CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

Fresno Office
1685 "E" Street
Fresno, CA 93706-2007

Sacramento Office (Main)
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

Redding Office
364 Knollcrest Drive #205
Redding, CA 96002

Regional Board Website (https://www.waterboards.ca.gov/centralvalley)

[TENTATIVE] WASTE DISCHARGE REQUIREMENTS ORDER R5-20XX-XXXX

ORDER INFORMATION

Order Type(s):	Waste Discharge Requirements (WDRs)
Status:	TENTATIVE
Program:	Title 23, Division 3, Chapter 15; Title 27
Region 5 Office:	Fresno
Discharger(s):	Clean Harbors Buttonwillow, LLC
Facility:	Clean Harbors Buttonwillow
Address:	2500 Lokern Road, Buttonwillow, CA
County:	Kern County
Parcel Nos.:	099-290-17-00-5; 099-261-32-00-6
GeoTracker ID:	L10006221337
Prior Order(s):	83-007, 86-199, 89-150, 96-094, 98-165, R5-2012-0111

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 _____ [Month] [Year].

_____

PATRICK PULUPA,
Executive Officer

REGIONAL BOARD INFORMATION

Sacramento Office (Main)
Rancho Cordova, CA 95670-6114
11020 Sun Center Drive #200
Telephone: (916) 464-3291

Fresno Office
1685 "E" Street
Fresno, CA 93706-2007
Telephone: (559) 445-5116

Redding Office
364 Knollcrest Drive #205
Redding, CA 96002
Telephone: (530) 224-4845

Regional Board Website
(https://www.waterboards.ca.gov/centralvalley)

TABLE OF CONTENTS

TABLE INDEX ..... **iii**

GLOSSARY ..... **iv**

FINDINGS **1**

Introduction 1

Materials Accompanying Order 2

Facility 3

Waste Classification & Permitting 7

Daily Cover/Intermediate Cover (Operating Landfill Units) 10

Site Conditions 10

Monitoring Networks 14

Water Quality Protection Standard 22

Unit Construction 22

Unit Closures 23

Post-Closure Maintenance & Financial Assurances 24

California Environmental Quality Act 25

Other Regulatory Matters 26

Reporting Requirements 27

Procedural Matters 27

A. Discharge Prohibitions 28

B. Discharge Specifications 29

C. Facility Specifications 31

D. Unit Construction Specifications 32

E. Closure & Post-Closure Maintenance Specifications 33

F. Financial Assurances 34

G. Monitoring Requirements 35

H. Reporting Requirements 36

I. Time Schedule 36

J. Other Provisions 37

ATTACHMENT A—SITE LOCATION 32

ATTACHMENT B—FACILITY LAYOUT 33

ATTACHMENT C—HYDRO-STRATIGRAPHIC NOMENCLATURE 34

ATTACHMENT D—LINER DESIGN FOR NEW UNITS 35

ATTACHMENT E—CLOSURE/COVER DESIGN 37

ATTACHMENT F—HISTORY OF WASTE MANAGEMENT UNITS 38

INFORMATION SHEET 41

TABLE INDEX

Table 1—Summary of Waste Management Units (WMUs) Permitted under Order..... 1

Table 2—Seismic Analysis..... 14

Table 3—Groundwater Monitoring Well Network 15

Table 4—Unsaturated Zone Monitoring Network 20

Table 5—Current Cost Estimates (Financial Assurances) 24

Table 6—Authorized Waste Discharges at Facility 29

Table 7—Time Schedule..... 37

GLOSSARY

AMR .....Annual Monitoring Report

BG.....Background

CalRecycle .....California Department of Resources Recycling and Recovery

C.F.R......Code of Federal Regulations

CIWQS .....California Integrated Water Quality System Project

COC .....Constituents of Concern

CSA.....Container Storage Area

DD .....Downdip Monitoring

DHSA .....Drum Handling and Storage Area

DMP .....Detection Monitoring Program

DSB.....Drum Storage Building

DTSC .....Department of Toxic Substances Control

DWTS.....Dirty Water Tank System

EC .....Electrical Conductivity

ET.....Evapotranspirative

Five-Year COCs .....Five-Year Constituents of Concern

GeoTracker .....State Water Board's Data Management System for Sites with Potential Groundwater Impact

GP .....Gas Probe

HWFP.....Hazardous Waste Facility Permit issued by DTSC. System

IPZ.....Intermediate Perched Zone

HWFP.....Hazardous Waste Facility Permit (DTSC)

LCRS .....Leachate Collection and Removal System

LDRS .....Land Disposal Restriction Standards

LFG.....Landfill Gas

LWTZ .....Lower Water Table Zone

MDL .....Method Detection Limit

Method TO-15 VOCs.....Volatile Organic Compounds associated with USEPA Method TO-15

MRP .....Monitoring and Reporting Program

MW.....Monitoring Well

N/A.....Not Applicable

POC .....Point of Compliance for Water Quality Protection Standard

PZ.....Piezometer

QA/QC .....Quality Assurance/Quality Control

Qualified Professional .....Professional Civil Engineer or Geologist licensed by the State of California

RCRA.....Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq.

RL .....Reporting Limit

RMSP.....Revised Monitoring System Plan

ROWD / JTD .....Report of Waste Discharge / Joint Technical Document

SAP.....Sampling and Analysis Plan

SGP.....Soil Pore Gas

STU.....Stabilization and Treatment Unit

SI.....Surface Impoundment

SMR.....Semiannual Monitoring Report

SPRRs / Standard Provisions ...*Standard Provisions and Reporting Requirements for Chapter 15 (23 CCR 2510, et seq.) and Part 258 (40 CFR 258),* September 1993 Edition

TDS.....Total Dissolved Solids

TTB.....Tank Treatment Building

TWS.....Truck Wash Station

Title 22.....California Code of Regulations, Title 22

Title 23.....California Code of Regulations, Title 23

Title 27.....California Code of Regulations, Title 27

UPZ.....Upper Perched Zone

USEPA.....United States Environmental Protection Agency

VOCs.....Volatile Organic Compounds

WDRs.....Waste Discharge Requirements

WL.....Water Level

WMU.....Waste Management Unit

WQPS.....Water Quality Protection Standard

FINDINGS

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

Introduction

1. Clean Harbors Buttonwillow, LLC (Discharger) owns and operates the Clean Harbors Buttonwillow facility (Facility), which is located approximately eight miles west of Buttonwillow and 6.5 miles northeast of McKittrick in Kern County. The Facility's location is depicted on the Site Location Map in **Attachment A**.

2. The Facility is situated on a 320-acre property comprised of Assessor's Parcel Number (APN) 099-290-17-00-5. The address associated with the Facility is 2500 Lokern Road, Buttonwillow, California 93206. The Facility encompasses the eastern half of Section 16, Township 29 South, Range 22 East, Mount Diablo Base and Meridian (MDB&M).

3. The Discharger also owns the adjacent property east of the Facility which encompasses 320 acres in the western half of Section 15, Township 29S, Range 22E, Mount Diablo Base and Meridian. The assessor's parcel number for this property is 099-261-32-006. The Discharger proposes to use portions of this property to stockpile surplus soil from the construction of future Waste Management Units (WMUs) at the Facility.

4. As the Facility's owner and operator, the Discharger is responsible for compliance with this Order, which prescribes Waste Discharge Requirements (WDRs) regulating construction, monitoring, operation, closure, and post-closure maintenance of the WMUs listed in **Table 1**.

Table 1—Summary of Waste Management Units (WMUs) Permitted under Order

Unit	Type	Class	Size	Status
WMU 18	Landfill	Class II	5 acres	Closed
WMU 21	Landfill	Class II	6 acres	Closed
WMU 22	Landfill	Class II	5 acres	Closed
WMU 23	Landfill	Class II	5 acres	Closed

Unit	Type	Class	Size	Status
WMU 27	Landfill	Class II	4.5 acres	Closed
WMU 28	Landfill	Class I	6.6 acres	Closed
WMU 31	Surface Impoundment	Class II	7.7 acres	Operating
WMU 33	Landfill	Class I	25.8 acres	Closed
WMU 34	Landfill	Class I	6.8 acres	Operating
WMU 35 (Cells 1-9)	Landfill	Class I	90 acres	Operating
WMU 36	Landfill	Class II	12.6 acres	Planned
WMU 37	Landfill	Class II	12.3 acres	Planned
WMU 38	Landfill	Class II	8.4 acres	Planned

Materials Accompanying Order

5. The following materials are attached to this Order, and incorporated herein:

ATTACHMENT A—SITE LOCATION
ATTACHMENT B— FACILITY LAYOUT
ATTACHMENT C— HYDRO-STRATIGRAPHIC NOMENCLATURE
ATTACHMENT D— LINER DESIGN FOR NEW UNITS
ATTACHMENT E—CLOSURE/COVER DESIGN
ATTACHMENT F—HISTORY OF WASTE MANAGEMENT UNITS

Information Sheet for [TENTATIVE] Waste Discharge Requirements Order (Information Sheet)

Standard Provisions and Reporting Requirements for Chapter 15 (23 CCR 2510, et seq.) and Part 258 (40 CFR 258), September 1993 Edition (1993 SPRRs) (separate document) **(Class I WMUs)**

Standard Provisions & Reporting Requirements for Waste Discharge Requirements for Industrial Facilities Regulated by Title 27, April 2016 Edition (2016 SPRRs) (separate document) **(Class II WMUs)**

6. This Order is also accompanied by the concurrently adopted **Monitoring & Reporting Program R5-20XX-XXXX (MRP)**, the provisions of which are incorporated as part of this Order. Each time the operative MRP is modified by the Central Valley Water Board or its Executive Officer, the revised version shall become the operative MRP (superseding the prior version) and be incorporated as part of this Order (i.e., in lieu of the prior version).

7. To the extent there are any material inconsistencies between the provisions of this Order, the operative MRP and the SPRRs, the provisions of this Order shall be controlling. However, to the extent a revised MRP contains new or different factual findings reflecting changed conditions or circumstances at the Facility, the revised MRP findings shall be controlling.

8. Additional information about the Facility is set forth in the **Information Sheet**, which is incorporated as part of these findings.

