1745 Spring Street, Paso Robles, San Luis Obispo County [Corey Walsh 805/ 542-4781]

On March 20, 2008, Central Coast Water Board staff received *Revised Work Plan for Groundwater Treatability Study using Hydrogen Peroxide*, submitted by SECOR International, Inc. on behalf of Chevron Environmental Management Company (EMC). The subject site is an inactive service station located on the southwest corner of the intersection of 18th Street and Spring Street in Paso Robles. The property is currently owned by Chevron EMC. Results of subsurface investigations indicate that soil and groundwater in the area of the former fuel dispensers, product piping, waste oil tank, and underground storage tanks are impacted with petroleum hydrocarbons. Chevron's previous remedial actions included over-excavation and disposal of approximately 98 cubic yards of soil. Soil and groundwater investigations and monitoring detected petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylebenzene, total xylenes, and tertiary-butyl alcohol (TBA) above cleanup goals.

The Revised Work Plan for Groundwater Treatability Study using Hydrogen Peroxide evaluates the feasibility of using hydrogen peroxide (H_2O_2) injection for cleanup of hydrocarbon affected soil and groundwater. The cleanup plan recommends and describes a proposal to install three hydrogen peroxide injection wells, one monitoring well and implementation of a 3-month hydrogen peroxide injection pilot test. Hydrogen peroxide is an *in-situ* remedial technology that reduces concentrations of petroleum products through oxidation. The injection of hydrogen peroxide to the subsurface must

comply with the General Waiver of Waste Discharge Requirements for Specific Types of Discharges, Resolution No. R3-2008-0010 (General Waiver). This staff report serves as notification to the Central Coast Water Board that Water Board staff will issue a Notice of Applicability once EMC meets the conditions of the General Waiver.

On August 5, 2008, after on-going discussions with the consultant, Central Coast Water Board staff approved the Revised Treatability Work Plan and notified the site's property owner and other interested parties of the proposed corrective action pilot test. To date, we have not received any comments regarding the proposed pilot test.

Former 76 Service Station No. 6053; 1340 Taft Street, San Luis Obispo, San Luis Obispo County [Corey Walsh 805/ 542-4781]

On March 20, 2008, Central Coast Water Board staff received an *in-situ* Treatability Study Work Plan submitted by SECOR International, Inc. on behalf of ConocoPhillips Company. The subject site is a former 76 service station located on the northwest corner of the intersection of Taft Street and Kentucky Street in San Luis Obispo. The property is owned by The Icon at SLO, LLC and is currently vacant, but is scheduled to be redeveloped. Results of subsurface investigations indicate that soil and groundwater in the area of the former product islands, and underground storage tanks are impacted with petroleum hydrocarbons. ConocoPhillips's previous remedial actions included excavation and disposal of approximately 650 cubic yards of soil. Soil and groundwater investigations and monitoring detected petroleum hydrocarbons as gasoline (TPH-g), benzene, methyl-tertiary-butyl ether (MTBE), and tertiary-butyl alcohol (TBA) above cleanup goals.

The Treatability Study Work Plan evaluates the feasibility of using ozone sparging for cleanup of hydrocarbon-affected soil and groundwater. The work plan recommends and describes a proposal to install eleven ozone injection/sparge wells and two groundwater monitoring wells. Ozone is an *in-situ* remedial technology that reduces concentrations of petroleum hydrocarbon constituents through chemical oxidation. The introduction of Ozone to the subsurface must comply with the General Waiver. This staff report serves as notification to the Central Coast Water Board that Water Board staff will issue a Notice of Applicability once ConocoPhillips meets the conditions of the General Waiver.

On August 20, 2008, Central Coast Water Board staff approved the Treatability Study Work Plan and notified the site's property owner, neighboring property owners, and other interested parties of the proposed corrective action pilot test. To date, we have not received any comments regarding the proposed action.

San Paso Truck & Auto; 81 Wellsona Road, Paso Robles, San Luis Obispo County [Corey Walsh 805/ 542-4781]

On February 15, 2008, Central Coast Water Board staff received a Treatability Study Work Plan submitted by SECOR International, Inc. on behalf of their client, Mr. John Wolf. The subject site is an active gasoline service station, convenience store, and restaurant located on the west side of El Camino Real (U.S. Highway 101) in Paso Robles. The property is currently owned by The Wine Country Gateway Recreational Vehicle Park, LLC. Results of subsurface investigations indicate that soil and groundwater in the area of the fuel dispensers and underground storage tanks (UST) at the site are impacted with petroleum hydrocarbons. Previous remedial actions included a dual-phase extraction (DPE) pilot test. Soil and groundwater investigations and monitoring have detected petroleum hydrocarbons as gasoline (TPH-g) and benzene above cleanup goals.

