INFORMATION SHEET

WASTE DISCHARGE REQUIREMENTS ORDER R5-2012-XXXX
COUNTY OF KERN
FOR POST-CLOSURE MAINTENANCE AND CORRECTIVE ACTION
MCFARLAND-DELANO SANITARY LANDFILL
KERN COUNTY

The County of Kern (hereinafter Discharger) owns and maintains the McFarland-Delano Sanitary Landfill (facility) about one and a half miles southwest of Delano. The 106-acre facility contains one closed, unlined 37-acre waste management unit.

The California Regional Water Quality Control Board (Central Valley Water Board) adopted Waste Discharge Requirements (WDRs) Order R5-01-159 on 14 June 2001, which classified the waste management unit (Unit) as a Class III unit for the discharge of municipal solid waste as defined in Title 27, California Code of Regulations, Section 20005 et seq. (hereafter Title 27). The proposed Order revises the existing WDRs to regulate post-closure maintenance and to implement a corrective action program.

Cleanup and Abatement Order 98-731 (CAO) was issued on 14 October 1998. The CAO required the Discharger to install an adequate detection monitoring program, complete an evaluation monitoring program, and implement a corrective action program that complies with the provisions of Title 27. The CAO also required the Discharger to submit assurances of financial responsibility for the initiation and completion of corrective action for all reasonable and foreseeable releases. The Discharger has complied with each item in the CAO. The proposed Order rescinds the CAO.

The waste management facility is located in the southeastern San Joaquin Valley. The San Joaquin Valley is an asymmetrical structural trough that has resulted in a depositional basin containing up to six vertical miles of sediment eroded from the adjacent mountains. The uppermost sediments in the vicinity of the facility are Holocene to Pliocene age unconsolidated flood basin, lacustrine, and alluvial deposits. These deposits are laterally and vertically discontinuous mixes of gravel, sand, silt, and clay.

The depth to first encountered groundwater ranges from about 60 feet to 78 feet below the native ground surface. Groundwater elevations range from about 224 feet above mean sea level to 233 feet above mean sea level. Monitoring data indicate background groundwater quality for first encountered groundwater has electrical conductivity ranging between 546 and 3,000 micromhos/centimeter, with total dissolved solids ranging between 370 and 2,900 milligrams per liter. The direction of groundwater flow ranges from east to east-southeast. The average groundwater gradient is approximately 0.0025 feet per foot and the average groundwater velocity is approximately 34 feet per year.

Volatile organic compounds (VOCs) that are not naturally occurring have been detected in groundwater along the point of compliance. The VOCs consistently detected in groundwater are benzene, tetrachloroethylene (PCE), trichloroethylene (TCE), 1,1-dichloroethane, cis-1,2-dichloroethene, vinyl chloride, dichlorodifluoromethane (Freon 12), and trichlorofluoromethane (Freon 11).

The Discharger submitted an Evaluation Monitoring Program Report on 2 April 2004. The nature of the release of waste constituents from the waste management unit is associated with landfill gas migration. The extent of the release plume is about 650 feet to the southeast of the Unit. The vertical extent is limited to 100 feet below ground surface.

The Discharger completed an Engineering Feasibility Study in accordance with Section 20425(c) of Title 27. The Engineering Feasibility Study concluded that the most technically and economically feasible corrective action alternative is landfill gas extraction and monitored natural attenuation.

The Discharger completed construction of a prescriptive standard final cover system in October 1995. The final cover consists of the following: a two-foot thick soil foundation layer; a one-foot thick barrier layer of clay compacted to a maximum hydraulic conductivity of $1x10^{-6}$ centimeters per second; and a one-foot thick vegetated soil layer. Construction of an active landfill gas extraction system was completed in January 2000. The system has been continuously operated since its installation.

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, 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 Resource Control Board Resolution 68-16.