

**STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

**STAFF REPORT FOR REGULAR MEETING OF MAY 12-13, 2010
Prepared on February 11, 2010**

ITEM NUMBER: 20

SUBJECT: Revised Waste Discharge Requirements for the John Smith Road Class I Landfill (Closed) and Class III Landfill, San Benito County - Order No. R3-2010-0021

KEY INFORMATION:

Location: Five miles southeast of the City of Hollister on John Smith Road.
Owner/Operator: City of Hollister (Class I Landfill), San Benito County Integrated Waste Management Department (Class III Landfill), Waste Connections, Inc. (operator)
Type of Waste: Non-hazardous municipal solid wastes.
Capacity Used: 1,387,108 cubic yards (832,264 tons) as of April, 2009.
Remaining Capacity: 2,785,000 cubic yards; estimated closure date is 2028.
Disposal: Area/canyon fill method.
Liner System: Active waste management units are lined and unlined; composite liner with leachate collection and removal system are required for new waste management units.
Existing Orders: Waste Discharge Requirements Order No. R3-2002-0001
This Action: Adopt Waste Discharge Requirements Order No. R3-2010-0021

SUMMARY

Proposed Waste Discharge Requirements Order No. R3-2010-0021 ("Order" or "Order No. R3-2010-0021"; Attachment 1) and proposed Monitoring and Reporting Program Order No. R3-2010-0021 ("MRP"; Attachment 2) for the John Smith Road Class I Landfill (Closed) and Class III Landfill (collectively "Landfill") revise the Landfill's sequencing plans, MRP, and update the regulatory and operational status of the Landfill. This Order revision is required to reflect changes in current and future Landfill activities. The proposed changes at the Landfill and within the Order include:

- a. Change in liner thickness specification to meet the prescriptive requirements of the California Code of Regulations, Title 27 (CCR Title 27).
- b. Description of Landfill operations including proposed waste management unit (WMU) construction.
- c. Updated Landfill characterization information.
- d. Specifications for disposal of treated wood waste, sludge, contaminated soils, and brine.
- e. Updated facility property boundary to reflect a lot line adjustment (unchanged waste disposal footprint).

DISCUSSION

Proposed Order R3-2010-0021 updates and replaces Waste Discharge Requirements Order No. R3-2002-0001, adopted by the California Regional Water Quality Control Board, Central Coast Region (hereafter "Water Board") on February 1, 2002. The proposed Order covers the current

Landfill operations and provides guidance and requirements for proposed changes at the Landfill. For the lined portion of the Landfill, the design and construction specifications within the proposed Order meet or exceed requirements in CCR Title 27, and 40 Code of Federal Regulations, Parts 257 and 258 (40 CFR 257 and 258), both of which pertain to siting, design, construction, and operation of solid waste management facilities.

Facility Description: The Landfill is located in San Benito County five miles southeast of Hollister, as shown on Landfill Location Map, Figure 1 of the Order. The Landfill's physical address is 2650 John Smith Road, Hollister, California, 95023.

The Landfill's property boundary ("waste management facility," as defined in CCR Title 27) encompasses approximately 72 acres. The Landfill's total permitted operational area is 65 acres, including a lot line adjustment. There is an additional lot line adjustment of approximately 22 acres pending which will expand the landfill boundary, but not the waste footprint. The landfill consists of an 8.3-acre closed Class I Landfill and a 44-acre active Class III Landfill. The 8.3-acre closed Class I Landfill is unlined WMU that received wastes from 1977 to 1983. The San Benito County Integrated Waste Management Department (Discharger) formally closed the Class I Landfill in 1992. The Class III Landfill has been in operation since 1968, therefore the permitted 44-acre waste disposal footprint includes both lined and unlined (pre-Subtitle D) waste management units (WMUs). The Discharger will line all new WMUs in accordance with CCR Title 27 approved liners.

The 44-acre Class III Landfill is active and the Discharger accepts waste delivered to the Landfill from the cities of Hollister and San Juan Bautista, and unincorporated areas of the County. Refuse is also accepted from the surrounding counties. The Landfill receives 90,250 tons of waste annually. An annual average of 250 tons of waste are disposed daily, but the Discharger is permitted to accept up to 500 tons per day.

Waste Placement and Capacity: As of April 2009, the Landfill holds an estimated 832,264 tons (1,387,108 cubic yards of waste and daily and intermediate cover soils, at 0.6 tons per cubic yard) of waste. The permitted remaining Landfill disposal capacity is 2,785,000 cubic yards of waste and daily and intermediate cover soils. Based on current waste disposal rates, the Landfill would reach permitted capacity in approximately 2028.

Surrounding Land Use: Land within a one mile radius of the Landfill is predominantly zoned for agricultural/range and agricultural/productive. Land to the west of Best Road is zoned as rural land. There are no residences or other structures located within 1,000 feet of the Landfill's permitted waste disposal areas.

