

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

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

Prepared on January 26, 2005

ITEM: 22

SUBJECT: WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR ON-SITE DOMESTIC ORENCO ADVANTEX TREATMENT/GEOFLOW DISPOSAL SYSTEM, CARRERA PROJECT, GREEN VALLEY ROAD, WATSONVILLE, SANTA CRUZ COUNTY, RESOLUTION NO. R3-2005-0042 – APN NO. 050-041-019

KEY INFORMATION

Disposal Type:	Individual on-site Orenco Advantex treatment system with Geoflow pressure shallow disposal system
Design Flow:	1,600 gallons per day, peak
Property:	2-acre residential
Landowner/Discharger:	Gonzalo Carrera
Local Oversight Agency:	Santa Cruz County Environmental Health Services

SUMMARY

On December 29, 2004, Board staff received a Report of Waste Discharge (ROWD) for a proposed on-site domestic Orenco Advantex treatment/Geoflow disposal system at the above-referenced property from Gonzalo Carrera (hereafter Discharger). Santa Cruz County Environmental Health Services (County Health Services) determined the site is unsuitable for a standard on-site subsurface disposal system because it does not meet Basin Plan requirements for (1) vertical separation between the disposal trench bottom and first-encountered groundwater and (2) wastewater percolation rates. Consequently, Health Services is not authorized to issue a permit without an exemption from the Basin Plan prohibitions.

Based on information provided in the ROWD, the Executive Officer (EO) approved the Basin Plan exemption on January 31, 2005. The EO also notified the Discharger of this proposed waiver of waste discharge requirements. The Board may

waive waste discharge requirements in accordance with California Water Code section 13269, as described in Resolution No. R3-2005-0042 (Attached).

DISCUSSION

System Design. The Discharger proposes to use the Advantex treatment system and the Geoflow pressure-dosing shallow disposal system to adequately treat and dispose of domestic wastewater to a site that does not comply with the following Basin Plan prohibition in Section VIII.D.3.1:

- Prohibition No. 3, which requires at least five feet of separation between the disposal trench bottom and usable ground water, including perched ground water.

Site investigations demonstrated depth to groundwater is often four feet and the site's

percolation rate is very slow, often up to 120 minutes/inch. The Basin Plan's requirement of five feet separation ensures adequate treatment in the soil column and prevents surfacing effluent.

The Avantex/Geoflow system addresses the concern expressed in the prohibition. The small discharge rate allows vegetation inhabiting the disposal site to take up most of the discharge, thereby limiting its percolation to groundwater while retaining the discharge below the ground surface. The system thereby provides adequate treatment while protecting the public health from surfacing effluent. (The system also reduces nitrate loading on groundwater by first removing nitrogen in the Avantex treatment system before distributing the wastewater to the site's surface soils where plant life uptakes water and nitrate.)

The Avantex system treats domestic wastewater to better than secondary standards; that is, to less than 30 milligrams per liter (mg/L) for both BOD and Total Suspended Solids (TSS). The Avantex also substantially reduces nitrogen levels in the wastewater, by at least 50 percent. Low effluent solids levels assist reliable operation of the Geoflow shallow pressure-dosing disposal system. The Geoflow system discharges about 0.5 gallons per hour (gph) of wastewater through each of many small orifices. A filter precedes the disposal system; the low-solids discharge from the treatment system extends the filter's life.

The Discharger designed the proposed treatment and disposal system in accordance with design manuals provided by the system manufacturers. County Health Services oversees the operation and maintenance of many such systems to ensure their reliable and effective performance. With adequate oversight, they have proven reliable.

Conditional Waiver. The waiver of waste discharge requirements and discharge of domestic sewage to the proposed on-site Geoflow disposal system is subject to the conditions and monitoring and reporting requirements included in Resolution No. R3-2005-0042 (Attached).

The proposed on-site domestic wastewater treatment and disposal system, if operated and maintained in accordance with the County Health Services permit requirements and the waiver conditions, will be in the public interest. This waiver is conditional and can be terminated at any time. This waiver expires on March 25, 2010.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Individual subsurface disposal systems for domestic residences are categorically exempt from CEQA under CEQA Guideline 15303.

RECOMMENDATION

Adopt Resolution No. R3-2005-0042

ATTACHMENT

1. Resolution No. R3-2005-0042

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