

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER R5-2010-0111

MODIFYING WASTE DISCHARGE REQUIREMENTS ORDER R5-2006-0022  
FOR  
MERCED COUNTY REGIONAL WASTE MANAGEMENT AUTHORITY  
FOR  
CLOSURE OF PHASES 1 to 4  
HIGHWAY 59 SOLID WASTE LANDFILL  
MERCED COUNTY

The Central Valley Regional Water Quality Control Board (hereafter Central Valley Water Board) finds that:

1. The County of Merced operates the Highway 59 solid waste landfill about six miles north of the City of Merced. The facility is owned by the Merced County Regional Waste Management Authority (hereafter referred to as Discharger). The Merced County Regional Waste Management Authority was formed in 2007 by the former owners of the landfill, the County of Merced and the cities of Atwater, Dos Palos, Gustine, Livingston, Los Banos, and Merced, pursuant to a joint powers agreement. This order includes the name change and resulting transfer of ownership of the landfill.
2. The 609-acre waste management facility contains four unlined Class III waste management units (Phases 1 to 4) covering approximately 89 acres, two existing single-composite-lined Class III units covering approximately 165 acres (Phases 5 and 6), two Class II surface impoundments, and three storm water retention basins.
3. Waste Discharge Requirements Order R5-2006-0022, adopted by the Central Valley Water Board on 26 January 2006, prescribes requirements for construction and operation of the landfill.
4. The Discharger submitted a design plan for the proposed closure of Phases 1 to 4 of the landfill in a final closure plan dated 31 October 2008. The final closure and post-closure maintenance plans were determined to be adequate by Central Valley Water Board staff. The closure plan proposed the construction of an engineered alternative in lieu of the prescriptive cover design specified in California Code of Regulations, title 27, section 21090(a). (Cal. Code Regs. title 27 is hereafter referred to as "Title 27").
5. The Discharger proposes to close Phases 1 to 4 with an engineered alternative final cover system consisting of an evapotranspirative final cover. The proposed

evapotranspirative final cover system will be utilized as a barrier to infiltrating precipitation. The proposed cover system will consist of the following components, in ascending order: 1) a minimum 24-inch thick foundation layer, the upper 12-inches of which will be compacted during final cover placement; and 2) a minimum 36-inch thick soil monolithic cover layer with low hydraulic conductivity to act as an evapotranspirative layer, the upper six-inches of which will be amended with compost for erosion resistance and to establish vegetative growth.

6. Phases 1 to 4 have a surface area of approximately 89 acres and a height of about 100 feet above the surrounding ground surface. The wastes extend to depths of 25 feet below the surrounding ground surface. The aboveground fill slopes are generally flatter than 3:1, with the exception of the areas where recent fill has been placed and stockpiles have been removed.
7. This order modifies Order R5-2006-0022 by adding additional construction specifications for the closure of Phases 1 to 4 and maintenance and monitoring of the final cover. Order R5-2006-0022 remains intact and applicable in all other aspects.

#### **CEQA**

8. The Merced County Board of Supervisors certified the final environmental impact report for expansion of the facility on 13 August 1996. The original landfill, including Phases 1 to 4, was opened and operating in 1973 and is categorized as an "existing facility," and is therefore exempt from the provisions of the California Environmental Quality Act (CEQA), (Pub Resources Code, section 21000, et seq.) in accordance with California Code of Regulations, title 14, section 15301.

#### **PROCEDURAL REQUIREMENTS**

9. The Central Valley Water Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for closure of the Phases 1 to 4, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
10. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the modification of Waste Discharge Requirements Order No. R5-2006-0022.

IT IS HEREBY ORDERED, pursuant to California Water Code sections 13263 and 13267, that the requirements of Order R5-2006-0022 are modified as follows:

Construction Specifications D.18 through D.28 are added to read as:

#### D. CONSTRUCTION SPECIFICATIONS

##### Landfill Closure Specifications

18. **At least 120 days prior** to construction, the Discharger shall submit for Executive Officer review and approval, design plans and specifications for a final cover system that includes a Construction Quality Assurance Plan meeting the requirements of Title 27, section 20324.
19. **By 31 December 2011**, the final cover system shall be constructed with an engineered alternative design known as an evapotranspirative or monolithic design. The cover shall, at a minimum, consist of a minimum 24-inch thick foundation layer overlain with a minimum three-foot thick soil monolithic evapotranspirative cover layer vegetated to provide erosion resistance. The soil layer shall be placed in such a manner that vegetative growth is assured while structural integrity is maintained.
20. One or more pan lysimeters shall be constructed on the upper deck of the Unit beneath the vegetated soil layer to monitor the effectiveness of the final cover in accordance with a plan approved by the Executive Officer.
21. The Discharger may propose changes to the final cover system design prior to construction, provided that approved components are not eliminated, the engineering properties of the components are not substantially reduced, and the proposed final cover system results in the protection of water quality equal to or greater than the design prescribed by Title 27 and this Order. The proposed changes may be made following approval by the Executive Officer. Substantive changes to the design require reevaluation as an engineered alternative and approval by the Central Valley Water Board.
22. Construction shall proceed only after all applicable construction quality assurance plans have been approved by the Executive Officer.
23. **By 31 March 2012**, following the completion of construction of the final cover system, the final documentation required in Title 27, section 20324(d)(1)(C) shall be submitted to the Executive Officer for review and approval. The report shall be certified by a registered civil engineer or a certified engineering geologist. It shall contain sufficient information and test results to verify that

construction was in accordance with the design plans and specifications, with this order, and with the standards and performance goals of Title 27.

24. A third party independent of both the Discharger and the construction contractor shall perform all of the construction quality assurance (CQA) monitoring and testing during construction. The CQA program shall be supervised by a registered civil engineer or a certified engineering geologist who shall be designated the CQA officer.

### **Final Cover Maintenance and Monitoring**

25. The Discharger shall monitor the final cover in accordance with the approved Post-Closure Maintenance Plan and Monitoring and Reporting Program R5-2006-0022.
26. Monitoring of the final cover shall include inspecting and recording the volume of moisture collected by the pan lysimeter(s) (see Construction Specification D.20).
27. **By 31 March 2013**, the Discharger shall submit a report for Executive Officer review and approval proposing the amount of moisture that would constitute significant infiltration through the final cover as measured by the pan lysimeter(s) with supporting documentation.
28. In the event the pan lysimeter(s) detect significant moisture infiltration, then, **within 120 days**, the Discharger shall submit a plan and time schedule, for Executive Officer review and approval, to evaluate the problem, and recommend and implement corrective measures.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday (including mandatory furlough days), the petition must be received by the State Water Board by 5:00 p.m., on the next business day. Copies of the law and regulations applicable to the filing petitions may be found on the Internet at:

[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality)

or will be provided upon request.

Order No. R5-2010- 0111  
Modifying WDRs Order No. R5-2006-0022  
Merced County Regional Waste Management Authority  
Highway 59 Solid Waste Landfill  
Merced County

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I, PAMELA C. CREEDON, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 23 September 2010.

  
for PAMELA C. CREEDON, Executive Officer

EAM: 7/28/2010