

## INFORMATION SHEET

ORDER NO. \_\_\_\_\_  
WASTE DISCHARGE REQUIREMENTS  
COUNTY OF MERCED  
AND  
CITIES OF ATWATER, DOS PALOS, GUSTINE,  
LIVINGSTON, LOS BANOS, AND MERCED  
FOR CONSTRUCTION AND OPERATION  
HIGHWAY 59 SOLID WASTE LANDFILL  
MERCED COUNTY

The County of Merced operates the Highway 59 Landfill about six miles north of the City of Merced. The facility is jointly owned by the County of Merced and the cities of Atwater, Dos Palos, Gustine, Livingston, Los Banos, and Merced (hereafter jointly referred to as Discharger). The 222-acre waste management facility contains an existing unlined Class III solid waste management unit (Unit), an existing composite-lined Class III Unit, a Class II surface impoundment, and two stormwater retention basins. The Discharger proposes to construct a new Unit in a 140-acre area north of the existing Units.

The climate in the central San Joaquin Valley is semi-arid, with hot, dry summers and cool winters. The average annual precipitation is 11.7 inches with a mean pan evaporation of 67.3 inches. The site is not within a 100-year floodplain according to FEMA maps.

The soils immediately underlying the facility were deposited as alluvial fan sediments and consist of poorly-sorted clays, silt, sand and gravel, with some beds of claystone, siltstone, sandstone, and conglomerate. The site is not within a known fault hazard zone.

Surface drainage from the facility flows to Fahrens Creek. Fahrens Creek is tributary to Bear Creek and the San Joaquin River. Storm water runoff is permitted by California General Industrial Storm Water Permit No. 5B24S000444.

The first encountered groundwater is approximately 65 feet below the native ground surface, and fluctuates as much as nine feet. The direction of groundwater flow is toward the southwest, with an average gradient of approximately 0.001 feet per foot. The average groundwater velocity is 1.5 to 1.9 feet per year. Monitoring data indicates background groundwater quality has an electrical conductivity (EC) ranging between 200 and 300 micromhos/cm, with total dissolved solids (TDS) ranging between 140 and 210 mg/l.

Groundwater quality is monitored by eight on-site detection monitoring wells. Six other wells have been installed for monitoring groundwater in the vicinity of the planned northward expansion area. The vadose zone detection monitoring system consists of geomembrane-lined pan lysimeters installed beneath the leachate collection and removal system collection pipes and sumps of the composite-lined Unit. The Discharger has also installed gas monitoring wells along

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the perimeters of the unlined Unit, which serve as vadose zone monitoring devices for the unlined area.

Leachate generated from the existing lined unit exhibits concentrations of volatile organic compounds and inorganic constituents of concern in excess of water quality standards. In addition, the site's geologic characteristics where the Unit is located do not permit adequate attenuation of leachate in the event of a release from the Unit. As such, the leachate is classified as a designated waste, pursuant to the definition of "designated waste" in §13173 of the California Water Code.

The Discharger submitted a demonstration that construction of an engineered alternative single-composite liner system will meet the performance standard for a Class III landfill contained in §20310 of Title 27. Therefore, this order requires new landfill units to be constructed with the proposed engineered alternative single-composite liner system. The Discharger also proposes to install pan lysimeters beneath the proposed Unit constructed in the 140-acre expansion area to the north for the purpose of vadose zone monitoring. Two Class II surface impoundments will be constructed for disposal of leachate generated by the proposed landfill Unit. The surface impoundments will require double-composite liner construction.