Facility

9. The Facility includes the following onsite features, systems and structures:

   a. Support facilities including an administration area, a laboratory, a shop, a scale house, and related facilities.

   b. The Stabilization Treatment Unit (STU) is designed to process waste that cannot be disposed of directly into a landfill due to Land Disposal Restriction Standards (LDRS) or other applicable standards. The stabilization treatment process will modify chemical and/or physical characteristics of the wastes to allow subsequent placement in a landfill in full compliance with standards. The STU stabilizes and solidifies hazardous waste by mixing the waste with reagents prior to eventual landfilling. The STU is a multilevel structure designed to be loaded with hazardous waste failing to meet LDRS. The STU has a double liner and a Leachate Collection and Removal System (LCRS). The liner system operates as a secondary containment for the entire STU footprint. The permitted treatment capacity of the STU is 1,600 tons per day and 400,000 tons per year.

   c. The Drum Handling Storage Area (DHSA) is a covered and contained area for the receipt, handling, and storage of containerized wastes. The

DHSA is permitted to hold up to 1,670 55-gallon drums for a capacity of 91,850 gallons.

d. The Dirty Water Tank System (DWTS) consists of two tanks, T-01-03 and T-01-01. The two tanks have a combined capacity of 30,000 gallons and are held in concrete (coated) secondary containment. Stormwater, wastewater, and liquids collected in sumps and trenches throughout the STU, DHSA, DWTS, and Truck Wash Station (TWS) are pumped into the DWTS. The various water collected in the DWTS may be recycled back into in the STU.

e. The TWS is an existing open pad with a sump designated as tank T-01-08. The TWS is for water wash down and/or wash out of bulk waste delivery trucks. The wastewater is collected in the TWS within its concrete structure and its collection sump. The sump waste is pumped to DWTS tank T-01-03 and may be used as process water for the STU. The TWS has a liquid capacity of 17,000 gallons.

f. The Container Storage Area (CSA) is proposed to provide storage of bulk containers containing wastes from the STU and Tank Treatment Buildings (TTB) that have been treated for compliance with LDRS but are undergoing specified curing times and/or verification analysis. The CSA is designed for non-liquid storage and will include two adjacent areas totaling 400 feet in length and 310 feet in width together. A containment barrier approximately 12 feet wide and two feet tall will surround the entire CSA. When built, the CSA's maximum capacity will be 1,284,460 gallons of waste.

g. The proposed Tank Treatment Buildings (TTB) are designed to process wastes that cannot be disposed of directly into a landfill due to LDR standards or other applicable standards. The stabilization and treatment process will modify chemical and/or physical characteristics of the wastes to allow subsequent placement in a landfill in full compliance with standards. Treatment additives will be used to treat wastes for excessive metals, pH neutralizations, stabilization, solidification, and micro-encapsulation. The TTB will be comprised of four separate buildings. Each of the four proposed buildings will be fully enclosed covering an area of 4,464 square feet. Each building is proposed to have 179 cubic yards of gross capacity and an operating capacity of 151 cubic yards. Each building may process three batches per day to equal a maximum of 453 cubic yards per day.

h. The proposed Drum Storage Buildings (DSB) will store containerized wastes that will be treated in the TTB or transferred to an off-site facility. The DSB will comprise of four separate buildings, one adjacent to each building in the TTB. Each building will be fully enclosed, utilizing secondary containment systems and is designed to hold up to 188 55-gallon containers for a total capacity of 10,340 gallons.

i. WMU 18 is a closed Class II WMU that was a former surface impoundment, which was subsequently converted to a non-hazardous solid waste landfill. The liner consists of 24 inches of native soil compacted to a permeability of 1 x 10^{-6} cm/sec, a 30 mil PVC-OR synthetic liner, 18 inches of uncompacted soil, a 30 mil PVC-OR synthetic liner, and 12 inches of protective soil cover. The cover system consists of a three-foot thick evapotranspirative (ET) soil layer.

j. WMU 21 is a closed Class II WMU that was a former surface impoundment which was converted to a non-hazardous solid waste landfill. The liner consists of 24 inches of native soil compacted to a permeability of 1 x 10^{-6} cm/sec, a 30 mil PVC-OR synthetic liner, 18 inches of uncompacted soil, a 30 mil PVC-OR synthetic liner, and 12 inches of protective soil cover. The cover system consists of a three-foot thick ET soil layer.

k. WMU 22 is a closed Class II WMU that was a former surface impoundment which was converted to a non-hazardous solid waste landfill. The liner consists of 24 inches of native soil compacted to a permeability of 1 x 10^{-7} cm/sec, a 40 mil PVC-OR synthetic liner, 24 inches of compacted soil to a permeability of 1x 10^{-7} cm/sec, a 40 mil PVC-OR synthetic liner, and 24 inches of compacted, protective soil (no specified permeability). The cover system consists of a three-foot thick ET soil layer.

l. WMU 23 is a closed Class II WMU that was a former surface impoundment which was converted to a non-hazardous solid waste landfill. The liner consists of 24 inches of native soil compacted to a permeability of 1 x 10^{-7} cm/sec, a 40 mil PVC-OR synthetic liner, 24 inches of compacted soil to a permeability of 1 x 10^{-7} cm/sec, a 40 mil PVC-OR synthetic liner, and 24 inches of compacted, protective soil (no specified permeability). The cover system consists of a three-foot thick ET soil layer.

m. WMU 27 is a closed Class II WMU that was a former surface impoundment which was converted to a non-hazardous solid waste

landfill. The liner consists of 24 inches of native soil compacted to a permeability of 1 x 10^{-7} cm/sec, a 40 mil PVC-OR synthetic liner, 24 inches of compacted soil to a permeability of 1 x 10^{-7} cm/sec, a 40 mil PVC-OR synthetic liner, and 24 inches of compacted, protective soil (no specified permeability). The cover system consists of a three-foot thick ET soil layer.

n. WMU 28 is a closed Class I landfill that previously received hazardous solid waste and closed in 2001. The maximum capacity is approximately 340,000 cubic yards. WMU 28 has a 36-inch clay liner compacted to permeability of 1 x 10^{-7} cm/sec, a 40 mil PVC-OR synthetic liner, a secondary LCRS, a 40 mil PVC-OR synthetic liner, a 36-inch clay liner compacted to a permeability of 1 x 10^{-7} cm/sec, a 40 mil PVC-OR synthetic liner, a primary LCRS, geotextile and a 24-inch protective soil cover (no specified permeability). The cover system consists of a two-foot thick clay barrier layer compacted to a permeability of 1 x 10^{-7} cm/sec, 80-mil HDPE geomembrane, geotextile, and two-foot thick vegetative soil layer.

o. WMU 31 is an operating, Class II surface impoundment that has a 24-inch clay liner compacted to a permeability of 1 x 10^{-7} cm/sec, a 40 mil PVC-OR synthetic liner, a 36-inch clay liner compacted to a permeability of 1 x 10^{-7} cm/sec, a 40 mil PVC-OR synthetic liner, a LCRS, a 40 mil PVC-OR synthetic liner, a 36-inch clay liner compacted to permeability of 1 x 10^{-7} cm/sec, a 40 mil PVC-OR synthetic liner, and a 24-inch protective soil cover (no specified permeability).

p. WMU 33 is a closed landfill that previously received hazardous solid waste and closed in 2001. The maximum capacity is approximately 1,850,000 cubic yards. The liner system consists of a secondary three-foot thick clay layer compacted to a permeability of 1 x 10^{-7} cm/sec, secondary 80-mil HDPE geomembrane, secondary LCRS, middle 80-mil HDPE geomembrane, primary three-foot thick clay layer compacted to a permeability of 1 x 10^{-7} cm/sec, primary 80-mil HDPE geomembrane, primary LCRS, and two-foot thick protective soil layer. The cover system consists of a two-foot thick clay barrier layer compacted to a permeability of 1 x 10^{-7} cm/sec, 80-mil HDPE geomembrane, geotextile, and two-foot thick vegetative soil layer.

q. WMU 34 is an active landfill for the disposal of hazardous and non-hazardous solid wastes. WMU 34 has an average depth of about 35 feet. The liner system consists of a secondary three-foot thick clay layer

compacted to a permeability of 1 x 10^{-7} cm/sec, secondary 80-mil HDPE geomembrane, secondary LCRS, middle 80-mil HDPE geomembrane, primary three-foot thick clay layer compacted to a permeability of 1 x 10^{-7} cm/sec, primary 80-mil HDPE geomembrane, primary LCRS, and two-foot thick protective soil layer. The maximum capacity at construction is approximately 360,000 cubic yards.

r. WMU 35 is an active landfill for the disposal of hazardous and non-hazardous solid wastes. WMU has a maximum depth of 85 feet below ground surface (bgs). The liner system consists of a secondary three-foot thick clay layer compacted to a permeability of 1 x 10^{-7} cm/sec, secondary 80-mil HDPE geomembrane, secondary LCRS, primary three-foot thick clay layer compacted to a permeability of 1 x 10^{-7} cm/sec, primary 80-mil HDPE geomembrane, primary LCRS, and 1.5-foot thick protective soil layer. WMU 35 is divided into nine cells that are being opened, filled, and closed in sequence. The maximum capacity at construction is approximately 10,700,000 cubic yards.

s. WMU 36 is a proposed Class II landfill that will accept non-hazardous solid waste. The proposed maximum capacity is 843,000 cy. The liner system consists of a composite liner system composed of a 60-mil HDPE liner, a geosynthetic clay liner (GCL) serving as the low-permeability layer, a geocomposite layer, and a 1.5 foot thick protective soil layer.

t. WMU 37 is a proposed Class II landfill that will accept non-hazardous solid waste. The proposed maximum capacity is 1,263,000 cy. The liner system consists of a composite liner system composed of a 60-mil HDPE liner, a GCL serving as the low-permeability layer, a geocomposite layer, and a 1.5 foot thick protective soil layer.

u. WMU 38 is a proposed Class II landfill that will accept non-hazardous solid waste. The proposed maximum capacity is 1,347,000 cy. The liner system consists of a composite liner system composed of a 60-mil HDPE liner, a GCL serving as the low-permeability layer, and a geocomposite layer, and a 1.5 foot thick protective soil layer.

v. Groundwater monitoring network consisting of several groundwater monitoring wells.

w. Unsaturated Zone monitoring system consisting of neutron probe tubes and/or pan lysimeters under WMUs and a proposed soil-gas monitoring network.

Waste Classification & Permitting

10. The Facility's landfills are subject to federal solid waste regulations promulgated under the Resource Conservation Recovery Act (RCRA) (42 U.S.C. § 6901 et seq.). These regulations are now codified as 40 C.F.R., Subtitles C and D and implemented in part through the provisions California Code of Regulations (CCR), Title 23, Division 3, Chapter 15 (Title 23) and CCR, Title 27 (Title 27).

11. The Facility was originally developed by Petroleum Waste, Inc., a subsidiary of McKittrick Mud Company. The Kern County Board of Supervisors approved development of the Facility in 1982. The Facility was granted Hazardous Waste Facility Permits by the Department of Toxic Substances Control (DTSC) and the U.S. Environmental Protection Agency (USEPA) in May 1983 and October 1984. Additionally, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) adopted Waste Discharge Requirements Order 83-007 in January 1983 to regulate the Facility. These permits/WDRs Order allowed the Facility to construct and operate a number of California hazardous waste and RCRA hazardous waste surface impoundments.

12. The Toxic Pits Cleanup Act of 1984 required the solidification of hazardous liquid wastes in the existing surface impoundments at the Facility, and the federal and state LDRS required treatment of wastes prior to land disposal. The Facility submitted revised permit applications to the applicable regulatory agencies to clean-close their surface impoundments and construct solid waste WMUs in their place.

13. In June 1989, the Facility was purchased by GSX Services of California, Inc. and assigned to GSX Services (Petroleum Waste), Inc. which was a wholly owned subsidiary of GSX Services of California, Inc. WDRs Order 89-199 was adopted in August 1989 to modify the following:

    a. The conversion of hazardous WMUs at the facility from hazardous liquid waste disposal to hazardous solid waste disposal by retrofitting 20 existing surface impoundments into eight new solid waste WMUs and operating additional new WMUs in previously undeveloped areas of the Facility.

    b. Prohibiting the discharge of hazardous liquid waste into surface impoundments or WMUs.

    c. The operation of non-hazardous Class II surface impoundments.

14. In September 1990, GSX Services of California, Inc. changed its name to Laidlaw Environmental Services of California and GSX Services (Petroleum

Waste), Inc. changed its name to Laidlaw Environmental Services (Lokern), Inc. (Laidlaw). Laidlaw subsequently submitted revised permit applications to DTSC, Kern County, and the Central Valley Water Board. The applications were for the construction of solid waste landfill WMU 35 in lieu of eight smaller landfills (WMUs 101 through 108), closure of WMUs 28 and 33, and to include a new groundwater monitoring program to comply with regulatory changes that occurred in 1991. A modified Conditional Use Permit was issued by Kern County. In April 1996, DTSC issued an updated Hazardous Waste Facility Permit.

15. On 30 April 1996, the Central Valley Water Board adopted WDRs Order 96-094. WDRs Order 96-094 required the clean-closure of six former hazardous waste surface impoundments (WMUs 6, 11, 12, 16, 19, and 25) and for the staged construction and operation of WMU 35 in place of eight previously-approved smaller landfills. WDRs Order 96-094 is currently the operative WDRs for WMUs 28, 31, 33, 34, and 35. WDRs Order 96-094 and classifies the Facility's WMUs as either Class I or Class II units for the discharge of hazardous/non-hazardous solid waste and non-hazardous liquid waste. This Order continues such classifications, which are set forth above in **Table 1**.

