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CENTRAL VALLEY REGION

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**WASTE DISCHARGE REQUIREMENTS ORDER R5-2022-0045
MODIFYING WASTE DISCHARGE REQUIREMENTS ORDER R5-2019-0044**



ORDER INFORMATION

Order Type(s): Modification of Waste Discharge Requirements (WDRs)
Status: ADOPTED
Program: Title 27 Discharge to Land
Regional 5 Office: Sacramento (Rancho Cordova)
Discharger(s): L and D Landfill Limited Partnership;
Fruitridge Road Land Company
Facility: L and D Landfills
Address: 8635 Fruitridge Road, Sacramento, California, 95826, USA
County: Sacramento County
Parcel Nos.: 061-180-050
WDID: 5A340308001
Prior Order(s): R5-2019-0044, R5-2012-0107

CERTIFICATION

I, PATRICK PULUPA, Executive Officer, hereby certify that the following is a full, true, and correct copy of the order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **10 June 2022**.

PATRICK PULUPA
Executive Officer

WASTE DISCHARGE REQUIREMENTS ORDER R5-2022-0045
AMENDING WDR ORDER R5-2019-0044
L AND D LANDFILL L.P.
FRUITRIDGE ROAD LAND CO.
L AND LANDFILL
SACRAMENTO COUNTY

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GLOSSARY

LCRS	Leachate Collection and Removal System
LDPE	Low-Density Polyethylene
LLDPE	Linear Low-Density Polyethylene
Leachate	Liquid formed by the drainage of liquids from waste or by the percolation or flow of liquid through waste. Leachate includes any constituents extracted from the waste and dissolved or suspended in the fluid. (Title 27, § 20164.)
MIW	Mining-influenced water
NPDES	National Pollutant Discharge Elimination System
MRP	Monitoring and Reporting Program
TTWQ/C	Threat to Water Quality and Complexity
Title 23	California Code of Regulations, Title 23
Title 27	California Code of Regulations, Title 27
WDR	Waste Discharge Requirements
WMU/MU	Waste Management Unit/Mining Unit

FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) hereby finds as follows:

Introduction

1. L and D Landfill Limited Partnership and Fruitridge Road Land Company (collectively referred to as “Dischargers”) own the L and D Landfill (Facility) in Sacramento (approximately six miles southeast of downtown) in Sacramento County, Section 24, T8S, R5E and Section 24, T8N, R6E, MDB&M. Fruitridge Road Land Company owns the land on which the Facility is located. L and D Landfill Limited Partnership is the Facility Operator.
2. The Facility is regulated by Waste Discharge Requirements Order (WDR Order) R5-2019-0044, adopted on 7 June 2019. Also attached and incorporated as part of WDR Order R5-2019-0044 is the separately issued Monitoring and Reporting Program R5-2019-0044 (MRP), which sets forth the approved Water Quality Protection Standard (WQPS). (See Title 27, § 20390 et seq.). Compliance with the operative MRP (including subsequent amendments) is required under WDR Order R5-2019-0044.
3. Prior to the adoption of WDR Order R5-2019-0044 (2019 Order), the Facility was regulated under WDR Order R5-2012-0107 (2012 Order).
4. Attachment G to the 2019 Order (Attachment G) identifies criteria for the Title 27 Prescriptive Final Cover Design and describes the Engineered Alternative Final Cover Designs for Landfill 1 and Landfill 2, Attachment G specifies that:
 - a. All three (3) approved final cover designs should have Foundation layers consisting of “≥ 2 feet of soil and/or appropriate waste materials.”;
 - b. The Low Hydraulic Conductivity (LHC) layer for the Title 27 Prescriptive Final Cover Design shall have ≥ 2 feet of compacted clay soil ($k \leq 1 \times 10^{-6}$ cm/sec) where the permeability of the LHC layer shall not exceed that of the underlying clay soil liner or natural geologic materials;
 - c. The LHC layer for the approve Engineered Alternative Final Cover Designs for Landfill 1 shall have “40 mil LDPE Geomembrane ($k \leq 1 \times 10^{-7}$ cm/sec)”;
 - d. The Barrier Layer for the approve Engineered Alternative Final Cover Designs for Landfill 2 shall have “40 mil LDPE Geomembrane ($k \leq 1 \times 10^{-7}$ cm/sec)”;

cm/sec) and an LHC layer of Geosynthetic Clay (GCL) where the GCL shall exhibit appropriate strength characteristics (hydrated) to accommodate stresses associated with specific landfill design parameters, with particular attention to interface, long-term creep, shear, and bearing capacity.

The descriptions of the Engineered Alternative Final Cover Designs for Landfills 1 and 2 are accompanied by a footnote stating: "Design approved in previous WDR Order R5-2012-0107."

