

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) (<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 27 Discharges to Land
Region 5 Office:	Sacramento (Rancho Cordova)
Discharger(s):	Nevada County Department of Public Works
Facility:	McCourtney Road Landfill
Address:	14741 Wolf Mountain Road, Grass Valley, California 95949
County:	Nevada County
Parcel Nos.:	25-120-12, 25-130-08, 25-130-46, 25-130- 47, 53-310-15, 53-310-17, 53-310-18, 53-310-37, 53-310-38, 530-310-39 and 53-310-40
GeoTracker ID:	L10004835054
WDID:	5A290300001
Prior Order(s):	R5-2014-0022; R5-2004-0022; R5-1996-0027; R5-1991- 0229; R5-1987-0189; R5-1972-0185

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 XX [Month] 2026.

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)

(<https://www.waterboards.ca.gov/centralvalley>)

TABLE OF CONTENTS

TABLE INDEX	iv
GLOSSARY	v
FINDINGS	1
Introduction	1
Materials Accompanying Order	2
Facility	3
Pump Stations	10
Leachate Storage Tank Farm	11
Waste Classification & Permitting	12
Site Conditions	13
Monitoring Networks	17
Water Quality Protection Standard	24
Evaluation Monitoring	25
Corrective Action	25
Unit Construction	27
Landfill WMU Closure	27
Surface Impoundment WMU Closure	30
Final Closure	32
Post-Closure Maintenance & Financial Assurances	32
California Environmental Quality Act	35
Other Regulatory Matters	36
Reporting Requirements	37
Procedural Matters	38

REQUIREMENTS	22
A. Discharge Prohibitions.....	22
B. Discharge Specifications	22
C. Facility Specifications	23
D. Unit Construction Specifications	23
E. Closure & Post-Closure Maintenance Specifications.....	23
F. Financial Assurances	24
G. Monitoring Requirements	25
H. Reporting Requirements.....	25
I. Time Schedule.....	26
J. Other Provisions	27
ATTACHMENT A—SITE MAP	32
ATTACHMENT B—LEACHATE MANAGEMENT	33
ATTACHMENT C—AREA WELLS.....	34
ATTACHMENT D—MONITORING DEVICES	35
ATTACHMENT E—LANDFILL GAS MANAGEMENT	36
ATTACHMENT F—FINAL COVER	37
STANDARD PROVISIONS & REPORTING REQUIREMENTS	38
A. Applicability.....	38
B. Terms and Conditions	39
C. Standard Prohibitions	40
D. Standard Discharge Specifications.....	41
E. Standard Facility Specifications.....	42
F. Standard Construction Specifications.....	44

G. Standard Closure and Post-Closure Specifications	49
H. Standard Financial Assurance Provisions	53
I. Standard Monitoring Specifications	53
J. Response to Release	63
K. General Provisions	65
L. Storm Water Provisions	68
INFORMATION SHEET	71
Changes to Landfill Liquid Management.....	71
Closure and Declassification of the Class II Surface Impoundments	72

TABLE INDEX

Table 1—Summary of Landfill Waste Management Units (WMUs) Permitted under Order	2
Table 2—Summary of (Former) Surface Impoundment Waste Management Units (WMUs) at the Facility	8
Table 3—Seismic Analysis.....	16
Table 4—Groundwater Monitoring Well Network	17
Table 5—SWAT Delineated Impacts.....	21
Table 6—Unsaturated Zone Monitoring Network	23
Table 7—Surface Water Monitoring Network	24
Table 8—Cost Estimate Summary (2024 Dollars).....	34
Table 9—Time Schedule.....	27

GLOSSARY

Antidegradation Policy	Statement of Policy with Respect to Maintaining High Quality Waters in California, State Water Board Resolution 68-16
Basin Plan	<i>Water Quality Control Plan for the Sacramento and San Joaquin River Basins</i>
bgs	Below Ground Surface
CalRecycle	California Department of Resources Recovery and Recycling
CAP	Corrective Action Program
CAMP	Corrective Action Monitoring Program
CEQA	California Environmental Quality Act
CEQA Guidelines	California Code of Regulations, Title 14, section 15000 et seq.
C.F.R.	Code of Federal Regulations
CPMP	Closure and Post-Closure Maintenance Plan
CQA	Construction Quality Assurance
Designated Waste	(a) Hazardous Waste subject to variance from management requirements per Health and Safety Code section 25143; and (b) Nonhazardous Waste containing pollutants that, under ambient conditions, could be released in concentrations exceeding applicable WQOs, or that could reasonably be expected to affect beneficial uses of water. (Wat. Code, § 13173.)
DMP	Detection Monitoring Program
DTSC	California Department of Toxic Substances Control
EC	Electrical Conductivity
EMP	Evaluation Monitoring Plan
FEMA	Federal Emergency Management Agency
GCL	Geosynthetic Clay Liner