16. In 2002, Clean Harbors, Inc. assumed ownership and operation of the Buttonwillow facility from Safety-Kleen (Buttonwillow), Inc. The transfer of ownership and subsequent name change of the facility from that documented in Order 96-094, was updated through the adoption of Order R5-2002-0191. The current owner of the Facility is Clean Harbors Buttonwillow, LLC, operating as a subsidiary of Clean Harbors, Inc. Clean Harbors Buttonwillow, LLC is the Discharger in this WDRs Order.

17. The Central Valley Water Board adopted Special Order 98-165 in July 1998 to amend WDRs Order 96-094 to reclassify five former non-hazardous surface impoundments as Class II solid waste landfills (WMUs 18, 21, 22, 23, and 27) and to regulate their closure. The former surface impoundments were put into service between June 1985 and August 1986 and accepted only non-hazardous liquid waste from petroleum exploration and production operations. The Central Valley Water Board later adopted WDRs Order R5-2012-0111 to amend Special Order 98-165 to change the design of the final cover system for these five WMUs.

18. On 25 February 2026, the Discharger submitted an updated Report of Waste Discharge (ROWD) and Joint Technical Document (JTD) for the Facility. Information in the JTD was used in the development of this Order. The Discharger's JTD (ROWD) makes the following significant proposals:

a. The addition of three Class II solid waste WMUs (WMUs 36, 37, and 38) to extend the non-hazardous waste disposal capacity for the Facility and preserve capacity in the Class I landfills.

b. The use of an additional 320 acres for clean soil stockpiles.

19. On 19 June 2026, DTSC issued an updated *Hazardous Waste Facility Permit.* Information from this and the Discharger's permit application for DTSC was also used in the development of this Order.

20. The Discharger proposes to discharge certain **Hazardous Wastes** (per Title 23, § 2521) to Class I WMUs at the Facility. This Order authorizes the discharge of such wastes to the WMUs specified in **Section B.1** and **Table 6**.

21. The Discharger proposes to discharge certain **Designated Wastes** (per Wat. Code, § 13173) to Class I and Class II WMUs at the Facility. This Order authorizes the discharge of such wastes to the WMUs specified in **Section B.1** and **Table 6**.

Daily Cover/Intermediate Cover
(Operating Landfill Units)

22. In accordance with Title 27, section 20680, daily cover is not required for the Class II WMUs 36, 37, and 38 as the units are not municipal solid waste (Class III) landfills.

23. In accordance with their DTSC permit, the Discharger is required to apply at least six inches of clean soil cover over exposed wastes within the Class I landfill operations area daily to control wind dispersal of particulate matter. For this purpose, DTSC defined clean soil as, "uncontaminated soil or non-hazardous contaminated soil." In lieu of a soil cover, the Discharger is allowed use other appropriate materials (such as polymeric soil sealers or foaming agents) to control wind dispersal of particulate matter within the landfill operations area.

24. A 12-inch intermediate cover will be applied on areas where waste fill operations or additional cells are not to be constructed for periods greater than 180 days. Intermediate cover will be derived from onsite soil excavated from cell construction or stockpiled in off-site stockpiling locations.

Site Conditions

25. The Facility lies in the Antelope Plain on the southwestern flank of the San Joaquin Valley, adjacent to the Temblor Mountain Range. Land slopes range from approximately one percent at the Facility to over 40 percent in the drainage area

headwaters in the Temblor Mountains. The relatively uniform ground slope does not exhibit major drainage courses. However, there is a more closely spaced series of small drainage courses which impact the Facility in the vicinity of the western boundary. The overall contour pattern is also concave in this area.

26. The upland areas that ultimately drain to the Facility are located in steep, incised canyons. Water courses are narrow, poorly defined, have a tortuous alignment, and are generally parallel. The water courses do not typically coalesce into a major channel.

27. Natural land surface elevations on the property range from about 335 feet mean sea level (MSL) at the northeast corner of the Facility to approximately 410 feet MSL at the southwest corner of the Facility.

28. Three distinct stratigraphic zones comprise the top 600 feet of the sedimentary sequence in the region of the Facility and include the following local stratigraphic designations: (i) the Upper Zone, which includes the Silt Unit and the Upper Sand Unit, (ii) the Intermediate Zone, which includes the Upper Clay Layer, the Intermediate Unit, and the Lower Clay Layer, and (iii) the Lower Zone, which includes the Lower Unit and is underlain by the Corcoran Clay.

29. The Upper Zone consists of the surficial Silt Unit and the underlying Upper Sand Unit. Due to the dipping strata, this zone varies in thickness from approximately 70 feet in the southwest corner of the Facility to approximately 220 feet in the northeastern corner of the Facility. The Upper Zone becomes water bearing in the northeastern portion of the Facility as the base of the Upper Sand Unit dips below approximately 230 feet above MSL. To the south, the Upper Zone is dry.

30. The top of the Upper Zone consists of a Silt Unit which extends from ground surface to depths that vary from approximately 30 feet in the southwestern corner of the Facility to approximately 120 feet in the northeastern corner of the Facility. In general, the silt has some interbedded sand and gravel, with trace amounts of clay. In the southern and western portions of the Facility, the Silt Unit contains interbedded sandy gravel up to ten feet thick. Silty sand interbeds up to ten feet thick are also seen in the Silt Unit, predominantly in the lower ten feet of the unit where the silt generally grades to sand. The Upper Sand Unit lies below the Silt Unit and varies in thickness from approximately 40 feet in the southern end to approximately 70 feet in the northeastern corner of the Facility. This unit is composed of very fine- to coarse-grained sand, which is moderate to well-sorted and loose to very dense. The Upper Sand Unit is unsaturated in the southwestern area of the Facility. A groundwater-bearing zone (the Upper

Perched Zone) is present whereas the base of the unit dips below approximately 230 feet MSL in the northeastern area of the Facility.

31. The Intermediate Zone is composed of the Upper Clay Layer, the Intermediate Unit, and the Lower Clay Layer. This zone varies in thickness from 35 to 55 feet across the Facility. Permeable facies of this zone become water bearing in the northeastern portion of the Facility where the base of the Intermediate Unit dips below approximately 184 feet MSL. To the south, the Intermediate Zone is dry.

32. The top of the Intermediate Zone consists of the Upper Clay Layer. The Upper Clay Layer appears to be continuous throughout the Facility, with a thickness ranging from two to 15 feet. Site borings confirm the continuity of this clay across the Facility. The Upper Clay Layer typically consists of stiff to very stiff, damp to moist fat clay. The Upper Clay Layer is likely acting as an aquitard, limiting the downward migration of groundwater across the Facility.

33. The underlying Intermediate Unit is approximately 30 to 40 feet thick. The silt is slightly sandy, with fine sand and clay interbeds. Two fine-grained sand beds can be correlated in some areas of the Facility within the Intermediate Unit; one is located at or near the top of the Intermediate Unit and the other located at or near the base. Data show that the uppermost sand body ranges from three to eight feet in thickness and pinches out laterally in the southeastern areas of the Facility. These same data show the lower sand body ranges from four to eight feet thick and pinches out laterally in the southwestern comer of the Facility and is silty and thin to absent in the northern area.

34. The bottom of the Intermediate Zone consists of the Lower Clay Layer, which appears to be continuous throughout the Facility, with a thickness ranging from four to 12 feet. The Lower Clay Layer consists of stiff to very stiff, damp to moist, fat clay which frequently grades to increasing silt content near the base of the layer. The composition and lateral continuity of this clay unit makes it a significant aquitard across the Facility limiting vertical migration of precipitation and contaminants.

35. The Lower Zone is comprised of the Lower Unit and is underlain by a very fine-grained unit, possibly the Corcoran Clay, at a depth of approximately 600 feet. The average thickness of this zone is approximately 400 feet. This stratigraphic zone is water-bearing continuously across the Facility.

36. The Lower Unit is composed of generally olive-brown to grayish-brown interbedded sands, silts, and clays which vary in thickness from two to 50 feet. Correlative sand beds thickening to 40 feet are encountered; however,

beds that are less than ten feet thick and which pinch out laterally between wells are more prevalent.

37. The presumed Corcoran Clay, which underlies the Lower Unit, was encountered at approximately -230 feet MSL, thus indicating its depth below ground level is approximately 620 ft.

38. There are three stratigraphically-controlled groundwater bearing zones at the Facility: (i) the Upper Perched Zone (UPZ), found in the Upper Sand Unit perched above the Upper Clay Layer; (ii) the Intermediate Perched Zone (IPZ), found in the Intermediate Unit (sands) perched above the Lower Clay Layer; and (iii) the Lower Water Table Zone (LWTZ), found in the Lower Unit (sands) with the Corcoran Clay Layer as the lower confining layer. The Upper Perched Zone is the water-bearing zone closest to ground surface. The Central Valley Water Board considers all three zones as the "Uppermost Aquifer" (as defined at Title 27, § 20164).

39. Land use within one mile of the Facility is generally undeveloped or used for agricultural purposes. There are also oil wells within a one-mile radius of the Facility.

40. According to the Central Valley Water Board's *Water Quality Control Plan for the Tulare Lake Basin* (Basin Plan), the beneficial uses of Valley Floor Waters (Antelope Plain Hydrologic Area) include: agricultural supply (AGR); industrial service supply (IND); industrial process supply (PRO); water contact recreation (REC-1); non-water contact recreation (REC-2); warm freshwater habitat (WARM); wildlife habitat (WILD); Rare, Threatened, or Endangered Species (RARE); and Groundwater Recharge (GWR).

41. In the UPZ, groundwater underneath the Facility is first encountered between approximately 125.3 feet and 155.8 feet bgs. Groundwater elevations range between 201.5 and 218.5 feet MSL. In the IPZ, groundwater underneath the Facility is first encountered between approximately 125.3 feet and 155.8 feet bgs. Groundwater elevations range between 151.3 and 167.3 feet MSL. In the LWTZ, groundwater underneath the Facility is first encountered between approximately 284.2 feet and 314.1 feet bgs. Groundwater elevations range between 71.7 and 99.8 feet MSL.

42. In the UPZ, the direction of groundwater flow is predominantly to the northeast. The hydraulic gradient in the UPZ averages approximately 0.0054 feet per foot (ft/ft) with a corresponding groundwater flow velocity of approximately 42.8 feet per year. In the IPZ, groundwater flow is predominantly to the northeast. The

hydraulic gradient averages approximately 0.0017 ft/ft for the IPZ, with a corresponding flow velocity of approximately 5.73 feet per year. Groundwater flow in the LWTZ is predominantly to the northeast. The average hydraulic gradient in the northern portion of the Facility is approximately 0.0090 ft/ft, while that in the central and southern portion of the Facility is approximately 0.012 ft/ft. These data indicate groundwater flow velocities of approximately 35 feet per year in the northern portion of the Facility and approximately 45 feet per year in the central and southern portions of the Facility.

43. According to the Basin Plan, the designated beneficial uses of groundwater at the Facility are municipal and beneficial use (MUN), agricultural supply (AGR) and industrial process supply (PRO). However, groundwater in the northern portion and southwestern corner of the Facility is in the process of being de-designated from MUN, which will require approval from the Office of Admistrative Law.

44. There is one private water supply wells within one mile of the Facility.

45. Class I and Class II WMUs must be designed and constructed to withstand a maximum credible earthquake (MCE). (Title 23, § 2547 and Title 27, § 20370.) The Discharger's site-specific seismic analysis indicates that an earthquake, occurring along the San Andreas Fault, at a closest rupture distance of 16 miles, would result in the events summarized in **Table 2**.

