STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

DRAFT STAFF REPORT FOR REGULAR MEETING OF JULY 30-31, 2015
Prepared on June 12, 2015

ITEM NUMBER: **9**

SUBJECT: **Revised Waste Discharge Requirements for the Cold Canyon Class III Landfill, San Luis Obispo County, Order No. R3-2015-0021**

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KEY INFORMATION:

Location:	Approximately five miles southeast of the City of San Luis Obispo, as shown on Figure 1 of Waste Discharge Requirements Order No. R3-2015-0021.
Owner/Operator:	Waste Connections, Inc.
Type of Waste:	Non-hazardous municipal solid waste (Class III Landfill).
Capacity Used:	9.4 million cubic yards as of July 2014.
Estimated Capacity:	Effective airspace of 10.9 million cubic yards, estimated site life of 51 years.
Disposal:	Area fill method.
Liner System:	Composite liner yet to be approved as an engineered alternative to prescriptive requirements
Existing Orders:	R3-2002-0065
This Action:	**Adopt Waste Discharge Requirements Order No. R3-2015-0021**

SUMMARY

Proposed Waste Discharge Requirements (WDRs) Order No. R3-2015-0021 ("Order" or "Order No. R3-2015-0021" Attachment 1) and proposed Monitoring and Reporting Program Order No. R3-2015-0021 ("MRP" Attachment 2) for the Cold Canyon Class III Landfill will allow for expansion of the Landfill waste footprint and will update requirements for design, construction, and operation of the expanded Landfill. The proposed Order benefits and protects groundwater and surface water by requiring adequate design, maintenance, inspection, and monitoring of engineering controls (e.g., composite liner, leachate collection and removal system, landfill gas, landfill covers, surface drainages, and sediment retention ponds).

DISCUSSION

Proposed Order R3-2015-0021 updates and replaces Waste Discharge Requirements Order No. R3-2002-0065, adopted by the California Regional Water Quality Control Board, Central Coast Region (hereafter "Water Board") on November 1, 2002. The proposed Order covers the

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

Facility Description: The Landfill is located five miles southeast of the City of San Luis Obispo on Highway 227. The Landfill property boundary encompasses 209 acres. Previously, the Landfill property boundary encompassed 121 acres consisting of one parcel. The Discharger applied for and received approval from San Luis Obispo County to expand the landfill property area to 209 acres with 121-acre waste footprint. As part of revised Order No. R3-2015-0021, the Discharger proposes expanding the 80-acre permitted waste disposal footprint by 41 acres to a 121-acre permitted waste disposal footprint.

The current 121-acre Class III Landfill has active waste disposal within an 80-acre permitted waste disposal footprint. Within the permitted waste disposal footprint are unlined (pre-Subtitle D) and lined areas, or "modules." CCR Title 27 §20164 defines a "Waste Management Unit" (WMU) as an area of land, or a portion of a waste management facility, at which waste is discharged. The term includes containment features and ancillary features for precipitation and drainage control, and for monitoring. For the Landfill, the WMU includes the permitted waste disposal footprint, stormwater conveyance ditches and culverts, and sediment retention basins. The WMU also includes the wider permitted operational area consisting of the main access road; an office, scale house and scale; equipment maintenance areas; household hazardous waste collection facility; electronic waste collection and processing facility; resource recovery park; and soil borrow, stockpiling, and staging areas.

The current Landfill began operation in 1965 and consists of nine (9) modules within the 80-acre permitted waste disposal footprint. Modules 1, 2, 3, and 4 are unlined pre-Subtitle D-regulated modules. Module 5 is a vertical expansion area above Module 1. Modules 6, 7, and 8 are lined modules with leachate collection and removal systems. Module 9 is a vertical expansion area over modules 6, 7, and 8.

The Discharger will construct future lined modules in seven phases for Modules 10 through 16. Modules 1 through 16 will encompass 121 acres and the Discharger estimates a remaining gross disposal capacity of approximately 6.5 million tons or 10.9 million cubic yards with an estimated 51-year service life at current disposal rates.

