

INFORMATION SHEET

ORDER NO. R5-2011-XXXX
BUTTE COUNTY
NEAL ROAD CLASS III MUNICIPAL SOLID WASTE LANDFILL
AND CLASS II SURFACE IMPOUNDMENTS
BUTTE COUNTY

The Neal Road Class III Municipal Solid Waste Landfill and Class II Surface Impoundments (hereafter "facility") is located seven miles southeast of Chico on land owned by Butte County. The facility is operated by Butte County.

The landfill operated as a burn dump from approximately 1965 to 1970 when it was converted to a landfill. The landfill currently consists of closed modules 1, 2, and 3, and active Module 4. Modules 1 and 3 were constructed without any liners. Module 2 was constructed with a two-foot thick clay liner (permeability of 1×10^{-6} cm/sec) that is overlain by a one-foot thick granular leachate collection and recovery system (LCRS). The liner of Module 4 exceeds the prescriptive requirements of Title 27 and Subtitle D, and meets the performance standard for Class III landfills as described in Section 20260 (b)(1). Modules 1, 2 and 3 were closed with a low-permeability cap in 2007. A perimeter LCRS was constructed around the north, east, and south sides of Modules 1 through 3. Leachate collected from Modules 2 and 4 and the toe of Modules 1 and 3 is discharged to a designated Class II surface impoundment.

The three Class II surface impoundments include a leachate pond, primary septage pond, and septage supernatant pond. The primary septage pond receives approximately 400,000 to 500,000 gallons per month of septage influent via trucks from septic systems throughout Butte County. The primary septage pond and an adjacent leachate pond, were retrofitted to Class II standards in 1992, following the closure of previous unlined septage impoundments. A second pond used to contain supernatant from the primary septage pond was constructed in 1996. Excess supernatant that cannot be eliminated by evaporation is currently trucked to either the City of Chico Wastewater Treatment Plant, or to the Sewerage Commission Oroville Region Wastewater Treatment Plant for disposal.

The landfill accepted 151,838 tons of waste in the year 2010, averaging 422 tons per day. The peak disposal rate is 1,200 tons per day, the maximum permitted by the Solid Waste Facility Permit. The rate increase of waste disposal is expected to be 3.3 percent per year, paralleling the projected population growth rate.

Geology and Hydrogeology

The facility is situated in a canyon eroded into gently rolling volcanic tablelands on the eastern fringe of the Sacramento Valley. Flows of massive volcanic tuff-breccia of the Tuscan Formation form an erosion-resistant caprock at the head of the canyon and on the ridge on both sides of the canyon. Erosion has exposed the underlying deposits of sands, gravels, silts, and volcanic sediments. The sands and gravels are pervious and are considered to be part of the recharge area for the aquifers underlying the Sacramento Valley. Groundwater is approximately 10-20 feet below the base of Module 4.

The site is not within the 100-year flood plain. No major surface waters are present near the site. Storm water runoff, which does not contact waste, is directed to peripheral channels and discharged into an ephemeral drainage that is tributary to Hamlin Slough, which flows into Butte Creek, a tributary of the Sacramento River.

Average rainfall at the site is approximately 27 inches. The mean annual evaporation is approximately 67 inches.

Revision of Waste Discharge Requirements

The discharger submitted a request to Central Valley Water Board to accept treated wood waste under the Alternative Management Standards for Treated Wood Waste regulations that went into effect July 1, 2007. The Alternative Management Standards specifically allow for treated wood waste to be disposed of in a composite-lined portion of a landfill unit that meets all requirements applicable to disposal of municipal solid waste in California after October 9, 1993 (Subtitle D compliant) and that is regulated by waste discharge requirements. Therefore, the Waste Discharge Requirements for the landfill must be revised to allow acceptance of treated wood waste.

Corrective Action

The current groundwater monitoring system consists of two up gradient and ten downgradient "compliance" wells. Data from the ground water monitoring system shows groundwater has been impacted by waste constituents including elevated concentrations of chloride, nitrates, total dissolved solids, and specific conductance. VOCs have been occasionally detected in the unsaturated zones since 1993.

The extent of the pollution has been determined through an Evaluation Monitoring Program. The initial Corrective Action Plan (CAP) implemented in the early 1990's entailed covering the inactive portions of the landfill with temporary tarps to help shed precipitation. A review of the ground water data showed this action was ineffective, the concentrations of the noted waste constituents increased during this time period. Reasons the original CAP failed include: lack of adequate slope on the top of the landfill

to facilitate runoff, the highly permeable nature of the earthen cover material and the need to expose portions of the site during waste disposal operations, and increased difficulty in managing storm water runoff.

The County submitted a second CAP on 18 March 2002. This plan called for final closure of Modules 1, 2, and 3 by 2006. Closure consisted of covering the Modules with a flexible membrane liner and vegetative cover to exclude all precipitation. A gas control system was employed to remove gas and moisture created by the decomposing waste. Final closure of Modules 1,2 and 3 was completed in March 2007.

GS:cs