Table 2—Seismic Analysis

Earthquake	Magnitude	Peak Ground Acceleration
MCE	8.5	0.31g

46. Based on data from the nearest weather station (Buttonwillow), the Facility has an annual average precipitation of 6.4 inches and a mean pan evaporation of 108 inches per year. The nearest weather station is reflective of conditions at the Facility.

47. WMUs must be constructed to accommodate stormwater runoff from the maximum probable precipitation for Class I WMUs and from a 24-hour precipitation event with a return period of 1,000 years for Class II WMUs. (See Title 23, § 2546 and Title 27, § 20320.) According to National Oceanic and Atmospheric Administration’s (NOAA) Precipitation Frequency Atlas 14, Volume 6 (rev. 2014), the Facility’s 1,000-year, 24-hour rainfall event is estimated to

result in 4.66 inches of precipitation Source: NOAA Precipitation Frequency Data Server (https://hdsc.nws.noaa.gov/hdsc/pfds). The maximum probable precipitation in a 24-hour period is 5.36 inches.

48. According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (https://msc.fema.gov/portal), the northern portion of the Facility is located within a 100-year floodplain. This risk is from three ephemeral stream channels drains towards the Facility. However, the ephemeral channels have been deepened, widened, and embanked to divert water away from WMUs. The Discharger has demonstrated that its affected landfills will not: (a) restrict the flow of a 100-year flood; (b) reduce the floodplain's temporary water storage capacity; or (c) result in a washout that poses a hazard to human health and/or the environment. (See 40 C.F.R. § 264.18(b)(1)).

Monitoring Networks

49. As of the date of this Order, the Facility's **groundwater** monitoring network consists of the existing and proposed monitoring wells listed in **Table 3**.

Table 3—Groundwater Monitoring Well Network

Well	Well Type	Monitored WMU (Program)	Water-Bearing Zone
I-1[1]	Interface	WL Only	UPZ
I-3[1]	Interface	WL Only	UPZ
MW-127RU[1]	MW	34, 35 (DD) 18,21 (POC)	UPZ
MW-131RU[1,2]	MW	28, 33 (DD) 22, 36 (POC)	UPZ
MW-135U[1,2]	MW/PZ[3]	37 (POC)	UPZ
MW-146RU[1,2]	MW	28, 33 (DD) 21, 36 (POC)	UPZ
MW-147RU[1,2]	MW	28, 33 (DD) 23, 36 (POC)	UPZ

Well	Well Type	Monitored WMU (Program)	Water-Bearing Zone
MW-159RU[1,2]	MW	28, 33 (DD) 27, 37 (POC)	UPZ
MW-QU[1,2]	MW/PZ[3]	37 (POC)	UPZ
P-101[1]	PZ	WL Only	UPZ
P-103I-1[1]	PZ	WL Only	UPZ
P-109[1]	PZ	WL Only	UPZ
P-120U[1]	PZ	WL Only	UPZ
P-127U1[1]	PZ	WL Only	UPZ
P-130U[1,2]	PZ	WL Only	UPZ
P-131U[1]	PZ	WL Only	UPZ
P-138U[1]	PZ	WL Only	UPZ
P-139U[1,2]	PZ	WL Only	UPZ
P-140U[1]	PZ	WL Only	UPZ
P-141U[1,2]	PZ	WL Only	UPZ
P-142U[1,2]	PZ	WL Only	UPZ
P-143U[1,2]	PZ	WL Only	UPZ
P-145U[1]	PZ	WL Only	UPZ
P-146U[1]	PZ	WL Only	UPZ
P-147U[1]	PZ	WL Only	UPZ
P-158U1[1]	PZ	WL Only	UPZ
P-159U[1]	PZ	WL Only	UPZ
P-160U[1]	PZ	WL Only	UPZ
P-161U[1,2]	PZ	WL Only	UPZ

Well	Well Type	Monitored WMU (Program)	Water-Bearing Zone
P-161RU[1]	PZ	WL Only	UPZ
P-2U[1,2]	PZ	WL Only	UPZ
P-3U[1]	PZ	WL Only	UPZ
P-4RU[2]	PZ	WL Only	UPZ
P-4U[1]	PZ	WL Only	UPZ
P-5U[1]	PZ	WL Only	UPZ
P-TU1[1]	PZ	WL Only	UPZ
MW-125I[1,2]	MW/PZ[3]	36 (POC)	IPZ
MW-128RI[1]	MW	21	IPZ
MW-132I[1,2]	MW/PZ[3]	37 (POC)	IPZ
MW-146I[2,4]	MW	36 (POC)	IPZ
MW-147I[2,4]	MW	36 (POC)	IPZ
MW-149RI/PZ[1,2]	MW	Background (Class I) 37 (POC)	IPZ
MW-171I[2,4]	MW	37 (POC)	IPZ
P-128I[1]	PZ	WL Only	IPZ
P-137RI[1,2]	PZ	WL Only	IPZ
P-148I[1,2]	PZ	WL Only	IPZ
P-CRI[1]	PZ	WL Only	IPZ
P-RI[1]	PZ	WL Only	IPZ
MW-139L[2,4]	MW	36, 37, 38 (BG)	LWTZ
MW-151RRL[1]	MW	35 (POC)	LWTZ
MW-152RRL[1]	MW	35 (POC)	LWTZ

Well	Well Type	Monitored WMU (Program)	Water-Bearing Zone
MW-153RRL[1]	MW	35 (POC)	LWTZ
MW-163RL[1]	MW	35 (POC)	LWTZ
MW-164RL[1,5]	MW	35 (POC)	LWTZ
MW-165RL[1]	MW	33 (POC)	LWTZ
MW-166RL[1,2]	MW	33 (POC) 36, 37, 38 (BG)	LWTZ
MW-167RL[1,2]	MW	28 (POC) 36, 37, 38 (BG)	LWTZ
MW-168RL[1,2]	MW	33 (POC) 36, 37, 38 (BG)	LWTZ
MW-169RL[1]	MW	34 (POC)	LWTZ
MW-170RL[1]	MW	31 (POC)	LWTZ
MW-PRL[1,2]	MW/PZ[3]	36, 37, 38 (BG)	LWTZ
MW-126RRL[2,4]	MW	36 (POC)	LWTZ
MW-142L[2,4]	MW	37 (POC)	LWTZ
MW-150RRL[2,4]	MW	36 (POC)	LWTZ
MW-172L[2,4]	MW	38 (POC)	LWTZ
MW-QL[2,4]	MW	37 (POC)	LWTZ
P-102L[1]	PZ	WL Only	LWTZ
P-102RL[1]	PZ	WL Only	LWTZ
P-112L[1]	PZ	WL Only	LWTZ
P-118L[1]	PZ	WL Only	LWTZ
P-119L[1]	PZ	WL Only	LWTZ

Well	Well Type	Monitored WMU (Program)	Water-Bearing Zone
P-119RL[1]	PZ	WL Only	LWTZ
P-121L[1]	PZ	WL Only	LWTZ
P-126L[1]	PZ	WL Only	LWTZ
P-126RL[1]	PZ	WL Only	LWTZ
P-133L[1,2]	PZ	WL Only	LWTZ
P-150L[1]	PZ	WL Only	LWTZ
P-150RL[1]	PZ	WL Only	LWTZ
P-151RL[1]	PZ	WL Only	LWTZ
P-152RL[1]	PZ	WL Only	LWTZ
P-153RL[1]	PZ	WL Only	LWTZ
P-154L[1]	PZ	WL Only	LWTZ
P-156L[1]	PZ	WL Only	LWTZ
P-163L[1]	PZ	WL Only	LWTZ
P-164L[1,2]	PZ	WL Only	LWTZ
P-165L[1]	PZ	WL Only	LWTZ
P-166L[1]	PZ	WL Only	LWTZ
P-167L[1]	PZ	WL Only	LWTZ
P-168L[1]	PZ	WL Only	LWTZ
P-169L[1]	PZ	WL Only	LWTZ
P-170L[1]	PZ	WL Only	LWTZ

Table Notes:

1. Monitoring network for the current facility (WMUs 18, 21, 22, 23, 27, 28, 31, 33, 34, and 35).
2. Monitoring network for the WMUs 36, 37, and 38.

3. Piezometer for the Class I monitoring network converted to monitoring well for the Class II monitoring network.
4. Newly constructed monitoring well.
5. Piezometer for the Class II monitoring network.

Table Definitions: BG – Background; DD – Downdip; IPZ – Intermediate Perched Zone; LWTZ – Lower Water Table Zone; MW – Monitoring Well; POC – Point of Compliance; PZ – Piezometer; UPZ – Upper Perched Zone; WL – Water Level;

50. As of the date of this Order, the Facility's **unsaturated zone** monitoring network consists of the existing and proposed monitoring points listed in **Table 4**.

Table 4—Unsaturated Zone Monitoring Network

Monitoring Point	Device Type	Monitored Unit	Status
NPT-28	Neutron Probe Tube	WMU 28	Operating
NPT-31-1	Neutron Probe Tube	WMU 31	Operating
NPT-31-2	Neutron Probe Tube	WMU 31	Operating
NPT-31-3	Neutron Probe Tube	WMU 31	Operating
NPT-33-1	Neutron Probe Tube	WMU 33	Operating
NPT-33-2	Neutron Probe Tube	WMU 33	Operating
NPT-33-3	Neutron Probe Tube	WMU 33	Operating
NPT-33-4	Neutron Probe Tube	WMU 33	Operating
NPT-34	Neutron Probe Tube	WMU 34	Operating
NPT-35-1	Neutron Probe Tube	WMU 35 Cell 1	Operating
NPT-35-2	Neutron Probe Tube	WMU 35 Cell 2	Operating
NPT-35-3	Neutron Probe Tube	WMU 35 Cell 3	Operating

Monitoring Point	Device Type	Monitored Unit	Status
NPT-35-4	Neutron Probe Tube	WMU 35 Cell 4	Operating
NPT-35-5	Neutron Probe Tube	WMU 35 Cell 5	Operating
NPT-35-6	Neutron Probe Tube	WMU 35 Cell 6	Operating
NPT-35-7	Neutron Probe Tube	WMU 35 Cell 7	Operating
NPT-35-8	Neutron Probe Tube	WMU 35 Cell 8	Planned
NPT-35-9	Neutron Probe Tube	WMU 35 Cell 9	Planned
PL-36	Pan Lysimeter	WMU 36	Planned
PL-37	Pan Lysimeter	WMU 37	Planned
PL-38	Pan Lysimeter	WMU 38	Planned
GP-28-1	Soil Gas Probe	WMU 28	Planned
GP-28-2	Soil Gas Probe	WMU 28	Planned
GP-28-3	Soil Gas Probe	WMU 28	Planned
GP-28-4	Soil Gas Probe	WMU 28	Planned
GP-33-1	Soil Gas Probe	WMU 33	Planned
GP-33-2	Soil Gas Probe	WMU 33	Planned
GP-33-3	Soil Gas Probe	WMU 33	Planned
GP-33-4	Soil Gas Probe	WMU 33	Planned
GP-33-5	Soil Gas Probe	WMU 33	Planned
GP-33-6	Soil Gas Probe	WMU 33	Planned
GP-34-1	Soil Gas Probe	WMU 34	Planned

Monitoring Point	Device Type	Monitored Unit	Status
GP-34-2	Soil Gas Probe	WMU 34	Planned
GP-34-3	Soil Gas Probe	WMU 34	Planned
GP-34-4	Soil Gas Probe	WMU 34	Planned
GP-35-1	Soil Gas Probe	WMU 35	Planned
GP-35-2	Soil Gas Probe	WMU 35	Planned
GP-35-3	Soil Gas Probe	WMU 35	Planned
GP-35-4	Soil Gas Probe	WMU 35	Planned
GP-35-5	Soil Gas Probe	WMU 35	Planned
GP-35-6	Soil Gas Probe	WMU 35	Planned
GP-35-7	Soil Gas Probe	WMU 35	Planned
GP-35-8	Soil Gas Probe	WMU 35	Planned
GP-35-9	Soil Gas Probe	WMU 35	Planned
GP-35-10	Soil Gas Probe	WMU 35	Planned

51. As of the date of this Order, there are no **surface water** monitoring requirements for the Facility.

52. As of the adoption of this Order, the above-described networks comply with the monitoring requirements of Titles 23 and 27. (See Title 23, §§ 2550.7–2550.11 and Title 27, §§ 20415–20435.) Subsequent changes to these networks will be reflected in a Revised Monitoring & Reporting Program issued by the Executive Officer.

