

INFORMATION SHEET

ORDER NO. _____

SHASTA COUNTY

WEST CENTRAL CLASS III MUNICIPAL SOLID WASTE LANDFILL
AND CLASS II SURFACE IMPOUNDMENT

SHASTA COUNTY

The Shasta County West Central Landfill is located approximately 12 miles southwest of Redding. Beginning in January 1990, the City of Redding has taken over operation of the landfill.

The landfill has accepted waste since 1981. The facility will be developed in five phases to reach a total volume of 17,000,000 cubic yards. Phase I is full and has been closed. Phase II is currently under construction but has been accepting waste since 1990. Phase II will be constructed in stages to reach a total capacity of 7,000,000 cubic yards.

Phase IA, the closed portion of the landfill, was designed in 1981 and constructed in 1982. The Phase I liner consists of 3-feet of clayey soil in the bottom of the canyon, and the LCRS is comprised of a perforated PVC pipe surrounded by gravel and cobbles. Phase II consists of a series of separately constructed units as shown in Attachments B and C. Phase II-Unit 1A, the first unit constructed following closure of Phase I, is lined with a one foot clay layer with a maximum hydraulic conductivity of 1×10^{-6} cm/sec, and a 6-mil PVC moisture barrier overlain by six inches of drain rock with perforated PVC piping. Units 1B, 1C, and 2 are constructed with 12 inches of compacted clay with a bentonite additive to achieve a maximum hydraulic conductivity of 1×10^{-7} cm/sec, a Geosynthetic Clay Liner (GCL), and a 40-mil PVC flexible membrane liner overlain by a one foot gravel drainage layer.

Unit 1D is lined (from bottom to top) with 12 inches of compacted clay with a bentonite additive to achieve a maximum hydraulic conductivity of 1×10^{-7} cm/sec, a GCL, a textured 60-mil HDPE flexible membrane liner, and a one foot gravel drainage layer. The side slopes are constructed at a 2:1 geometry, layered with a GCL, a textured 60 mil HDPE liner, and a geonet drainage layer overlain by a nonwoven geotextile. Newly constructed, Unit 3, is the active unit of the Phase II portion of the landfill. The Discharger submitted a liner performance evaluation demonstrating how the proposed single composite liner system will comply with the performance standard outlined in Title 27. The Discharger proposed a bottom liner system consisting of (from top to bottom) a one-foot gravel drainage layer, a geotextile, a 60-mil HDPE geomembrane, a CGL, and a one-foot compacted clay layer. The side slopes will be lined (from top to bottom) with a geocomposite drainage net, a 60-mil HDPE geomembrane, a GCL, and a geotextile over the subgrade.

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Leachate is discharged to a covered Class II surface impoundment. The surface impoundment consists of (bottom to top) a two-foot compacted clay liner with a maximum hydraulic conductivity of 1×10^{-6} cm/sec, a geonet drainage layer on the side slopes and a blanket leachate collection system of sand, overlain by an 80-mil-thick HDPE geomembrane.

Four unclassified surface impoundments, one at the base of the landfill and three on the adjoining ridge, are used for the containment of contact water, which may contain minor amounts of waste constituents. Water from these ponds will either be evaporated in the summer months, used for on-site dust control, or sprinkled on the hillside for erosion and wildfire management.

Wastes will be accepted from the unincorporated areas of Shasta County and the Cities of Redding, Anderson, and Shasta Lake City. The current average daily load is estimated at 340 tons or 756 cubic yards (based on a density of 900 lbs/yard³ for compacted waste). Tires are no longer accepted at the facility.

The Discharger proposes to accept treated wood waste at the West Central 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 West Central 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 West Central 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 to Unit 3 of the Phase II portion of the West Central Landfill.

The disposal method is a canyon fill operation. The surrounding area consists of shallow canyons vegetated oak trees, manzanita brush, and grass. Land within 1,000 feet of the facility is used for grazing and open space. Surface water drainage is to Dry Creek, a tributary of Cottonwood Creek, which flows into the Sacramento River.

The facility is not within the 100-year floodplain, however the WMUs area cover an ephemeral drainage course. To prevent inundation of the facility, the watercourse upstream of the facility has been diverted into the adjacent drainage.

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The beneficial uses of these surface waters are domestic, municipal, agricultural, and industrial supply; groundwater recharge; power generation; recreation; esthetic enjoyment; navigation; freshwater replenishment; and preservation and enhancement of fish, wildlife, and other aquatic resources.

The site is near the western edge of the Redding groundwater basin. The geologic units exposed consist of the Red Bluff Formation on the ridge tops underlain by the Tehama Formation. The Chico Formation is present at depths below the site but does not outcrop in the area. Recent alluvium and dredge tailings are found in the canyon bottom. The Red Bluff and Tehama Formations are fluvial deposits of clayey and silty sandstone with lenses of pebble and cobble conglomerates. Permeabilities range between 1×10^{-5} and 1×10^{-6} cm/sec.

First-encountered groundwater is in the Tehama Formation. Monitoring of the groundwater indicates that the water table is approximately 80 feet below the ridge tops. Groundwater flow generally follows the topography, flowing from the ridges into the canyon eastward. Wells in the bottom of the canyon are artesian in the winter and spring, indicating a groundwater discharge area.

The Discharger has constructed a groundwater underdrain system beneath Units 1 and 2 to prevent groundwater from building up under the liners. The underdrains maintain the minimum five feet of separation between wastes and groundwater. Water collected in the underdrain systems can be collected and tested for waste constituents. In December 2002, VOC's were detected and confirmed in groundwater discharging from the Unit 1 and 2 underdrain. The underdrain effluent has since been routed to the Class II surface impoundment. The Unit 1 and 2 underdrain is no longer adequate as a detection monitoring system for Unit 3 since the discovery of VOCs in the underdrain effluent, therefore in addition to the construction of a new underdrain beneath Unit 3, a leak detection sump will also be constructed along the eastern to of Unit 3.

The beneficial uses of groundwater are domestic, municipal, agricultural, and industrial supply.

The average annual precipitation for the area is 35 inches, and the average evaporation rate is 60 inches per year.

KB/KLC: sae
25 March 2005