The Treatability Study Work Plan evaluated the feasibility of using hydrogen peroxide (H_2O_2) injection for cleanup of hydrocarbon-affected soil and groundwater. The cleanup plan recommends and describes a proposal to install three monitoring wells, three additional soil borings in the former UST area and implementation of a hydrogen peroxide injection pilot test. Hydrogen peroxide is an *in-situ* remedial technology that reduces concentrations of petroleum products through oxidation.

The injection of hydrogen peroxide to the subsurface must comply with the General Waiver. This staff report serves as notification to the Central Coast Water Board that Water Board staff will issue a Notice of Applicability once the Responsible Party (Mr. John Wolf) meets the conditions of the General Waiver.

On June 23, 2008, the Central Coast Water Board staff approved the Treatability Study Work Plan and notified the site's property owner, adjacent property owners, and other interested parties of the proposed corrective action pilot test. To date we have not received any comments regarding the proposed pilot test.

Former J's Gas & Save, 1114 Freedom Boulevard, Watsonville, Santa Cruz County (John Mijares 805-549-3696)

On August 28, 2008 GeoRestoration, Inc.'s (GeoRestoration) submitted a *Workplan to Conduct Pilot Test* On *Well MW-6* (workplan). The site has an approved Corrective Action Plan using Dual-Phase Extraction (DPE) and Air Sparging (AS). GeoRestoration started the DPE/AS system in March 2007 under the Pay for Performance (PFP) program of the Underground Storage Tank (UST) Cleanup Fund. As of June 2008, the DPE/AS system has reduced petroleum hydrocarbons concentrations in key wells to below the active remediation targets established by the UST Cleanup Fund. The PFP contract requires GeoRestoration to meet the remediation targets for at least one year as a condition for full payment under the PFP contract.

GeoRestoration believes that the use of DPE/AS is no longer cost-effective because of the low concentrations of petroleum hydrocarbon constituents in the extracted soil vapor and groundwater. GeoRestoration proposes to continue groundwater remediation with in-situ chemical oxidation (ISCO) using hydrogen peroxide. GeoRestoration has completed bench scale testing and proposes to conduct a field pilot test to assess the effectiveness of hydrogen peroxide in treating the residual petroleum hydrocarbon in groundwater. The workplan provides the necessary information to fully comply with the requirements for enrollment under the Central Coast Water Board's General Waiver.

On September 10, 2008, Central Coast Water Board staff approved the proposed hydrogen peroxide in-situ chemical oxidation pilot study workplan and issued a Notice of Applicability to Mr. Macedonio Medina, the responsible party, for enrollment under the General Waiver. This staff report serves as notification to the Central Coast Water Board that Water Board staff has issued a Notice of Applicability to Mr. Macedonio Medina to implement the workplan.

Former B&K Union Tow Service, 101 The Alameda, San Juan Bautista, San Benito County (John Mijares 805-549-3696)

On September 3, 2008, Central Coast Water Board staff enrolled Mr. Ken Laverone, the responsible party for the subject site, under the Central Coast Water Board's General Waiver. The General Waiver covers the installation and operation of additional in-situ Submerged Oxygen Curtain (iSOC) diffusers in MW-2, MW-7, MW-8, and MW-9 at the site. The iSOC diffusers supersaturate the well and surrounding formation with dissolved oxygen, which enhances the biodegradation of petroleum hydrocarbon compounds in groundwater. The site currently operates an iSOC system, which was approved by the Central Coast Water Board on March 7, 2005. D&M Consulting Engineers, on behalf of Mr. Laverone, has provided the necessary information to fully comply with the requirements for enrollment under the General Waiver

This staff report serves as a notification to the Central Coast Water Board that Water Board staff has issued a Notice of Applicability to Mr. Ken Laverone to install and operate the additional iSOC diffusers.

A-1 Dry Cleaners, 424 North Milpas, Santa Barbara, Santa Barbara County [Donette Dunaway, 805/549-3698]

The A-1 Dry Cleaners (A-1) business is located at 324 North Milpas Street in Santa Barbara, California. Site owners and tenants have continuously operated a dry cleaning business on the site since 1961. The shallow groundwater beneath and downgradient of the site contains chlorinated solvents which exceed the Maximum Contaminant Level for drinking water. Shallow groundwater beneath the site is at approximately six feet below ground surface. The parcels surrounding the site are used for commercial and light industrial businesses, single family residences, residential income property, and apartments. A-1 first detected chlorinated solvents at the site in 1996, and installed five groundwater wells and 28 soil/groundwater grab sample borings to investigate the extent and concentration of tetrachloroethylene (PCE) beneath the site. Although shallow groundwater is not currently used for drinking, the Water Board is charged with protecting beneficial uses of water resources and there is a potential for wastes to migrate to deeper drinking water aquifers.