5. In Finding 70 of the 2012 Order the Central Valley Water Board approved the following engineered alternative final cover for Landfill 1:
 - a. One-foot soil foundation layer;
 - b. A 40-mil linear low-density polyethylene (LLDPE) geomembrane layer, textured on both sides;
 - c. A geocomposite drainage layer (on side slopes steeper than 4H:1V); and
 - d. One-foot soil erosion resistant soil layer, with vegetation.
6. In Finding 71 of the 2012 Order, the Central Valley Water Board approved the following engineered alternative final cover for Landfill 2:
 - a. One-foot soil foundation layer;
 - b. A geosynthetic clay liner (GCL);
 - c. A 40-mil LLDPE geomembrane layer, textured on both sides;
 - d. A geocomposite drainage layer (on side slopes steeper than 4H:1V); and
 - e. One-foot soil erosion resistant soil layer, with vegetation (closure phases 1, 2, 3, and 5 will receive a two-foot erosion resistant soil layer, with vegetation).
7. On 12 November 2021, the Discharger submitted Closure Construction Drawings and Details (Drawings and Details) for Phase 9A final cover closure at Facility. The Drawings and Details include plans for a 19-acre final cover system for a portion of the Landfill known as the West Pit Area in Landfill 1. Of note, the Discharger's proposed design specifies a 12" Intermediate Soil Cover for the final cover Foundation Layer and a 40-mil linear LDPE geomembrane layer. The proposed design resembles the design approved in the 2012 Order, but does not comply with the design requirements described in Attachment G. The Discharger contends, and Central Valley Water Board staff agree, that the discrepancies

between the proposed designs and the requirements of Attachment G are due to errors in Attachment G.

Analysis

8. In 2012, the Discharger proposed a “12-inch thick foundation layer” for the final cover system for Landfill 1 in its February 2012 Revised Preliminary/Partial Final Closure and Post-Closure Maintenance Plan (2012 PC/PFC/PMP). The Discharger performed a slope stability analysis based on a final cover design including a “12-inch thick foundation layer”. The Discharger included the slope stability analysis in its 2012 PC/PFC/PMP. The Regional Board reviewed the seismic analysis and found that “[t]he Discharger’s static and dynamic stability analysis demonstrates that the side slopes of the final cover will be stable in accordance with the requirements of Title 27.” (2012 Order, Finding 75.)
9. In 2018, the Discharger proposed a “12-inch thick foundation layer” for the final cover system for Landfill 1 in its May 2018 Revised Preliminary/Partial Final Closure and Post-Closure Maintenance Plan (2018 PC/PFC/PMP). The Central Valley Water Board found that the slope stability analysis supporting the proposed vertical expansion needed to be revised to incorporate updated seismic hazard analysis and required the Discharger to submit an updated slope stability analysis (as an amendment or revision to the PC/PFC/PMP) and conditionally approved the final cover systems as approved engineered alternative designs. (2019 Order, Finding 82.)
10. On 21 February 2021, the Discharger submitted the required updated slope stability analysis as an amendment to the PC/PFC/PMP. The analyses considered final cover systems described in Findings 5 and 6 of this Order, including one-foot soil foundation layer and a 40-mil LLDPE geomembrane layer, textured on both sides.
11. The Discharger’s 2021 stability analysis identifies methodology used, considers regional and local seismic conditions and faulting, considers industry practice relating to factors of safety against landfill slope failure, describes assumptions employed, and uses the computer program PCSTABL5M (Achilleos, 1988) developed by Purdue University. The analytical methods used for the circular and sliding block failure modes in the slope stability analysis are the Bishop Simplified and Janbu Simplified methods of slices, respectively. The Discharger’s 2021 stability analysis concludes, in part, that “[b]ased on the location of the sections and the assumptions, the results of the scenarios analyzed meet the safety factor requirements for long-term global slope stability.”

12. Central Valley Water Board staff analysis of the record indicates that the Discharger's proposals, analyses, and Regional Board evaluation of the final cover system for Landfill 1 and Landfill 2 considered a one-foot (1') Foundation Layer and a 40-mil LLDPE geomembrane layer, textured on both sides. The specifications for approved Engineering Alternative final cover systems as described in Attachment G are inconsistent with the Engineering Alternative final cover systems considered and supported in the record. Therefore, this Order modifies the 2019 Order and Attachment G to reflect the actual Engineering Alternative final cover systems analyzed and approved for the Facility.

Procedural Matters

13. This Order and the discussion herein are reserved only to the modification of inconsistent terms in Attachment G and related findings of the 2019 Order. This Order is not intended to consider or modify any other aspect of the 2019 Order, nor any other order adopted by the Central Valley Water Board.
14. Issuance of this Order for an existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resource Code section 21000, et seq., and the CEQA guidelines, in accordance with Title 14, section 15301, since this Order only serves to modify an existing WDR Order.
15. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to amend WDR Order R5-2019-0044 and has provided them with an opportunity to submit their written views and recommendations.
16. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.