Water Quality Protection Standard

53. A Water Quality Protection Standard (WQPS) is the analytical framework through which WMUs are individually monitored for releases and impacts to water quality.

(Title 23, § 2550.2 and Title 27, § 20390, subd. (a).) Under Titles 23 and 27, a WQPS is separately established for each WMU in WDRs. (*Id*.)

54. In accordance with Titles 23 and 27, this Order, by virtue of its incorporation of **Monitoring & Reporting Program R5-20XX-XXXX (MRP)** and subsequent revisions thereto, establishes a WQPS for each WMU at the Facility.

Unit Construction

55. Liners for new Class I WMUs must be designed and constructed to prevent migration of waste from the waste management units to adjacent geologic materials, ground water, or surface water, during disposal operations, closure, and the post-closure maintenance period. (See Title 23, §§ 2540(a), 2542(a).)

56. Liners for new Class II WMUs must be designed and constructed to contain fluids (e.g., leachate, waste and landfill gas condensate), to prevent the migration of waste to adjacent geologic materials, groundwater and surface water. (See Title 27, §§ 20310(a), 20330(a).)

57. The Discharger previously submitted construction plans for the construction of WMU 35 and its nine cells at the Facility, and these plans have been approved. The approved liner design for WMU 35, Cells 8 and 9 are outlined in **Attachment D**, which is incorporated herein.

58. The Central Valley Water Board is authorized to approve an **engineered alternative** to Title 27 prescriptive standards (see, e.g., Title 27, § 20330, subd. (c)), provided that the Discharger demonstrates that compliance with the prescriptive standard would be unreasonably and unnecessarily burdensome in comparison to the proposed alternative. (Title 27, § 20080, subds. (b), (c).

59. The Discharger submitted construction plans for the construction of new WMUs at the Facility, specifically WMUs 36, 37, and 38, which incorporate an engineered alternative outlined in **Attachment D**.

60. Regarding the new non-hazardous WMUs (WMUs 36, 37, and 38), the Discharger has adequately demonstrated that construction of a liner in accordance with the Title 27 prescriptive standard would be unreasonably and unnecessarily burdensome in comparison to the proposed engineered alternative. The Discharger has further demonstrated that the proposed engineered alternative(s), as described in **Attachment D**, are not only consistent with the performance goals of the prescriptive standard, as described above, and will afford at least equivalent water quality protections.

61. New WMUs will incorporate the LCRS described in further detail on **Attachment**

D. The proposed LCRS comply with Title 27 prescriptive standards. (See Title 23, § 2543; Title 27, § 20340.)

62. The unsaturated zone monitoring system for future modules shall be implemented in accordance with the operative MRP.

63. According to the submitted seismic analysis, the proposed WMUs will be able to withstand MCE seismic events described in **Finding 45**. (Title 23, § 2547 and Title 27, § 20370.)

Unit Closures

64. The Discharger has an approved Closure and Post-Closure Maintenance Plan (CPMP) on file for the Class I WMUs. The Discharger submitted a Preliminary CPMP for the Class II WMUs with their JTD submittal.

65. Per the CPMP for the Class I WMUs, the Discharger proposes closure of WMUs 34 and the remaining cells of WMU 35 with a final cover as specified in **Attachment E**.

66. Per the Preliminary CPMP for the Class II solid waste WMUs, the Discharger proposes closure of WMUs 36, 37, and 38 with an engineered alternative final cover, as specified in **Attachment E**.

67. In accordance with Title 27, section 21400(b), Class II surface impoundment WMU 31 will be clean-closed or, if clean-closure is infeasible, then WMU 31 will be closed as a Class II landfill with an engineered alternative final cover.

68. The Discharger's proposed final covers, together with any modifications set forth in **Attachment E**, are hereby approved for closure of the Class I and Class II WMUs.

Post-Closure Maintenance & Financial Assurances

69. The Discharger's approved CPMPs for the Class I and Class II WMUs are the operative document providing for post-closure maintenance for the entire post-closure maintenance period of at least 30 years, and until it is demonstrated that the Facility no longer poses a threat to the public health and safety and the environment. (See Title 27, §§ 20950(a)(1), 21180(a).)

70. The CPMPs include costs estimates for closure (Title 27, §§ 21820, 22206), post-closure maintenance (§§ 22210–22212), and foreseeable corrective action for releases (§§ 22220–22222). As of the date of this Order, these estimates, calculated in accordance with Title 27, are specified in **Table 5.**

Table 5—Current Cost Estimates (Financial Assurances)

WMUs	Requirement	Estimated Cost
Current Facility	Closure	$ 26,117,533
Current Facility	Post-Closure Maintenance	$ 13,839,452
Current Facility	Corrective Action	$ 578,000
WMUs 36, 37, 38	Closure	$ 2,530,068
WMUs 36, 37, 38	Post-Closure Maintenance	$ 4,596,113
WMUs 36, 37, 38	Corrective Action	$ 405,973

71. For the current Facility, this Order requires the Discharger to maintain financial assurances for closure, post-closure maintenance, and corrective action with DTSC in at least the Estimated Cost amounts specified in **Table 5**, in accordance with Title 23.

72. For WMUs 36, 37, and 38, this Order requires the Discharger to maintain financial assurances for closure, post-closure maintenance, and corrective action with CalRecycle in at least the Estimated Cost amounts specified in **Table 5**, in accordance with Title 27.

California Environmental Quality Act

73. In accordance with the California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq., on 24 September 2024, the County of Kern certified a final **Environmental Impact Report** (EIR) in connection with its issuance of a Conditional Use Permit. For purposes of the EIR, the "project" includes the following pertinent elements:

    a. An increase in the permitted property boundary from 320 acres to 640 acres to include the expansion parcel for a clean soil stockpile area;

    b. An increase in the permitted disposal area from 160 acres to 193.3 acres for the addition of three non-hazardous waste landfill units (WMUs 36, 37, and 38) within the existing facility boundary;

    c. An increase in permitted disposal capacity from 13,250,000 cy to 16,674,000 cy for the additional of non-hazardous waste landfill units (WMUs 36, 37, and 38) within the existing facility boundary;

    d. Construction of four new hazardous waste treatment buildings (TTBs) to support modifications proposed in DTSC's *Hazardous Waste Facility Permit* renewal application; and

e. Construction of one latex paint recycling building.

74. The Central Valley Water Board was consulted in the development of the EIR, and the discharges and other activities authorized under this Order fall within the scope of the project as contemplated in the EIR. Additionally, there are no substantial changes to either the proposed project or the attendant circumstances under which it will be undertaken, and no new information requiring revision of the Final Environmental Impact Report (EIR). The Final Environmental Impact Report (EIR) is therefore conclusively presumed compliant with CEQA for use by the Central Valley Water Board as a "responsible agency" under CEQA. Accordingly, no further environmental review is required under CEQA. (See Cal. Code Regs., tit. 14, § 15162.)

75. Mitigation measures specified in the EIR relevant to the issuance of this Order require the implementation of a *Mitigation Monitoring and Reporting Program* (MMRP). The Discharger submitted an MMRP, dated 25 July 2025.

76. This Order implements all applicable mitigation and monitoring measures specified in the EIR and MMRP.

Other Regulatory Matters

77. This Order is issued in part pursuant to Water Code section 13263, subdivision (a), which provides as follows:

> The regional board, after any necessary hearing, shall prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge…, with relation to the conditions existing in the disposal area … into which, the discharge is made or proposed. The requirements shall implement any relevant water quality control plans that have been adopted and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of [Water Code] Section 13241.

78. This Order implements the Central Valley Water Board's Basin Plan, which designates beneficial uses for surface water and groundwater and establishes

water quality objectives (WQOs) necessary to preserve such beneficial uses.[1] (Wat. Code, § 13241 et seq.)

79. The State Water Board's *Statement of Policy with Respect to Maintaining High Quality Waters in California*, Resolution 68-16 (*Antidegradation Policy*) prohibits the Central Valley Water Board from authorizing degradation of "high quality waters" unless it is shown that such degradation: (1) will be consistent with the maximum benefit to the people of California; (2) will not unreasonably affect beneficial uses, or otherwise result in water quality less than as prescribed in applicable policies; and (3) is minimized through the discharger's best practicable treatment or control.

80. Consistent with Titles 23 and 27, this Order requires the Discharger to maintain the Facility to contain waste within WMUs, thereby preventing degradation of water quality. To the extent that there are releases from Facility WMUs, they will be required to address such releases through a Corrective Action Program. (See Title 23, §§ 2550.1, 2550.7, 2550.10 and Title 27, §§ 20385, 20415, 20430.) Because this Order does not authorize any degradation in water quality, it complies with the *Antidegradation Policy*.

81. For the purposes of California Code of Regulations, title 23 (Title 23), section 2200, the Facility has a threat-complexity rating of **1**-**A**, where:

    a. Threat Category "1" reflects waste discharges that can cause long-term loss of receiving water beneficial uses (e.g., drinking water supply loss, water-contact recreation area closures, or posting of areas used for spawning/growth of shellfish or migratory fish); and

    b. Category "A" -- Any discharge of toxic wastes; any small volume discharge containing toxic waste; any facility having numerous discharge points and groundwater monitoring; or any Class 1 waste management unit.

Reporting Requirements

82. This Order is also issued in part pursuant to Water Code section 13267, subdivision (b)(1), which provides that:

---

[1]Designated beneficial uses surface water and groundwater are discussed in Finding 40 and Finding 43, respectively.

> [T]he regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region … shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

83. The technical reports required under this Order, as well as those required under the separately issued MRP, are necessary to ensure compliance with prescribed WDRs and the provisions of Title 23, Title 27, Subtitle C (40 C.F.R. part 260), Subtitle D (40 C.F.R. part 258). Additionally, the burdens associated with such reports are reasonable relative to the need for their submission.

84. Failure to comply with the reporting requirements under this Order and the MRP may result in enforcement action pursuant to Water Code section 13268.

Procedural Matters

85. All local agencies with regulatory jurisdiction over land-use, solid waste disposal, air pollution and public health protection have approved the use of the Facility's site for the discharge of waste to land as provided for herein.

86. The Discharger, interested agencies, and interested persons were notified of the Central Valley Water Board's intent to prescribe the WDRs in this Order, and provided an opportunity to submit their written views and recommendations at a public hearing. (Wat. Code, § 13167.5; Title 23, § 2592; Title 27, § 21730.)

87. At a public meeting, the Central Valley Water Board heard and considered all comments pertaining to the discharges regulated under this Order.

88. The Central Valley Water Board will review and revise the WDRs in this Order as necessary.

REQUIREMENTS

IT IS HEREBY ORDERED, pursuant to Water Code sections 13263 and 13267, that WDRs Orders 96-094 and R5-2012-0111 are rescinded, except for enforcement purposes; and that the Discharger and their agents, employees and successors shall

comply with the following.

A. Discharge Prohibitions

1. The discharge of leachate or waste to surface waters, surface water drainage courses, groundwater, and natural geologic materials adjacent of the WMUs is prohibited.

2. The discharge of wastes outside of a WMU or portions of a WMU specifically designed for their containment is prohibited.