Surrounding Land Use: Properties within a one-mile radius of the Landfill are zoned agricultural, commercial retail, residential rural, residential single family, and rural lands. Neighboring properties have residences and are used for vineyards and grazing. There are 18 structures within 1,000 feet of the facility boundary.

Geology: Underlying bedrock at the site includes the Pismo and Monterey Formations. Three members of the Pismo Formation (Edna, Squire, and Undifferentiated) and one regionally extensive member of the Monterey Formation are exposed at the site. The Monterey Formation underlies approximately 90 percent of the unlined portion of the landfill. The formation consists of approximately 52 percent siltstone, 27 percent claystone, and 21 percent fine- to very fine-grained sandstone.

The Pismo Formation underlies most of the lateral expansion area. An estimated 1,555 feet of Pismo Formation is exposed in the northern and southern parts of the site. The formation consists of approximately 82 percent fine- to very fine-grained sandstone, 9 percent siltstone, 9 percent claystone, and less than 1 percent conglomerate.

Surficial deposits at the site are typically uncemented or weakly cemented earth materials that were reworked by natural and artificial means. They include alluvial deposits that are confined to the main drainage channels and areas of landslide deposits that commonly mantle slopes and ridges. Based on borings advanced at the site, unconsolidated deposits are not believed to be present below the existing waste disposal area and are largely absent in the expansion area. Unconsolidated deposits in the landfill footprint in the expansion area will be excavated during construction of the modules.

Hydrogeology: Groundwater beneath and near the Landfill occurs in both the Pismo and Monterey Formations. Groundwater at the site flows generally from northeast to southwest under a relatively uniform hydraulic gradient through the undifferentiated member of the Pismo Formation, Indian Knob Fault Zone, Monterey Formation, and Edna Member of the Pismo Formation. Although the Indian Knob Fault zone is less permeable than the Pismo and Monterey Formations, it has little influence on groundwater flow.

Groundwater Quality: There have been several indications that a release from the unlined portions of the landfill has occurred. Some of these indications were due to the detection of VOCs in groundwater samples and others were due to statistically significant concentrations of chloride, sulfate, or dissolved manganese. Historically, the detections of VOCs have been sporadic and suggest that the VOCs were associated with landfill gas. Installation and operation of the landfill gas collection system reduced the VOCs in groundwater to non-detectable or occasional, nonrepeating trace-level concentrations.

Some site monitoring wells have shown statistical exceedances of chloride, sulfate, and dissolved manganese in groundwater. These exceedances appear to indicate a leachate release from the facility because the constituents are present in samples of leachate from the lined portion of the landfill at concentrations equal or greater to the concentrations present in groundwater. However, the lack of elevated VOC concentrations in groundwater does not support a landfill release. Additional monitoring will be required to evaluate whether exceedances of chloride, sulfate, and dissolved manganese are indicative of a landfill release.

Surface Water: There are five springs identified within a mile of the facility. Three springs are upgradient of the site. One spring feeds an intermittent stream northeast of the site. Another spring feeds Canada Verde creek upstream from the site. Canada Verde is an ephemeral stream along the southern portion of the landfill expansion area and normally only flows during storm events. Stormwater from the Landfill discharges to Canada Verde which flows into Pismo Creek west of the Landfill.

Stormwater: The Landfill drains to the southwest towards Hwy 227. Runoff from the landfill currently drains into three stormwater detention basins and one temporary stormwater retention basin in the south corner of Module 8. Runoff from the materials recovery facility drains into its own stormwater detention basin. The surface water drainage control system for the Landfill is designed to accommodate a 100-year, 24-hour storm event and acts to minimize erosion and eliminating uncontrolled runoff, reducing drainage paths, collecting runoff in lined channels on the landfill benches, conveying it to down drains to perimeter ditches, and then discharging the runoff in a controlled manner to sedimentation basins. The existing storm water detention

basins are designed with sufficient freeboard and spillway capacity to accommodate the runoff associated with the 100-yr 24-hour storm.