REQUIREMENTS

IT IS HEREBY ORDERED, pursuant to Water Code section 13263, that the WDR Order R5-2019-0044 is amended in order to correct Attachment G. **Effective immediately upon adoption**, WDR Order R5-2019-0044 is amended in items below:

1. Change the Order No. throughout to R5-2019-044-001
2. Attachment G is modified as follows (modifications in **bold**):

Landfill 1 – Engineered Alternative Final Cover Design

Component	Top Deck	Side Slopes
Erosion Resistant Layer	≥ One-foot soil erosion resistant soil layer, with vegetation	
Drainage Layer	A geocomposite drainage layer (on side slopes steeper than 4H:1V)	
Low Hydraulic Conductivity (LHC) Layer	A 40-mil linear low-density polyethylene (LLDPE) geomembrane layer, textured on both sides	
Foundation Layer	≥ One-foot soil foundation layer ^{1,2}	

1. Minimum compaction of 90% of maximum dry density.
2. See WDR Construction Specification D.3.

Landfill 2 – Engineered Alternative Final Cover Design

Component	Top Deck	Side Slopes
Erosion Resistant Layer	≥ One-foot soil erosion resistant soil layer, with vegetation ¹	
Drainage Layer	A geocomposite drainage layer (on side slopes steeper than 4H:1V)	
Barrier Layer	A 40-mil linear low-density polyethylene (LLDPE) geomembrane layer, textured on both sides	
Low Hydraulic Conductivity (LHC) Layer	A Geosynthetic Clay Liner (GCL) ²	
Foundation Layer	≥ One-foot soil foundation layer ^{3,4}	

1. Closure phases 1, 2, 3, and 5 require a two-foot erosion resistant soil layer, with vegetation;
2. GCL shall exhibit appropriate strength characteristics (hydrated) to accommodate stresses associated with specific landfill design parameters, with particular attention to interface, long-term creep, shear, and bearing capacity;
3. Minimum compaction of 90% of maximum dry density; and

4. See WDR Construction Specification D.3.
3. Modify the paragraph above the signatory line on the Signature Page as shown in format below:

I, Patrick Pulupa, Executive Officer, do hereby certify that this Order is a full, true, and correct copy of the Order R5-2019-044-001 adopted by the California Regional Water Quality Control Board, Central Valley Region, on **7 June 2019** and amended by this Order R5-2022-0045 on **10 June 2022**.

L and D Landfill Limited Partnership and Fruitridge Road Land Company, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted there under, shall comply with amended Order R5-2019-044-001.

LIST OF ATTACHMENTS

Attachment A: Links to the 2019 and 2012 Orders for the Facility
Information Sheet

ENFORCEMENT

If, in the opinion of the Executive Officer, the Dischargers fail to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

ADMINISTRATIVE REVIEW

Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. To be timely, the petition must be received by the State Water Board by 5:00 pm on the 30th day after the date of this Order; if the 30th day falls on a Saturday, Sunday or state holiday, the petition must be received by the State Water Board by 5:00 pm on the next business day. The law and regulations applicable to filing petitions are available on the [State Water Board website](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) (http://www.waterboards.ca.gov/public_notices/petitions/water_quality). Copies will also be provided upon request.

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ATTACHMENT A

WDR Order R5-2019-0044 ([2019 Order](#)) and Monitoring & Reporting Program, Adopted on 6 June 2019

(https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/sacramento/r5-2019-0044.pdf)

WDR Order R5-2012-0107 ([2012 Order](#)) and Monitoring & Reporting Program, Adopted on 4 October 2012

(https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/sacramento/r5-2012-0107.pdf)

INFORMATION SHEET

L and D Landfill Limited Partnership and Fruitridge Road Land Company (collectively referred to as “Dischargers”) own the L and D Landfill (Facility) in Sacramento (approximately six miles southeast of downtown) in Sacramento County, Section 24, T8S, R5E and Section 24, T8N, R6E, MDB&M. Fruitridge Road Land Company owns the land on which the Facility is located. L and D Landfill Limited Partnership is the Facility Operator. The Facility is an active landfill with two waste management units (WMU): Landfill 1 and Landfill 2. Landfill 1 is an existing Class III WMU. Landfill 2 is a new Class III WMU. In general, the Facility accepts construction & demolition wastes and limited types and amounts of waste from household sources (e.g., self-haul wastes and curb-side green waste). Waste Discharge Requirements Order (WDR Order) No. R5-2019-044 regulates the Facility.

On 12 November 2021 the Discharger submitted Closure Construction Drawings and Details (Drawings and Details) for Phase 9A final cover closure at Facility. The Drawings and Details include plans for a 19-acre final cover system for a portion of the Landfill known as the West Pit Area in Landfill 1. Of note, the Discharger’s proposed design specifies a 12” Intermediate Soil Cover for the final cover Foundation Layer and a 40-mil linear low-density polyethylene (LLDPE) geomembrane layer. The Discharger contends some criteria depicted in WDRs Order No. R5-2019-0044 Attachment G is incorrect.

The analysis of the record indicates that the Discharger’s proposals, analyses, and Regional Board evaluation of the final cover system for Landfill 1 and Landfill 2 considered a one-foot (1’) Foundation Layer and a 40-mil LLDPE geomembrane layer, textured on both sides. The specifications for approved Engineering Alternative final cover systems as described in WDRs Order No. R5-2019-0044, Attachment G are

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inconsistent with the Engineering Alternative final cover systems considered and supported in the record.

This Order modifies Order R5-2019-0044 to change Attachment G to reflect the actual Engineering Alternative final cover systems analyzed and approved for the Facility.