Geology: The Discharger identified three principal geologic units underlying the Landfill, which include the: Cretaceous Panoche Formation, Pleistocene older terrace deposits, and Quaternary surficial deposits. The Panoche Formation consists of marine-deposited sandstone and shale, which crops out mostly on the south side of the canyon. The older terrace deposits are composed of sandy claystone, clayey sandstone, and conglomerate. The surficial deposits, which occur at the mouth of the canyon, consist primarily of clayey silts and silty clays with some silty sands. The Panoche Formation underlies all of the WMUs, lined and unlined, and the northern portions of the Landfill lie directly on the older terrace deposits.

Surface Water and Groundwater: The Landfill is located well above the 100-year flood plain and there are no designated wetlands within the Landfill boundary.

Surface water flows are ephemeral and consist of natural drainage courses through the basin outside the Landfill boundary. Surface water drainage from the Landfill enters an unnamed tributary to Santa Ana Creek located in the San Benito County hydrologic unit. The Discharger maintains

facilities necessary for collecting and diverting stormwater run-off from the Landfill. The Discharger does need stormwater run-on controls because of the Landfill's location near the top of a surface water drainage divide. Run-off facilities include drainage diversion berms, various drainage ditches, corrugated steel pipe or high density polyethylene (HDPE) over-side drains and inlets, and energy dissipaters. The Discharger also uses rock-lined channels for over-side drains. The Discharger designed the drainage network to carry stormwater at velocities that minimize ditch erosion. Side slope benches and access roads are equipped with drainage ditches for erosion control and drainage needs. Outside the waste footprint, the Discharger has designed conveyance features to direct surface water flows after rain events to natural drainage courses located along the southwestern part of the Landfill. The Discharger captures stormwater runoff from interior portions of the Landfill's disposal areas and directs the runoff to a sedimentation basin. The Discharger meters the bulk of this stormwater runoff to a drainage/culvert along John Smith Road, while using the balance for subsequent on-site dust control during the dry season.

The Landfill is located along the southeast margin of the Gilroy-Hollister groundwater basin in rural San Benito County. The Landfill is underlain by marine sandstones, siltstones, claystones, and shales of the Panoche Formation and older terrace deposits, as described previously. Neither geologic unit is a significant producer of groundwater and available groundwater is mineralized. Chloride, sulfate, manganese, total dissolved solids, and electric conductivity in groundwater from these units routinely exceed secondary drinking water standards. There are no municipal water supply wells within 5,000 feet that are hydraulically downgradient from the landfill. The nearest water supply well, Yates 1, is located hydraulically upgradient of the Landfill, approximately 1,000 feet from the Landfill entrance. San Benito County owns Yates-1 and uses the water for livestock supply, and has plans to use the water for the future Resource Recovery Park. Water quality testing as recent as 2007 indicated no water quality impact related to Landfill operations.

Groundwater Quality: The Discharger has monitored groundwater at the Landfill since 1985. An area of groundwater beneath and downgradient from the Landfill is impacted by volatile organic compounds (VOCs). VOCs were first recognized during the Solid Waste Assessment Test program in 1987. The source was leachate from the older unlined portion (pre-Subtitle D) of the Landfill. The Discharger characterized the nature and extent of the pollutants and installed a groundwater extraction system to capture the VOCs-impacted groundwater.

The extraction system is comprised of three onsite wells that capture VOCs-impacted groundwater that migrated from beneath the older Landfill, and two off-site wells to capture groundwater moving past the three onsite wells (i.e., "bypass water") (Figure 3 of Attachment 1). The Discharger began operating the groundwater extraction system in 1993 and operated the system continuously until December 1997. The Discharger restarted the system in December 1999 and the system remains in operation. The system is automated to maintain an inward flow of groundwater toward each well, and the capture of impacted groundwater is nearly complete. Since the startup of the groundwater extraction system, the Discharger has made significant progress toward achieving cleanup goals. Before system startup, VOCs routinely exceeded their Maximum Contaminant Level (MCL) drinking water standards with total VOCs concentrations as high as 220 micrograms per liter in groundwater near the Landfill entrance. In the past several years, VOCs in offsite groundwater have rarely exceeded their MCLs. VOCs concentrations in groundwater downgradient from the extraction well approximately 500 feet from the Landfill entrance have been below 2 micrograms per liter since 2002, and groundwater 1,500 feet downgradient from the Landfill entrance has not historically been impacted by landfill wastes.

Landfill Design Changes: The Discharger proposes changing a Landfill-specific liner thickness requirement, Specification C.16.a in the existing Order, to meet the prescriptive requirements of Section 20330 of CCR Title 27. The Discharger's justification for this change is based on constructed engineering controls and geologic conditions. The Discharger installed thicker liners

beneath approximately three acres of the expansion area base, including the lowest module and final leachate collection and removal system (LCRS) sump.