gpm	Gallons per minute
Hazardous Waste	Wastes which, pursuant to Title 22, section 66261.3 et seq., are required to be managed in accordance with Division 4.5 of Title 22. (Title 27, § 20164; Title 23, § 2521(a).)
HDPE	High-Density Polyethylene
JTD	Joint Technical Document
LCRS	Leachate Collection and Removal System
LEA	Local Enforcement Agency
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.)
LFG	Landfill Gas
MDB&M	Mount Diablo Base and Meridian
MDL	Method Detection Limit
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter
MPE	Maximum Probable Earthquake
msl	Mean Sea Level
MRP	Monitoring and Reporting Program
MSW	Municipal Solid Waste regulated under 40 C.F.R. part 258
MW	Monitoring Well
SPRRs	Standard Provisions and Reporting Requirements
Subtitle D	USEPA-promulgated MSW regulations under RCRA (see 40 C.F.R. part 258)
RCRA	Resource Conservation and Recovery Act
ROWD	Report of Waste Discharge

Glossary

TDS	Total Dissolved Solids
Title 22	California Code of Regulations, Title 22
Title 23	California Code of Regulations, Title 23
Title 27	California Code of Regulations, Title 27
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds
WDRs	Waste Discharge Requirements
WMU	Waste Management Unit
WQOs	Water Quality Objectives
WQPS	Water Quality Protection Standard

FINDINGS

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

Introduction

1. The Nevada County Department of Public Works (Discharger) owns and operates the closed McCourtney Road Landfill (Facility) located approximately four (4) miles southwest of Grass Valley in Nevada County, Sections 5, 8, and 9, Township 15 North, Range 8 East, Mount Diablo Base and Meridian (MDB&M). The Facility's location is depicted on the Site Location Map in **Attachment A**.
2. The Facility is situated on a 244-acre property comprised of Assessor's Parcel Numbers (APNs) 25-120-12, 25-130-08, 25-130-46, 25-130-47, 53-310-15, 53-310-17, 53-310-18, 53-310-37, 53-310-38, 53-310-39 and 53-310-40. The address associated with the Facility is 14741 Wolf Mountain Road, Grass Valley, California 95949.
3. Facility landfill operations occurred from 1973 to 1992, accepting primarily household wastes from incorporated and unincorporated areas of western Nevada County (e.g., Nevada City, Grass Valley, Lake of the Pines). In November 1992 the Discharger stopped accepting wastes in the Facility landfill. In 1992 the Discharger also commenced operations of an onsite transfer station. The Discharger transports wastes to Anderson Landfill in Shasta County and the Lockwood Landfill in Storey County, Nevada.
4. A "waste management unit" (WMU) means an area of land, or a portion of a waste management facility, at which waste is discharged. The term includes containment features and ancillary features for precipitation and drainage control and for monitoring (Title 27, § 20164).
5. A "surface impoundment" is a waste management unit which is a natural topographic depression, excavation, or diked area, which is designed to contain liquid wastes or wastes containing free liquids, and which is not an injection well (Title 27, § 20164). Title 27 identifies the placement of designated liquids (including undewatered sludges) in surface impoundments as an authorized waste management strategy for discharges to land (Title 27, § 20120, Table 2.1).
6. As the Facility's owner and operator, the Discharger is responsible for compliance with this Order, which prescribes Waste Discharge Requirements (WDRs) regulating monitoring and post-closure maintenance of the closed landfill Waste Management Units (WMUs) listed in **Table 1**.

