

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

**STAFF REPORT FOR REGULAR MEETING OF FEBRUARY 11, 2005**

Prepared on December 23, 2004

**ITEM NUMBER        22**

**SUBJECT:            WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR ON-SITE  
DOMESTIC FAST TREATMENT/GEOFLOW DISPOSAL SYSTEM,  
AKOL PROJECT, SAN ANDREAS ROAD, SANTA CRUZ COUNTY,  
RESOLUTION NO. R3-2005-0027**

**KEY INFORMATION**

Disposal Type:	Individual on-site FAST treatment system with Geoflow pressure shallow disposal system
Design Flow:	325 gallons per day, 30-day daily average
Property:	0.25-acre residential
Landowner/Discharger:	Kem Ako/Kathy Runyon
Local Oversight Agency:	Santa Cruz County Environmental Health Services

**SUMMARY**

On December 17, 2004, Regional Board staff received a Report of Waste Discharge (ROWD) for a proposed on-site domestic Fixed Activated Sludge Treatment (FAST) treatment/Geoflow disposal system at the above-referenced property from Kem Akol/Kathy Runyon (hereafter Discharger). Santa Cruz County Environmental Health Services (Health Services) determined the site is unsuitable for a standard on-site subsurface disposal system because it does not meet Basin Plan requirements for vertical separation between the disposal trench bottom and first-encountered groundwater. Also, the 0.25-acre lot is too small to comply with the Basin Plan's requirement for a one-acre minimum. Consequently, Health Services is not authorized to issue a permit without an exemption from the Basin Plan prohibition.

Based on information provided in the ROWD, the Executive Officer (EO) approved the Basin Plan exemption on December 23, 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. R3-2005-0027(Attached).

**DISCUSSION**

**System Design.** The Discharger proposes using the FAST treatment system and the Geoflow pressure-dosing shallow disposal system to adequately treat and dispose of domestic wastewater at a site that does not comply with a Basin Plan prohibitions in Section VIII.D.3.1, including the following:

- Prohibition No. 3, which requires at least 20 feet of separation between the disposal trench bottom and usable ground water, including perched ground water, when the percolation test rate is between one and four minutes per inch. Two of three of the test rates from the site were 3 minutes per inch.
- Prohibition No. 11, which requires lots to be at least one acre in size.

Site investigations demonstrated groundwater is likely less than 20 feet deep. The Basin Plan's requirement of 20 feet separation ensures adequate treatment in the soil column for the demonstrated soil permeability. The one-acre minimum lot size required for on-site soil absorption system reduces the loading of nitrogen to the regional aquifer.

The FAST/Geoflow system addresses the concerns expressed in the prohibitions. The Geoflow's 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 FAST treatment system before distributing the wastewater to the site's surface soils where plant life uptakes water and nitrate.

The FAST system treats domestic wastewater secondary standards; that is, to less than 30 milligrams per liter (mg/L) for both BOD and Total Suspended Solids (TSS). 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 FAST 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. County Health Services requires the Discharger to enter into a contract with a professional registered with the County to maintain the FAST/Geoflow system. With adequate oversight, the systems 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. R3-2005-0027 (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. R3-2005-0027

### **ATTACHMENT**

Resolution No. R3-2005-0027

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