The Discharger's Landfill-specific justification for the change is that the base portion of the liner where leachate will accumulate and be extracted (Module 3A) is already constructed with a composite liner system that includes an 80-mil high density polyethylene liner (HDPE) component and a secondary leak detection layer, also constructed with an 80-mil HDPE liner. The remaining portions of the expansion area will have equivalent levels of protection with 60-mil HDPE because leachate will not accumulate on those portions of the liner because base grades are designed to promote liquid flow (sloped) to the final sump located in Module 3A. Additionally, the Discharger has demonstrated that the remaining areas to be lined are underlain by two geologic formations that are not significant producers of groundwater, and the groundwater that is available is mineralized (low quality). The allowance of a 60-mil HDPE liner versus an 80-mil HDPE liner does not pose a risk to water quality and is consistent with all other landfill liner requirements within the Central Coast Region.

COMPLIANCE HISTORY

The Discharger and the Landfill are in compliance with the existing Order. The Discharger is responsive to Water Board staff's information requests and readily addresses compliance issues. Staff has not issued any violations to the Discharger since the last Order update in 2002, and the Discharger has met all reporting deadlines.

MONITORING AND REPORTING PROGRAM

The Landfill MRP includes:

Part I – Monitoring and Observation Schedule: This section requires periodic routine inspections of the Landfill and the leachate collection system, and detailed analytical monitoring of groundwater, leachate, and Landfill gas.

Part II – Sample Collection and Analysis: This section establishes criteria for sample collection and analysis, methods to determine concentration limits, and specifies how the Discharger must maintain these records.

Part III – Statistical and Non-Statistical Analysis of Data: This section establishes methods for the Discharger to determine Landfill compliance with water quality protection standards based on laboratory analytical information.

Part IV – Reporting: This section establishes formats and requirements that the Discharger must follow when submitting analytical data, annual reports, and summaries to the Water Board.

Part V – Definition of Terms: This section defines specific terms used in the MRP.

MRP Changes: Central Coast Water Board staff revised the existing MRP for the Landfill to coincide with revised Order No. R3-2010-0021. One new requirement Central Coast Water Board staff added to the MRP is the requirement for annual leachate monitoring. Currently, no leachate is generated, but with the construction of the new lined WMUs that are equipped with a LCRS, Central Coast Water Board staff anticipates leachate generation in the future from continued disposal operations. Therefore, Central Coast Water Board staff incorporated updated leachate monitoring requirements as part of the MRP revision (Attachment 2). Water Board staff also incorporated unsaturated zone monitoring, expanded Landfill gas monitoring, and stormwater monitoring into the new MRP. Stormwater discharges from the Landfill have been and will continue to be regulated

under "Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities (General Storm Water Permit for Industrial Activities)," under State Water Resources Control Board (State Water Board) Water Quality Order No. 97-03-DWQ and National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS00001.

ENVIRONMENTAL SUMMARY

This Order contains prohibitions, discharge specifications, water quality protection standards, and provisions intended to protect the environment by mitigating or avoiding impacts of Landfill operations on water quality. The Order addresses an existing closed Landfill (Class I) and operating Landfill (Class III).

CALIFORNIA ENVIRONMENTAL QUALITY ACT

The Discharger prepared a Mitigated Negative Declaration (MND) dated November 2, 2001, for continued operation and expansion of the Landfill in accordance with the California Environmental Quality Act (CEQA) (State Clearinghouse No. 1991083121). The 2001 MND was certified by the San Benito County Division of Environmental Health in November 2001. Subsequently, a Notice of Determination (NOD) was filed in December 2001. In November 2003, DTSC filed a Notice of Exemption (State Clearinghouse No. 2003118286) for the Class I Landfill in accordance with the State Clearinghouse, citing 14 CCR, Section 15301, for a Class 1 Categorical Exemption for a Post-Closure Permit renewal.

PUBLIC NOTICE AND COMMENTS ON ORDER NO. R3-2010-0021

Central Coast Water Board staff distributed the draft Order No. R3-2010-0021 and MRP No. R3-2010-0021 on February 17, 2010 to a list of interested parties and agencies that have been historically involved with the Landfill. After a 30-day public comment period, Central Coast Water Board staff received no comments to the proposed Order and MRP.

CONCLUSION

The proposed Order updates operational and monitoring requirements for the John Smith Road Landfill to protect groundwater and surface water through required engineering controls, corrective actions, preventative inspections, and monitoring. The Discharger's proposed change to the liner thickness is consistent with all other landfills within the Central Coast Region, and the Landfill does not pose a significant risk to groundwater and surface water with the controls and requirements in the proposed Order.

RECOMMENDATION

Adopt Waste Discharge Requirements Order No. R3-2010-0021 and revised Monitoring and Reporting Program No. R3-2010-0021.

ATTACHMENT

Proposed Waste Discharge Requirements Order No. R3-2010-0021, including Monitoring and Reporting Program No. R3-2010-0021