

INFORMATION SHEET

WASTE DISCHARGE REQUIREMENTS ORDER NO. _____
FOR ORANGE AVENUE DISPOSAL, INC.
FOR CLOSURE AND POST-CLOSURE MAINTENANCE
ORANGE AVENUE LANDFILL
FRESNO COUNTY

The Orange Avenue Landfill, owned by Orange Avenue Disposal, Inc. (hereafter Discharger) is just south of North Avenue on the east side of Orange Avenue, within the City of Fresno. Municipal solid wastes were received from the City of Fresno and surrounding areas in south-central Fresno County. Waste discharge ceased on 26 June 2007.

The climate in the southern San Joaquin Valley is semi-arid, with hot, dry summers and cool winters. The average annual precipitation is 10.9 inches with a mean pan evaporation of 66 inches. The site is not within a 100-year floodplain according to FEMA maps.

The 40-acre waste management facility contains one existing unlined waste management unit (Unit) covering approximately 30 acres. The soils immediately underlying the facility were deposited as alluvial fan sediments consisting of unconsolidated interbedded sands, silts, and clays. The site is not within a known fault hazard zone.

The first encountered groundwater is approximately 70 to 75 feet below the native ground surface. The direction of groundwater flow is toward the northwest. The average groundwater gradient is approximately 0.003 feet per foot. Monitoring data indicate that background groundwater quality does not meet the recommended Secondary Maximum Contaminant Level drinking water standards, has a specific electrical conductivity range from 890 to 1160 micromhos per centimeter, and total dissolved solids ranging from 560 to 780 milligram per liter.

The existing groundwater monitoring network consists of two upgradient wells and five downgradient wells along or near the point of compliance. The Discharger installed a series of landfill gas monitoring probes for perimeter monitoring of the waste management unit. These monitoring devices are suitable for early detection of a landfill release of volatile organic compounds migrating through the vadose zone in a vapor phase.

Several volatile organic compounds were first detected in groundwater when the detection monitoring wells were installed in 1986. Analyses of groundwater from monitoring wells resumed in May 1990 on a periodic basis and VOCs have been repeatedly detected since then, often at concentrations above water quality objectives. On 20 September 1995, Cleanup and Abatement Order (CAO) No. 95-709 was adopted by Executive Officer signature, requiring the Discharger to implement an evaluation monitoring program (EMP) in accordance with specific tasks. The EMP was to be implemented in three phases to allow information gathered in a previous phase to be utilized in the design of the

TENTATIVE

subsequent phase(s). Phase 1 was completed in 1996, Phase 2 would employ deep exploratory drilling and groundwater sampling, and Phase 3 would include groundwater monitoring well installation and sampling. The CAO did not contain due dates for completion and submission of the reports.

Staff's review of the most recent EMP work plan, dated 10 August 2009, for Phases 2 and 3 found the work plan adequate to delineate the lateral and vertical extent of landfill derived waste constituent degradation of groundwater. In addition to implementing the EMP, corrective action to remediate groundwater degradation was initiated with the installation of a landfill gas mitigation system in 1997. The mitigation system consists of a series of active vent pipes connected to a thermal oxidizer unit. Operation of the system is anticipated to reduce the levels of VOCs observed in groundwater beneath the landfill, providing a means of groundwater remediation in addition to natural degradation and source control.

The overall effectiveness of the landfill gas mitigation system on the groundwater degradation is currently being evaluated. Results from sampling events indicate that all but one landfill gas monitoring well (GW-8D) exhibited methane concentrations below the 5 percent by volume regulatory threshold in April 2010. As of 3 May 2010, all landfill gas monitoring wells had methane concentrations below 5 percent, therefore the monitoring frequency has been reduced to quarterly in accordance with Title 27.

The proposed final cover is an evapotranspiration cover design (ET), which is an engineered alternative. In an ET cover design, the low-hydraulic conductivity layer is replaced by a vegetated soil layer that is engineered and constructed to absorb moisture during precipitation events and expel moisture by evaporation and transpiration before it flows through the base of the cover. The proposed ET cover will utilize a five-foot thick soil layer placed above the existing one foot interim cover for a total cover of six-feet.

Section 20080(b) of Title 27 allows the Central Valley Water Board to consider the approval of an engineered alternative to the prescriptive standard. The proposed engineered alternative cover system needs to be consistent with the performance goal addressed by the particular prescriptive standard, and provide protection against water quality impairment equivalent to the prescriptive standard in accordance with Section 20080(b)(2) of Title 27. Provision 15 of this Order requires submittal of final construction and design plans for Executive Officer approval to ensure the ET cover meets the standard for the engineered alternative approved by the Central Valley Water Board.

This Order updates the waste discharge requirements for the facility in conformance with the California Water Code and Title 27, and the revisions and policies adopted thereunder,

TENTATIVE

INFORMATION SHEET, ORDER NO. _____
FOR ORANGE AVENUE DISPOSAL, INC.
FOR CLOSURE AND POST-CLOSURE MAINTENANCE
ORANGE AVENUE LANDFILL
FRESNO COUNTY

-3-

for the closure and post-closure maintenance and completion of an evaluation monitoring program and corrective action for groundwater degradation of this facility.

The action to revise waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resource Code Section 21000, et seq., and the CEQA guidelines, in accordance with Title 14, CCR, Section 15301. This order requires full containment of wastes and does not permit degradation of surface water or groundwater. Further antidegradation analysis is therefore not needed. The discharge is consistent with the antidegradation provisions of State Water Resources Control Board Resolution No. 68-16.

EAM:7/21/10

TENTATIVE