WMU Liner Design: CCR Title 27 requires the Discharger to construct all new disposal modules with composite liners and leachate collection and removal systems. The Discharger has constructed new lined Modules 6 through 8 using an engineered alternative design, as allowed by CCR Title 27. The Discharger is proposing to continue using an engineered alternative design for future construction of Modules 10 through 16. Any engineered alternatives must meet or exceed the performance standards of CCR Title 27 prescriptive standards and be approved by the Water Board Executive Officer.

Another key water quality protection measure required by this Order is the Discharger's continued construction and use of their "preferential leachate pathway" (PLP) liner system. The Discharger must place the PLP liner in any area of the Landfill where new waste disposal will result in an overlap with existing waste in unlined modules. The purpose of the PLP liner is to direct leachate draining from new waste to the leachate collection and removal system, rather than allowing the leachate to drain into and through unlined modules to groundwater. Landfill leachate has pollutants, such as VOCs, that must be managed correctly to prevent releases to, and degradation of groundwater and surface water.

COMPLIANCE HISTORY

The Discharger and the Landfill are currently in compliance with the existing Order. The Discharger is responsive to Water Board staff's information requests and readily addresses compliance issues when required. Water Board Staff issued a series of Notice of Violations (NOVs) in 2010 and 2011. Violations were related to wet weather issues including sediment discharges, saturated slopes and benches, erosion of benches, and leachate seeps. In response to the NOVs the Discharger implemented a program to line benches with impermeable materials and to line lower slopes with liner material to prevent leachate seeps from daylighting and discharging to surface water. The Discharger's installation of runoff control measures has been effective in controlling site erosion and sediment discharges. The Discharger increased the size of the main sedimentation basin in an effort to retain stormwater onsite and reduce the number of stormwater discharge events from the overall facility.

MONITORING AND REPORTING PROGRAM

The Landfill MRP includes:

Part I – Monitoring and Observation Schedule: This section requires periodic routine inspections of the Landfill and pollution control systems (leachate collection and removal, landfill gas collection and removal, and groundwater extraction and treatment), rainfall data records, intake monitoring, 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, uploading information to GeoTracker, and summaries to the Water Board.

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

ENVIRONMENTAL SUMMARY
Order No. R3-2015-0021 contains prohibitions, discharge specifications, water quality protection standards, and provisions intended to protect the environment by mitigating or avoiding impacts to water quality during Landfill construction and operation.

CALIFORNIA ENVIRONMENTAL QUALITY ACT
The Discharger prepared an Environmental Impact Report (EIR) in May 2012 for continued operation and expansion of the Landfill in accordance with the California Environmental Quality Act (CEQA) (State Clearinghouse No. 2006101173). The San Luis Obispo County Board of Supervisors certified the final EIR in November 2012.

PUBLIC NOTICE AND COMMENTS
Water Board staff distributed the draft Order No. R3-2015-0021 on April 29, 2015, to a list of interested parties and agencies that have historically been involved with this Landfill. Water Board staff worked with the Discharger to clarify sections of the proposed WDRs without changing the WDRs. Water Board staff also re-sent the public comment notice to neighboring property owners on May 21, 2015, reminding them of the opportunity to provide comments. After a 30-day public comment period, Water Board staff received no comments to the proposed Order or MRP.

CONCLUSION

The proposed Order provides operational and monitoring requirements for the Landfill to protect groundwater and surface water through required engineering controls and containment systems, preventative inspections, and monitoring. 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. R3-2015-0021 with Monitoring and Reporting Program No. R3-2015-0021.

ATTACHMENT

Attachment 1: Proposed Waste Discharge Requirements Order No. R3-2015-0021
Attachment 2: Monitoring and Reporting Program No. R3-2015-0021