The Discharger proposes to accept treated wood waste at the Highway 59 Landfill. Existing law regulates the control of hazardous waste, but exempts from the hazardous waste control laws, wood waste that is exempt from regulation under the federal Resource Conservation and Recovery Act of 1976, as amended (RCRA), if the wood waste is disposed of in a municipal landfill that meets certain requirements imposed pursuant to the Porter-Cologne Water Quality Control Act for the classification of disposal sites, and the landfill meets other specified requirements outlined in Sections 25143.1.5, 25150.7, and 25150.8 of the Health and Safety Code. The Discharger has indicated that all treated wood waste accepted at the Highway 59 Landfill will be handled and disposed of in accordance with the provisions outlined in Sections 25143.1.5, 25150.7, and 25150.8 of the Health and Safety Code. The Highway 59 Landfill appears to meet the necessary requirements imposed pursuant to the Porter-Cologne Water Quality Control Act. This order therefore allows the disposal of treated wood waste in accordance with the conditions imposed pursuant to the Health and Safety Code.

Volatile organic compounds are often detected in a release from a landfill, and are the primary waste constituents detected in groundwater beneath a municipal solid waste landfill. Since volatile organic compounds are not naturally occurring, and thus have no background value, they are not amenable to the statistical analysis procedures contained in Title 27 for the determination of a release of wastes from a Unit. Title 27 does provide for the non-statistical evaluation of monitoring data that will provide the best assurance of the earliest possible detection of a release from a Unit. However, Title 27 does not specify a specific method for non-statistical evaluation of monitoring data.

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The Central Valley Regional Water Quality Control Board may specify a non-statistical data analysis method pursuant to Section 20080(a)(1) of Title 27. In order to provide the best assurance of the earliest possible detection of a release of non-naturally occurring waste constituents from a Unit, this Order specifies a non-statistical method for the evaluation of monitoring data.

The specified non-statistical method for evaluation of monitoring data in this Order provides two criteria (or triggers) for making the determination that there has been a release of waste constituents from a Unit. The presence of two waste constituents above their respective method detection limit (MDL), or one waste constituent detected above its practical quantitation limit (PQL), indicates that a release of waste from a Unit has occurred. Following an indication of a release, verification testing will be conducted to determine whether there has been a release from the Unit, or there is a source of the detected constituents other than the landfill, or the detection was a false detection. Although the detection of one waste constituent above its MDL is sufficient to provide for the earliest possible detection of a release in accordance with Title 27, the detection of two waste constituents above the MDL as a trigger is appropriate due to the higher risk of false-positive analytical results and the corresponding increase in sampling and analytical expenses from the use of detecting one waste constituent above its MDL as a trigger.

The pollutant dichlorodifluoromethane has repeatedly been detected in well MW-2A at concentrations exceeding the U.S.E.P.A. National Ambient Water Quality Criteria, One-in-a-Million Incremental Cancer Risk Estimate for Health and Welfare Protection (0.19 ug/l). Other constituents detected on two or more consecutive occasions below water quality goals include benzene, toluene, tetrachloroethylene, and trichlorofluoromethane. The Discharger is currently conducting evaluation monitoring in accordance with Cleanup and Abatement Order No. 98-730. However, the final evaluation monitoring report has not been submitted to date. This order rescinds Order No. 98-730 and requires timely completion of the evaluation monitoring program and implementation of a feasibility study for corrective action.

The Discharger has demonstrated that the Unit as proposed avoids on-site wetlands to the maximum extent practicable and where impracticable, the impact is minimized and those impacts are mitigated to ensure no net loss of wetlands. The Discharger has avoided a significant portion of the on-site wetlands and further avoidance is impracticable. The Discharger is required under its federal CWA Section 404 permit and the Biological Opinion to preserve in perpetuity a 168-acre wetland preserve and mitigation area. The Discharger will construct wetland acreage within that the mitigation area in compensation for the acreage lost as part of the Landfill construction.

The Merced County Board of Supervisors certified the final environmental impact report for the facility on 7 December 1999. The Merced County Public Works Department filed a Notice of Determination on 17 September 1999 in accordance with the California Environmental Quality

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Act (Public Resources Code Section 21000 et seq.) and CEQA guidelines (14 CCR Section 15000 et seq.). The Central Valley Water Board considered the environmental impact report and incorporated mitigation measures from the environmental impact report into these waste discharge requirements designed to prevent potentially significant impacts to design facilities and to water quality.

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