3. The discharge of waste to a closed waste management unit is prohibited.

4. Waste containing free liquids, or containerized free liquids, into landfills.

5. Infectious or bio-hazardous materials, as defined by Health and Safety Code section 117690.

6. U.S. Department of Transportation Class A explosives.

7. Municipal garbage or refuse, except that which is generated on-site.

8. Waste containing polychlorinated biphenols (PCBs) with a concentration greater than 50 mg/kg.

9. Wates containing dioxins, identified by the following EPA waste codes: F020, F021, F022, F023, F026, F027

10. Bulk or containerized hydrazine (EPA waste code U133).

11. Compressed gas waste cylinders greater than one liter.

12. The Discharge of “Hazardous Waste,” as defined per Title 23, section 2601, into Class II WMUs at the Facility. DTSC shall be immediately notified of any such discharges in violation of this Order.

13. Any “Hazardous Waste” not approved by DTSC.

14. Wastes that have the potential to reduce or impair the integrity of containment structures or which, if commingled with other wastes in the WMU, could produce violent reaction, heat or pressure, fire or explosion, toxic byproducts, or reaction products which in turn:

a. require a higher level of containment than provided by the WMU;

b. are “restricted hazardous wastes”; or

c. impair the integrity of containment structures.

B. Discharge Specifications

1. The Discharger shall only discharge waste to Facility WMUs as specified in **Table 6**, subject to the table-specific definitions provided below.

Table 6—Authorized Waste Discharges at Facility

Waste Category	WMU 31	WMUs 34, 35	WMUs 36, 37, 38
Hazardous Waste Wastes which, pursuant to Title 22, section 66261.3 et seq., must be managed in accordance with Division 4.5 of Title 22. (Title 27, § 20164; Title 23, § 2521(a).)	No	Yes	No
Municipal Solid Waste (MSW) – excluding MSW generated on-site Wastes subject to 40 C.F.R. part 258. (Title 27, § 20164.)	No	No	No
Designated Waste (1) Hazardous Wastes subject to a variance from management requirements per Health and Safety Code section 25143; and (2) Nonhazardous Waste containing constituents that, under ambient conditions, could be released in concentrations exceeding WQOs, or could reasonably be expected to affect beneficial uses. (Wat. Code, § 13173.)	Yes	Yes	Yes
NORM and TENORM NORM and TENORM waste with a concentration of no greater than 1,800 pCi/g per load.	No	Yes	No

Waste Category	WMU 31	WMUs 34, 35	WMUs 36, 37, 38
Putrescible Waste Dead animals, typically associated with oil spills, and solid and semi-solid vegetable waste accepted for disposal for special situations.	No	No	Yes

2. The Discharger shall promptly remove and relocate all waste discharged at the Facility in violation of this Order. If unable to do so, they shall submit a report to the Central Valley Water Board: explaining how the violative discharge(s) occurred, and why the waste(s) cannot be feasibly removed; and proposing waste acceptance program updates to prevent reoccurrences. If the infeasibility is economic, cost estimates shall be provided as part of the report.[2]

3. For landfill WMUs, the Discharger shall only use the materials described in **Finding 23** as an alternative daily cover (ADC) for landfill WMUs, provided that other materials may be used if approved in writing by the Central Valley Water Board as meeting the standards of Title 23, section 2544 and Title 27, section 20705.

4. **Leachate** from landfill WMUs shall not be discharged to other WMUs unless approved in writing by the Central Valley Water Board. (See Title 23, § 2543; Title 27, § 20340.)

5. Neither the treatment nor the discharge of wastes shall cause a condition of pollution or nuisance as defined by CWC section 13050.

6. The discharge of waste shall not cause degradation of any water supply.

[2] Submission of this letter does not constitute approval for discharge. The Central Valley Water Board may direct the removal of waste not authorized under this Order.

7. For WMUs 34 and 35, all compatible wastes not prohibited by state or federal regulations, or these requirements, may be placed in appropriate WMUs as specified in Title 23, provided that each waste is verified to be:

   a. Compatible with containment systems; and

   b. Compatible with wastes residing in the WMU.

8. For WMUs 34 and 35, the Discharger shall comply with all applicable sections of Title 23, including sections not specifically referenced in this Order, and all General Provisions and Standard Conditions in the 1993 SPRRs .

9. For WMUs 31, 36, 37, and 38, the Discharger shall comply with all applicable sections of Title 27, including sections not specifically referenced in this Order, and all Standard Discharge Specifications (2016 SPRRs, § D).

10. For WMU 31, at least two feet of freeboard must be maintained at all times.

C. Facility Specifications

1. For WMUs 31, 36, 37, and 38, the Discharger shall comply with all Standard Facility Specifications (April 2016 SPRRs, § E).

2. For WMUs 28, 33, 34, and 35, the Discharger shall comply with the Standard Conditions in the 1993 SPRRs.

3. Conditions may be added to the Facility's design, operating plan, or post-closure plans as necessary to protect water quality, human health, or the environment.

D. Unit Construction Specifications

1. The Discharger shall comply with all Standard Conditions (1993 SPRRs), Standard Construction Specifications (2016 SPRRs, § D), and Standard Storm Water Provisions (2016 SPRRs, § L), which are incorporated herein, as well as the following

2. The Discharger shall not commence liner construction (other than preparatory earthmoving and grading) until the Central Valley Water Board has approved in writing all necessary construction plans, specifications and construction quality assurance plans related to the new liner(s).

3. Base liners and slope liners for **new WMUs** listed shall be constructed according to specifications in **Attachment D**.

4. A certified geologist shall map the base of the excavation associated with the landfill prior to liner installation to assess the potential for the presence and the nature of the gravel stringers. If extensive and well-developed gravel stringers are identified, an independent evaluation of the adequacy of the unsaturated zone and groundwater monitoring systems shall be conducted by a third-party hydrogeologist or civil engineer.

    a. After the mapping is completed but before the installation of the liners for WMU 35, the Discharger shall submit the results to the Central Valley Water Board, DTSC, and the Kern County Planning and Natural Resources Department.

        i. If extensive and well-developed gravel stringers are identified, the results of the independent evaluation of the adequacy of the unsaturated zone and groundwater monitoring systems shall be submitted to the Central Valley Water Board, DTSC, and the Kern County Planning and Natural Resources Department.

    b. After the mapping is completed but before the installation of the liners for WMUs 36, 37, and 38, the Discharger shall submit the results to the Central Valley Water Board, CalRecycle, and the Kern County Planning and Natural Resources Department.

        i. If extensive and well-developed gravel stringers are identified, the results of the independent evaluation of the adequacy of the unsaturated zone and groundwater monitoring systems shall be submitted to the Central Valley Water Board, CalRecycle, and the Kern County Planning and Natural Resources Department.

5. The Discharger shall not implement changes to approved liner designs in **Attachment D** until the Central Valley Water Board approves of the proposed changes in writing, provided that the proposed changes:

    a. Previously approved components are not eliminated;

    b. The engineering properties of previously approved components are not substantially reduced; and

c. The proposed liner system will result in water quality equal to or greater than the design(s) prescribed per Title 23, section 2540 Title 27, section 20310 et seq., and this Order.[3]

E. Closure & Post-Closure Maintenance Specifications

Except as otherwise directed below, the Discharger shall comply with all Standard Conditions (1993 SPRRs), Standard Closure and Post-Closure Specifications (2016 SPRRs, § G) and closure-related Standard Construction Specifications (2016 SPRRs, § F), as well as the following with respect to closure of landfills at the Facility.

1. The Discharger shall submit a Final or Partial Final Closure and Post Closure Maintenance Plan (CPMP), at least two years prior to the proposed closure of any portion of any landfill.

2. The Discharger shall close landfills with the final cover components proposed in the operative Preliminary Closure and Post-Closure Maintenance Plan (CPMP), as approved per **Attachment E**.

3. The Discharger shall obtain revised WDRs prior to closure of any landfill with a final cover other than the one(s) approved herein.

4. During or after final cover installation, the Discharger may perform minor modifications to problematic areas of the final cover, provided that: (a) the barrier layer of the final cover (e.g., geomembrane, GCL and/or compacted clay layer) remains intact; and (b) the Central Valley Water Board approves of such modifications.

5. If the final cover incorporates a geomembrane barrier, all edges of the final cover shall be sealed by connecting to the liner.

6. The Discharger shall apply a volume of seed, binder and nutrients to the vegetative/erosion-resistant layer sufficient to establish the vegetation proposed in the final closure plan. The Discharger shall also install any necessary erosion and sedimentation controls to protect vegetation while it is being established.

---

[3] Proposed changes that do not meet these criteria are considered “material,” and will require the revision of this Order.

7. Critical interfaces of the final cover shall be laboratory-tested to ensure minimum design shear strength. The results of such testing shall be reported to the Central Valley Water Board as part of the Construction Quality Assurance (CQA) Report.

F. Financial Assurances

Except as otherwise directed below, the Discharger shall comply with all Standard Financial Assurance Provisions (2016 SPRRs, § H), as well as the following:

1. For the current Facility, this Order requires the Discharger to maintain financial assurances for closure, post-closure maintenance, and corrective action with DTSC in at least the Estimated Cost amounts specified in **Table 5**, in accordance with Title 23.

2. For WMUs 36, 37, and 38, this Order requires the Discharger to maintain financial assurances for closure, post-closure maintenance, and corrective action with CalRecycle in at least the Estimated Cost amounts specified in **Table 5**, in accordance with Title 27

3. A report regarding financial assurances, or a copy of the financial assurances report submitted to CalRecycle and/or DTSC shall be submitted to the Central Valley Water Board annually, no later than **1 June**.

4. If DTSC, CalRecycle, or the Central Valley Water Board determines that the submitted financial assurances for the Facility are inadequate, the Discharger shall, within 90 days of such determination:

    a. Obtain a new financial assurance mechanism for the amount specified by the agency determining the inadequacy; and

    b. Submit a report documenting such financial assurances to the agency determining the inadequacy.

5. For the Class II WMUs, the operative Preliminary CPMP shall include all components required per Title 27, section 21769, subdivision (c), and include a lump sum cost estimate for:

    a. Completion of all actions required for closure of each WMU;

    b. Preparation of detailed design specifications;

c. Development of a Final CPMP; and

d. Undertaking at least 30 years of post-closure maintenance unless the WMU is clean-closed.

6. Whenever changed conditions increase the estimated costs of closure and post-closure maintenance, the Discharger shall promptly submit an updated CPMP to DTSC and Central Valley Water Board for its Class I WMUs and to the Central Valley Water Board, CalRecycle and the LEA for the Class II WMUs.

G. Monitoring Requirements

Except as otherwise directed below, the Discharger shall comply with all applicable Provisions for Monitoring (1993 SPRRs), Response to Release (1993 SPRRs), Standard Monitoring Specifications (2016 SPRRs, § I) and Standard Response to Release Specifications (2016 SPRRs, § J), as well as the following:

1. The Discharger shall comply with all provisions of the separately issued Monitoring R5-20XX-XXXX and any subsequent revisions thereto (operative MRP).

2. The Discharger shall implement the Water Quality Protection Standard (WQPS) set forth in the operative MRP (see also Title 23, § 2550.2; Title 27, § 20390); and shall verify the compliance of each WMU with each subsequent monitoring event.

3. For all WMUs, the Discharger shall implement a groundwater, surface water (if applicable), and unsaturated zone detection monitoring program (DMP) in accordance with Title 23, sections 2550.1, 2550.7 and 2550.8 Title 27, sections 20385, 20415 and 20420.

4. For each WMU subject to corrective action, the Discharger shall implement a corrective action monitoring program (CAMP) in accordance with Title 23, Chapter 15, sections 2550.1, 2550.7, 2550.10 for its Class I WMUs and Title 27, sections 20385, 20415 and 20430, and Section I of the 2016 SPRRs for its Class II WMUs.

H. Reporting Requirements

In addition to those Standard Provisions pertaining to notification and reporting obligations, the Discharger shall comply with the following provisions.

