

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

STAFF REPORT FOR REGULAR MEETING OF FEBRUARY 11, 2005

Prepared on December 10, 2004

ITEM: 20

SUBJECT: WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR ON-SITE DOMESTIC ORENCO ADVANTEX TREATMENT/GEOFLOW DISPOSAL SYSTEM, AZIMI PROJECT, CATHEDRAL DRIVE, APTOS, SANTA CRUZ COUNTY, RESOLUTION NO. R3-2005-0011

KEY INFORMATION

Disposal Type: Individual on-site Orenco Advantex treatment system with Geoflow pressure shallow disposal system
Design Flow: 900 gallons per day, peak
Property: 0.35-acre residential
Landowner/Discharger: Abdul Azimi
Local Oversight Agency: Santa Cruz County Environmental Health Services

SUMMARY

On November 4, 2004, Regional 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 Abdul Azimi (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) adequate lot size. 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 December 9, 2004. 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. R3-2005-0011 (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 some Basin Plan prohibitions in Section VIII.D.3.1. These prohibitions include:

- Prohibition No. 3, which requires at least five feet of separation between the disposal trench bottom and usable ground water, including perched ground water, and
- Prohibition No. 11, which requires the site to be at least one acre in size.

Site investigations demonstrated groundwater occasionally rises to three feet deep and the lot size is approximately 0.35 acres. The Basin Plan's

requirement of five feet separation ensures adequate treatment in the soil column and prevents surfacing effluent. The Basin Plan's requirement for a one-acre minimum lot size controls the discharge of nitrates to loading rates protective of the groundwater's beneficial use as a source of drinking water. (Board staff determined the loading rates when developing the prohibitions for the Board's consideration in 1983.)

The Avantex/Geoflow system addresses both concerns expressed in the prohibitions. 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 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 Advantex 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 Advantex also substantially reduces nitrogen levels in the wastewater, by at least 50 percent. Low 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 systems 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. R3-2005-0011 (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 February 11, 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. R3-2005-0011

ATTACHMENT

1. Resolution No. R3-2005-0011

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