A-1 submitted a Corrective Action Plan (CAP) which proposes a phased groundwater remediation program, and has agreed to comply with the requirements of the General Waiver for the proposed subsurface injection of Hydrogen Release Compound® (HRC®). An on-line version of CAP is located on http://www.geotracker.swrcb.ca.gov. In the CAP, A-1 proposes to inject HRC® into the groundwater. HRC is a non-toxic product that is injected into groundwater to speed up naturally occurring biological degradation of chlorinated solvents. A-1's consultant will inject HRC® into the vadose zone in six locations between the site building and Milpas Street as a treatment barrier downgradient of the site. Following the injection of HRC®, the consultant will continue to monitor groundwater to assess the effectiveness of this method of groundwater remediation. HRC® solution has a designed effective treatment period for enhancing groundwater waste degradation of one to two years. If HRC® proves effective, the consultants anticipate more injections to address solvents in groundwater across the entire site.

An on-site vapor survey found that PCE is present in the vapor-phase in soil beneath the site, thus there is a potential for this chemical to migrate into indoor air. Water Board staff required A-1 to evaluate the vapor intrusion risk from wastes in groundwater, and submit a Vapor Intrusion Risk Plan by September 18, 2008. Water Board staff has also directed the responsible party to submit a Vapor Mitigation Plan to address potential vapor intrusion risks. The Vapor Mitigation Plan will include direct indoor air monitoring and remediation in offsite, neighboring properties. Water Board staff sent a public response notification and Fact Sheet describing the A-1's groundwater waste and vapor inhalation risks, and the proposed cleanup plan to the neighbors within 500 feet downgradient of the site. Water Board staff did not receive public comments on the project. On September 23, 2008, Water Board staff approved the CAP, and enrolled A-1 Dry Cleaners under the General Waiver.

Former Santa Cruz Industries, 411 Swift Street, Santa Cruz, Santa Cruz County [Donette Dunaway, 805/549-3698]

The Santa Cruz Industries building is located at 411 Swift Street in Santa Cruz, and housed a former retail display manufacture and metal plating facility. The metal plating facility operated onsite for approximately 34 years and ceased operations in October 1988. The retail display manufacturing facility ceased operations in 1999. Santa Cruz Industries is responsible for cleaning up paint and chlorinated solvents in soil and groundwater beneath their site. Shallow groundwater beneath and downgradient of the site contains chlorinated solvents which exceed the Maximum Contaminant Level allowable for drinking water. The responsible party suspects that chlorinated solvents in soil and groundwater beneath the site leaked from painting and vapor degreasing activities. The building is currently used for food and beverage manufacturing, and industrial storage. The parcels surrounding the site include commercial and light industrial businesses, residences, and a school. The responsible party has investigated and monitored the soil and groundwater issues since 1991, and operated a vapor extraction system from November 1999 through July 2000. Shallow groundwater beneath the site ranges from four to seven feet below ground surface. Although shallow groundwater is not currently used for drinking, the Water Board is charged with protecting

beneficial uses of water resources and there is a potential for wastes to migrate to deeper drinking water aquifers.

Santa Cruz Industries submitted a "2-Phase Chemical Oxidation Pilot Study" (Pilot Study), which is a groundwater remediation program using in-situ chemical oxidation. As part of implementing the pilot study, Santa Cruz Industries has agreed to comply with the requirements of the General Waiver, including monitoring and mitigation for potential indoor vapor intrusion during and after the pilot study activities. An on-line version of Pilot Study is located on http://geotracker.waterboards.ca.gov. In the Pilot Study, Santa Cruz Industries proposes to inject RegenOx®, Hydrogen Release Compound® (HRC), and Metals Release Compound® (MRC) into the groundwater. RegenOx® causes a catalyzed chemical oxidation of chlorinated solvent wastes, which will immediately break down these waste compounds. HRC® is a non-toxic product that speeds up naturally occurring biological degradation of chlorinated solvents, and continues bioremediation for one to two years. The RegenOx® injections may cause metal wastes beneath the former metal plating shop at the site to oxidize, desorb from the soil, and move into the groundwater. To prevent moving metal wastes, the consultant will inject MRC® into the soil beneath the plating shop. MRC® will instantly react with any desorbed metals, and cause the metals to be immobilized via precipitation and/or sorption to soil in-situ. Following the injections, the consultant will continue to monitor groundwater to assess the effectiveness of the injection remediation. If the injections are successful, the responsible party plans to expand the pilot study site-wide.

Swift Industries performed a vapor survey at the site and found that PCE is present in the vapor phase in soil, indicating there is a potential for PCE to migrate into indoor air during injections. Central Coast Water Board staff required the responsible party to evaluate the indoor vapor intrusion risk and initiate the vapor intrusion contingency plan if indoor vapors exceed a pre-determined threshold during the injection process.

The project consultant sent a letter to the neighbors within 500 feet downgradient of the site, describing Santa Cruz Industry's groundwater wastes and the proposed cleanup plan, and requested public comments within 30-days. Water Board staff did not receive public comments on the project. On September 23, 2008 Water Board staff approved the Pilot Study, and enrolled Santa Cruz Industries in the General Waiver.