1. The Discharger shall comply with all MRP provisions pertaining to the submittal and formatting of reports and data.

2. Reports shall be submitted electronically via the State Water Board's GeoTracker Database (https://geotracker.waterboards.ca.gov). After uploading, the Discharger shall notify Central Valley Water Board staff via email at CentralValleyFresno@WaterBoards.ca.gov. The following information shall be included in the body of the email:

Attention:	Title 27 Unit
Report Title:	[Enter Report Title]
GeoTracker Upload ID:	[Number]
GeoTracker Global ID:	L10006221337
Facility:	Clean Harbors Buttonwillow
County:	Kern County
CIWQS Place ID:	214782

3. All technical reports submitted under this Order shall be prepared by, or under the direct supervision of, a California-licensed civil engineer or engineering geologist. For the purposes of this section, a "technical report" is a report incorporating the application of scientific or engineering principles.

I. Time Schedule

The Discharger shall complete the following tasks in accordance with the specified deadlines:

Table 7—Time Schedule

Item No.	Category	Task	Deadline
1.	Construction	Submit construction and design plan(s) for review and approval in accordance with Section D of this Order.	90 Days Prior to Proposed Construction
2.	Construction	Submit construction report(s) for review and approval upon completion demonstrating construction was in accordance with approved construction plans.	60 Days Prior to Proposed Discharge to Unit(s)
3.	Final Closure	Submit final or partial final closure and post-closure maintenance plan (PCMP), design plans, and CQA plan for review and approval.	2 Years Prior to Closure

J. Other Provisions

1. The Discharger shall maintain at the Facility copies of this Order (including all attachments), the operative Monitoring & Reporting Program (i.e., MRP R5-20XX-XXXX and any revisions thereto), and the SPRRs. These materials shall be made available to all operating personnel, who shall be familiar with the contents of such materials.

2. The Discharger shall comply with all applicable provisions of Titles 23 and 27 (including those provisions not specifically referenced herein).

LIST OF ATTACHMENTS

Attachment A—SITE LOCATION
Attachment B—FACILITY LAYOUT
Attachment C—HYDRO-STRATIGRAPHIC NOMENCLATURE
Attachment D—LINER DESIGN FOR NEW UNITS
Attachment E—CLOSURE/COVER DESIGN
Attachment F—HISTORY OF WASTE MANAGEMENT UNITS

Information Sheet

Standard Provisions and Reporting Requirements for Chapter 15 (23 CCR 2510, et seq.) and Part 258 (40 CFR 258), September 1993 Edition (1993 SPRRs) (separate document) **(Class I WMUs)**

Standard Provisions & Reporting Requirements for Waste Discharge Requirements for Industrial Facilities Regulated by Title 27, April 2016 Edition (SPRRs) (separate document) **(Class II WMUs)**

Monitoring and Reporting Program R5-20XX-XXXX (separate document)

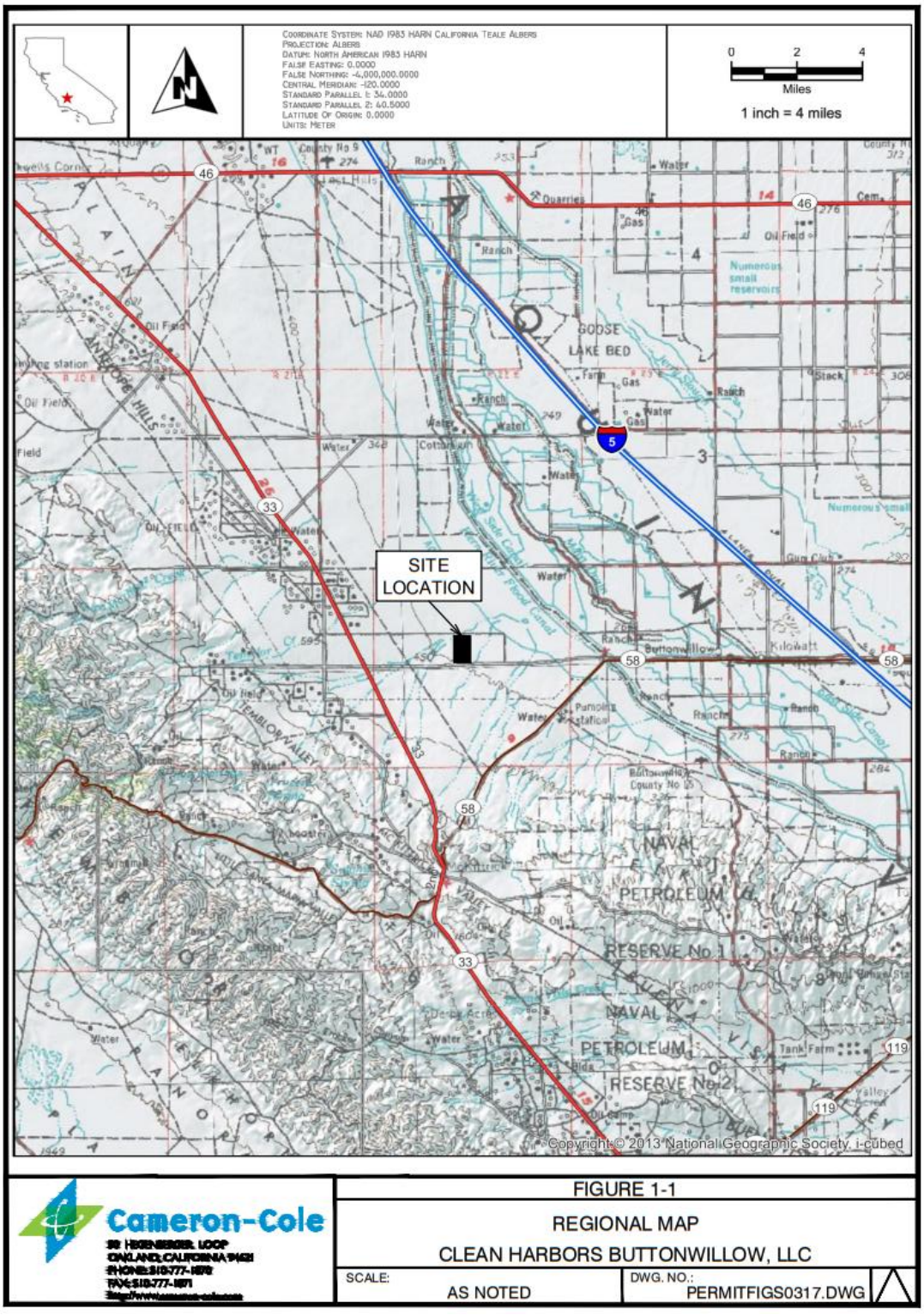
ENFORCEMENT

If, in the opinion of the Executive Officer, the Discharger fails 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.

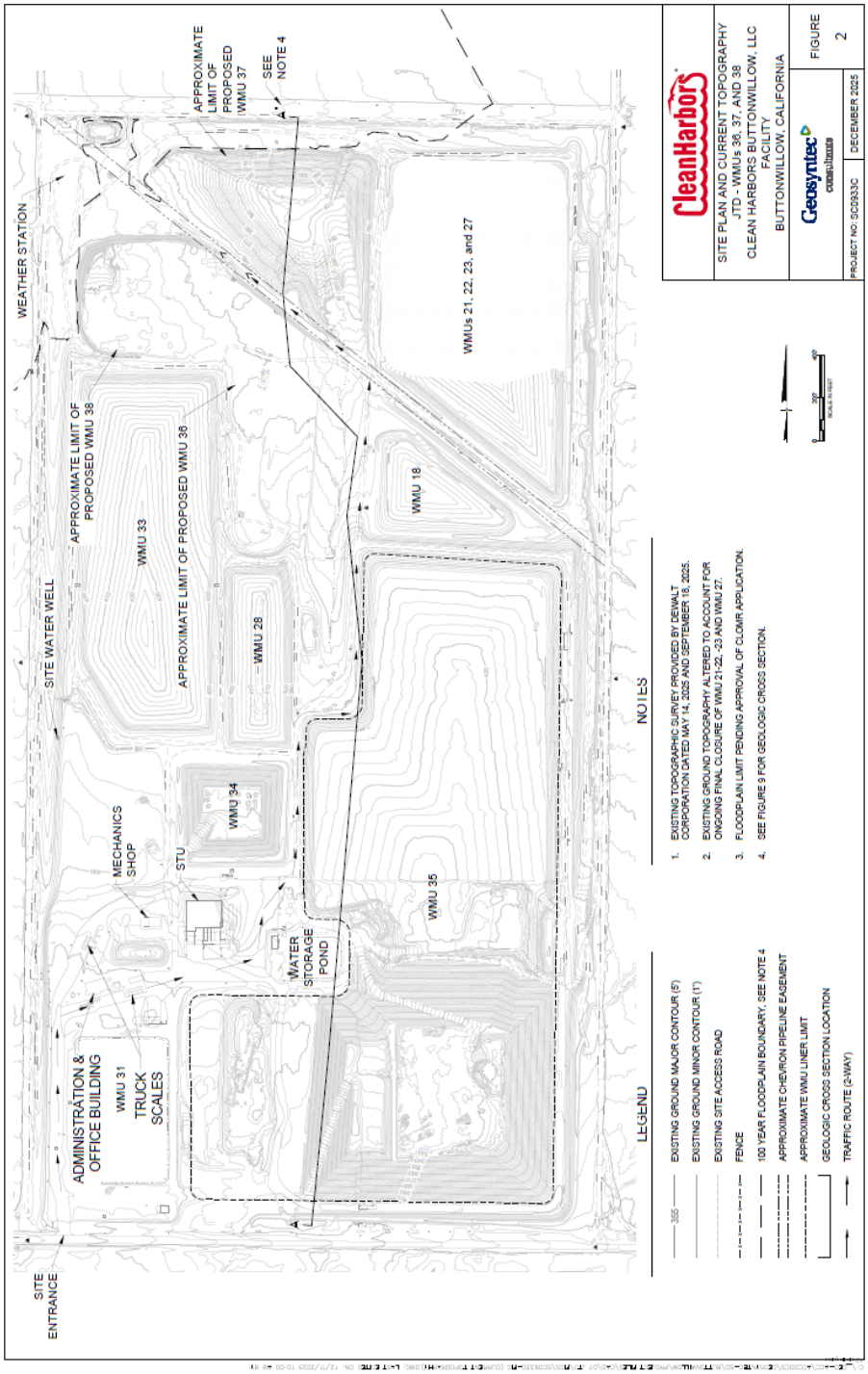
ADMINISTRATIVE REVIEW

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). Copies will also be provided upon request.

ATTACHMENT A—SITE LOCATION



ATTACHMENT B—FACILITY LAYOUT



ATTACHMENT C—HYDRO-STRATIGRAPHIC NOMENCLATURE

Zone Name	Zone Thickness	Stratigraphic Unit	Lithologic Description	Hydrologic Unit and Extent
Upper Zone	70 feet (SW corner) to 220 feet (NE corner)	Silt Unit	Silt; some interbedded sand and gravel, with trace amounts of clay (30 to 120 feet thick)	None
		Upper Sand Unit	Sand; very fine- to coarse-grained sand, moderate to well-sorted, loose to very dense (40 to 70 feet thick)	**Upper Perched Zone (UPZ) –** water-bearing in the NE where the base of the Upper Sand Unit dips below 230 feet MSL
Intermediate Zone	35 to 55 feet	Upper Clay Layer	Clay; stiff to very stiff, damp to moist fat clay (2 to 15 feet thick)	Aquitard forming the base of the UPZ
		Intermediate Unit	Silt; slightly sandy, with interbedded fine sand and clay (30 to 40 feet thick)	**Intermediate Perched Zone (IPZ) -** water-bearing in the NE where the base of the Intermediate Unit dips below about 184 feet MSL
		Lower Clay Layer	Clay; stiff to very stiff, damp to moist, fat clay, frequently grades to increasing silt content near the base (4 to 12 feet thick)	Aquitard forming the base of the IPZ

Zone Name	Zone Thickness	Stratigraphic Unit	Lithologic Description	Hydrologic Unit and Extent
Lower Zone	Average thickness about 400 feet	Lower Unit	Sand; with interbedded sands, silts, and clays (2 to 50 feet thick)	**Lower Water Table Zone (LWTZ) -** water-bearing continuously across the site
		Corcoran Clay	Clay; encountered at approximately 230 feet MSL	Lowermost aquitard

ATTACHMENT D—LINER DESIGN FOR NEW UNITS

Class I (Hazardous) – Waste Management Unit 35, Cells 8 and 9

The base liner system for WMU 35, Cells 8 and 9 shall consist of the following in descending order (from top to bottom):

- 1.5-foot thick operations layer;
- Geocomposite drainage layer;
- 80-mil primary high-density polyethylene (HDPE) geomembrane liner, textured on both sides;
- Three-foot thick primary low-permeability soil liner;
- Geocomposite drainage layer;
- 80-mil secondary HDPE geomembrane liner, textured on both sides; and
- Three-foot thick secondary low-permeability soil liner.

