

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2012-XXXX

MODIFYING WASTE DISCHARGE REQUIREMENTS ORDER R5-2007-0092
FOR
COUNTY OF KERN
FOR
CLOSURE AND POST-CLOSURE MAINTENANCE OF PHASE 1
BAKERSFIELD METROPOLITAN (BENA) SANITARY LANDFILL
KERN COUNTY

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

1. The County of Kern (hereafter Discharger) owns and operates a municipal solid waste landfill about 17 miles east of Bakersfield and one-half mile northwest of Bena, in portions of Sections 3, 4, 9, and 10, T30S, R30E; and Section 33 and a portion of Section 34, T29S, R30E, MDB&M.
2. The 2,285-acre facility contains one 54-acre lined waste management unit (Unit) known as Phase 1, and a 175-acre Unit known as Phase 2A. The facility is comprised of Assessor's Parcel Numbers (APN) 179-010-16 and 17; 179-020-02, 03, 04, 05, 38, 58, and 61; 397-050-10, 11, 12, 14, 25, 26, 27; and 397-060-07.
3. Waste Discharge Requirements Order R5-2007-0092, adopted by the Central Valley Water Board on 22 June 2007, prescribes requirements for construction and operation of the landfill.

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4. The Discharger submitted a final closure plan and a post-closure maintenance plan for the proposed closure of Phase 1 dated December 2009. 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 Section 21090(a) of Title 27, California Code of Regulations §20005 et seq. (Title 27).
5. The Discharger proposes to close Phase 1 with an engineered alternative final cover system consisting of an evapotranspirative final cover. The proposed evapotranspirative final cover system utilizes a vegetated soil layer to minimize infiltration of precipitation.
6. The performance of an evapo-transpirative cover design can be adequately predicted by using a computer model that utilizes the Richards Equation and laboratory-derived parameters from samples of soil that will be used in the construction of the cover.
7. An evapo-transpirative final cover constructed according to a design derived in the above manner can be monitored to observe its actual performance. Adjustments can be made to the vegetation or thickness of the soil layer if a trend of under-performance is observed as part of the post-closure maintenance of the cover.
8. The Discharger proposed an evapo-transpirative cover design that was derived using the computer model UNSAT-H. The proposed design utilizes a three-foot thick vegetated soil layer.
9. This order modifies Order R5-2007-0092 by adding additional construction specifications for the closure of Phase 1 and maintenance and monitoring of the

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final cover. Order R5-2007-0092 remains intact and applicable in all other aspects.

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10. The Kern County Board of Supervisors certified the final environmental impact report for expansion of the facility on 25 April 2000. The original landfill was opened and operating in 1990 and is categorized as an "existing facility". As an existing facility, closure of a Unit of the landfill is exempt from the provisions of the California Environmental Quality Act, (Pub Resources Code, section 21000, et seq.) in accordance with California Code of Regulations, Title 14, Section 15301.

PROCEDURAL REQUIREMENTS

11. The Central Valley Water Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the closure of Phase 1, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
12. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the modification of Waste Discharge Requirements Order No. R5-2007-0092.

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IT IS HEREBY ORDERED, pursuant to California Water Code sections 13263 and 13267, that the requirements of Order R5-2007-0092 are modified as follows:

Construction Specifications D.12 through D.22 are added to read as:

D. CONSTRUCTION SPECIFICATIONS

Landfill Closure Specifications

12. **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.
13. **By 31 December 2014**, 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 36-inch thick vegetated soil layer. The soil layer shall be placed in such a manner that vegetative growth is assured while structural integrity is maintained.
14. 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.
15. 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

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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.

16. Construction shall proceed only after all applicable construction quality assurance plans have been approved by the Executive Officer.
17. **By 31 March 2015**, 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.
18. 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

19. The Discharger shall monitor the final cover in accordance with the approved Post-Closure Maintenance Plan and Monitoring and Reporting Program R5-2007-0092.
20. Monitoring of the final cover shall include inspecting and recording the volume of moisture collected by the pan lysimeter(s) (see Construction Specification D.14).

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21. **By 31 March 2015**, 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.
22. 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 Resources Control 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

or will be provided upon request.

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 _____.

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PAMELA C. CREEDON, Executive Officer