The side slope liner system for WMU 35, Cells 8 and 9 shall consist of the following in descending order:

- 1.5-foot thick operations layer;
- 80-mil protective HDPE liner;
- Geocomposite drainage layer;
- 80-mil primary HDPE geomembrane liner, textured on both sides;
- Geosynthetic clay liner (GCL);
- Geocomposite drainage layer;
- 80-mil secondary HDPE geomembrane liner, textured on both sides; and
- Three-foot thick secondary low-permeability soil liner.

SEE NEXT PAGE FOR CLASS II LINER REQUIREMENTS

Class II (Non-Hazardous) – Waste Management Units 36, 37, and 38

The base and side slope liner system for WMUs 36, 37, and 38 shall consist of the following in descending order (from top to bottom):

- 1.5-foot thick operations layer;
- Geocomposite drainage layer;
- 60-mil primary HDPE textured geomembrane liner;
- Geosynthetic clay liner (GCL) as a low-permeability layer;

Leachate Collection & Removal System (LCRS)

The LCRS for both the Class I and Class II WMUs consists of a geocomposite drainage layer that drains to a sump and the low point of the WMU. The leachate is the pumped out through an access pipe to leachate storage tanks. The LCRS will also consist of a network of 6-inch diameter HDPE collection pipes and drainage gravel.

ATTACHMENT E—CLOSURE/COVER DESIGN

Class I (Hazardous) – Waste Management Unit 35, Cells 6, 7, 8 and 9

The cover system for WMU 35, Cells 8 and 9 shall consist of the following in descending order (from top to bottom):

- Two-foot thick compacted final cover soil;
- Geocomposite drainage layer
- 80-mil HDPE geomembrane liner, textured on both sides;
- GCL barrier layer;
- One-foot thick compacted foundation layer soil; and
- One-ft thick compacted select waste.

Class II (Non-Hazardous) – Waste Management Units 36, 37, and 38

The cover system for WMUs 36, 37, and 38 shall consist of the following in descending order (from top to bottom):

- Three-foot thick evapotranspirative soil layer;
- One-foot thick foundation layer;

Class II (Non-Hazardous) – Waste Management Units 31 (Surface Impoundment)

WMU 31 is required to be clean-closed.

ATTACHMENT F—HISTORY OF WASTE MANAGEMENT UNITS

Waste Management Unit	Function	Status
WMU 1	Hazardous Surface Impoundment	Clean-Closed
WMU 2	Hazardous Surface Impoundment	Clean-Closed
WMU 3	Hazardous Surface Impoundment	Clean-Closed
WMU 4	Hazardous Surface Impoundment	Clean-Closed
WMU 5	Hazardous Surface Impoundment	Clean-Closed
WMU 6	Hazardous Surface Impoundment	Clean-Closed
WMU 7	Hazardous Surface Impoundment	Clean-Closed
WMU 8	Hazardous Surface Impoundment	Clean-Closed
WMU 9	Hazardous Surface Impoundment	Clean-Closed
WMU 10	Hazardous Surface Impoundment	Clean-Closed
WMU 11	Hazardous Surface Impoundment	Clean-Closed
WMU 12	Hazardous Surface Impoundment	Clean-Closed
WMU 13	Hazardous Surface Impoundment	Clean-Closed
WMU 14	Hazardous Surface Impoundment	Clean-Closed
WMU 15	Hazardous Surface Impoundment	Clean-Closed

Waste Management Unit	Function	Status
WMU 16	Hazardous Surface Impoundment	Clean-Closed
WMU 17	Hazardous Surface Impoundment	Clean-Closed
WMU 18	Non-Hazardous Surface Impoundment/Landfill	Converted to a non-hazardous waste landfill and closed.
WMU 19	Hazardous Surface Impoundment	Clean-Closed
WMU 20	Hazardous Surface Impoundment	Clean-Closed
WMU 21	Non-Hazardous Surface Impoundment/Landfill	Converted to a non-hazardous waste landfill and closed.
WMU 22	Non-Hazardous Surface Impoundment/Landfill	Converted to a non-hazardous waste landfill and closed.
WMU 23	Non-Hazardous Surface Impoundment/Landfill	Converted to a non-hazardous waste landfill and closed.
WMU 24	Hazardous Surface Impoundment	Clean-Closed
WMU 25	Hazardous Surface Impoundment	Clean-Closed
WMU 27	Non-Hazardous Surface Impoundment/Landfill	Converted to a non-hazardous waste landfill and closed.
WMU 28	RCRA Hazardous Landfill	Closed
WMU 31	Non-Hazardous Surface Impoundment	Operating
WMU 33	RCRA Hazardous Landfill	Closed
WMU 34	RCRA Hazardous Landfill	Operating

Waste Management Unit	Function	Status
WMU 35-1	RCRA Hazardous Landfill	Operating
WMU 35-2	RCRA Hazardous Landfill	Operating
WMU 35-3	RCRA Hazardous Landfill	Operating
WMU 35-4	RCRA Hazardous Landfill	Operating
WMU 35-5	RCRA Hazardous Landfill	Operating
WMU 35-6	RCRA Hazardous Landfill	Operating
WMU 35-7	RCRA Hazardous Landfill	Operating
WMU 35-8	RCRA Hazardous Landfill	Planned
WMU 35-9	RCRA Hazardous Landfill	Planned
WMU 36	Non-Hazardous Landfill	Planned
WMU 37	Non-Hazardous Landfill	Planned
WMU 38	Non-Hazardous Landfill	Planned
RCRA 1	RCRA Hazardous Surface Impoundment	Clean-Closed
RCRA 2	RCRA Hazardous Surface Impoundment	Clean-Closed
RCRA 3	RCRA Hazardous Surface Impoundment	Clean-Closed
RCRA 4	RCRA Hazardous Surface Impoundment	Clean-Closed
WMU T-1	Non-Hazardous Surface Impoundment	Clean-Closed

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

[TENTATIVE] WASTE DISCHARGE REQUIREMENTS ORDER R5-20XX-XXXX
FOR
CLEAN HARBORS BUTTONWILLOW, LLC
CLEAN HARBORS BUTTONWILLOW
KERN COUNTY

INFORMATION SHEET

Facility History and Background

The Facility was developed by Petroleum Waste, Inc., a subsidiary of McKittrick Mud Company, on land owned by McKittrick Mud. The Kern County Board of Supervisors approved development of the Facility in 1982. The Facility was granted Hazardous Waste Facility Permits by the Department of Toxic Substances Control (DTSC) and the U.S. Environmental Protection Agency (EPA) in May 1983 and October 1984 respectively and again in 1996. These permits allowed the Facility to construct and operate a number of California hazardous waste and Resource Conservation and Recovery Act (RCRA) hazardous waste surface impoundments.

In September 1987, the Facility submitted a revised Part B application. The submittal of this application was motivated primarily by the Toxic Pits Cleanup Act of 1984, which required the solidification of liquid hazardous wastes in the existing surface impoundments at the Facility, and the federal and state LDRS, which required treatment of wastes prior to land disposal. The revised application called for retrofitting the existing California hazardous and RCRA hazardous waste surface impoundments into eight new landfills (WMUs 101 through 108) and constructing three additional landfills (WMUs 28, 33, and 34) in previously undeveloped areas of the site. In addition, the application addressed construction of three units to be used for treatment of wastes prior to land disposal: the Stabilization Treatment Unit (STU), the Waste Stabilization Unit (WSU), and the Modular Inorganic Treatment System (MITS). The September 1987 permit application was modified several times to incorporate revised unit designs and operational plans.

In 1991, Laidlaw Environmental Services (Lokern), Inc. (Laidlaw) submitted a new RCRA Part B permit application to DTSC and requested a modified Kern County Conditional Use Permit (CUP) as well as modified WDRs. The application was for the construction of landfill WMU 35 in lieu of 8 smaller landfills (WMUs 101 through 108), closure of WMU 28 and 33, to remove the petroleum exclusion contained in DTSC and RCRA permits (allowed for the acceptance of most hazardous waste), remove all references to the MITS and WSU, and inclusion of a new groundwater monitoring program to comply with regulatory changes that occurred in 1991.

INFORMATION SHEET

During the permit application review process, a supplemental environmental impact report (SEIR) was prepared. The SEIR is titled "Laidlaw Environmental Services (Lokern), Inc., Lokern Facility Modifications, Draft Supplemental Environmental Impact Report," State Clearinghouse No. 92042028, prepared by Ogden Environmental and Energy Services Co, Inc. dated January 1994. The SEIR was subsequently certified by the Kern County Board of Supervisors and a modified CUP was issued.

In April 1996, DTSC issued an updated/renewed *Hazardous Waste Facility Permit*. The permit expired on 6 April 2006. A permit renewal application was submitted in October 2005 as required by 22 CCR §66270.10(h). The application was deemed complete by DTSC on 27 December 2005. The Facility continues to operate in accordance with its existing *Hazardous Waste Facility Permit* until such time DTSC issues a new permit or denies a new permit (22 CCR §66270.51(a)).

Following the issuance of a modified CUP, the WDRs for the Class I and Class II WMUs at the Facility were amended and adopted by Central Valley Regional Water Quality Control Board (Central Valley Water Board) Order No. 96-094 in May 1996 to incorporate changes in the Facility design/operations, to include proposed acceptance of new waste types, to modify the existing monitoring program, and to address closure. In 1998, Special Order 98-165 amended Order 96-094 to reclassify the former Class II surface impoundments (WMUs 18, 21, 22, 23, and 27) as Class II solid waste landfills and to regulate closure of these landfills.

Clean Harbors submitted a design plan for the proposed closure of WMUs 18, 21, 22, 23, and 27 in July 2011. In November of 2011, the Central Valley Water Board adopted Order No. R5-2012-0111 amending Order No. 98-165 for closure of Class II WMUs 18, 21, 22, 23, and 27. WMUs 18, 21, 22, 23 and 27 have been closed in accordance with the requirements of these WDRs. Clean Harbors is also commingling hazardous and non-hazardous waste in Class I landfill WMU 35.

On 24 September 2024, the County of Kern certified a final Environmental Impact Report (EIR) in connection with its issuance of a Conditional Use Permit to allow for the addition of non-hazardous waste landfill units (WMUs 36, 37, and 38) within the existing facility boundary. Mitigation measures specified in the EIR relevant to the issuance of this Order require the implementation of a *Mitigation Monitoring and Reporting Program* (MMRP). The Discharger submitted an MMRP, dated 25 July 2025.

In February 2026, Clean Harbors submitted a *Joint Technical Document* for the addition of three Class II solid waste WMUs (WMUS 36, 37, and 38). The purpose of these revised WDRs is to permit the new Class II landfills to extend the non-hazardous waste disposal capacity for the Facility and preserve capacity in the Class I landfills.