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

Unit	Cell	Class	Size (Acres)	Containment System	Period of Use
Landfill Unit 1	Old Landfill Mass	Class III	24.9	Unlined	1972-1989
Landfill Unit 1	89-90 Cell	Class III	6.3	Partial Lined	1989-1990
Landfill Unit 2	90-91 Cell	Class III	5.1	Lined	1990-1992

See Glossary for definitions of terms and abbreviations in table.

Materials Accompanying Order

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

ATTACHMENT A—SITE MAP
ATTACHMENT B—LEACHATE MANAGEMENT
ATTACHMENT C—AREA WELLS
ATTACHMENT D—MONITORING DEVICES
ATTACHMENT E—LANDFILL GAS MANAGEMENT
ATTACHMENT F—FINAL COVER

Standard Provisions & Reporting Requirements for Non-Hazardous
Discharges of Waste Regulated under Subtitle D and/or Title 27, December
2015 Edition (SPRRs or Standard Provisions)
Information Sheet for [TENTATIVE] Waste Discharge Requirements Order
(Information Sheet)

8. This Order is also accompanied by the concurrently adopted **Monitoring & Reporting Program Order R5-20XX-XXXX (operative 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).
9. 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 that a revised MRP contains new or different factual findings reflecting changed conditions or circumstances at the Facility, the revised MRP findings shall be controlling.

10. Additional information about the Facility is set forth in the **Information Sheet**, which is incorporated as part of these findings. (See Finding 7)
11. On 14 April 2026, the Discharger submitted an updated Report of Waste Discharge (ROWD) as part of its 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 Discharge to and management of landfill liquids, including **Leachate** and **Landfill Gas Condensate** extracted from Landfill Unit 1 and Landfill Unit 2 to an onsite leachate storage tank farm for storage prior to offsite disposal, instead of returning such waste to the same unit from which it originated, as is ordinarily required. (See Title 27, § 20340); and
 - b. A request to declassify both surface impoundment WMUs from "Class II" surface impoundments WMUs subject to Title 27 requirements.

Facility

12. According to *Volumes I and II Site Background and Waste Characterization Summary Report*, dated May 1993, the McCourtney Road Landfill operated as a burn dump from "about 1952 through 1972" where aerial photographs indicate that the burn dump operations were located on the approximate northern third of the Facility. In 1973 "sanitary landfilling methods were implemented" and Nevada County assumed ownership of the Facility. In 1977 or 1978 a fire burned the Facility "recycling office" destroying landfill records, including the daily logs of landfill operations.
13. The landfill portion of the Facility was sited at the head of a small east-sloping ravine that included a seasonal stream draining to the east. An embankment was constructed across a downstream portion of the ravine as part of the landfill containment system. The seasonal stream was subsequently buried during landfill development. Surface elevations at the site range from about 2,400 feet MSL in the upper reaches of the ravine on the western side of the site to about 2,100 feet MSL on the eastern side of the site. Differences between the original and present site topography reflect changes associated with landfill development.
14. Average landfill disposal rates ranged from about 70 to 120 tons per day on an annual basis. Total landfill tonnage is unknown due to a lack of historical records, but up to 2.3 million cubic yards of waste are estimated to be in place based on changes in topography since 1972. The highest elevation of waste at the landfill is about 2,300 feet above mean sea level (MSL), near the head of the ravine in which the landfill was sited. The lowest elevation of waste is about 2,150 feet MSL at the base of the landfill toe at the downstream end of the ravine upstream of the

buttress. The maximum height of the landfill waste column is about 80 feet corresponding to the approximate center of the Old Landfill Mass and deepest portion of the underlying ravine.

15. In addition to the closed landfill WMUs described in **Table 1** and the surface impoundment WMUs described in **Table 2**, the Facility includes
 - a. Leachate collection and pump station network (see **Attachment B**);
 - b. Leachate storage tank farm;
 - c. Landfill gas extraction, collection, and flare system;
 - d. Precipitation and drainage controls;
 - e. Three (3) stormwater sedimentation basins;
 - f. The McCourtney Road Transfer Station with a LCRS consisting of a leachate sump, pump station (PS-4), and a closed pipe collection system that is connected to the leachate storage tank farm;
 - g. Materials Recovery Facility;
 - h. Fire protection and suppression features; and
 - i. Support facilities such as scale houses, office, a contractor trailer office, shop buildings, and public kiosks.
16. The Facility includes the following former operations areas:
 - a. An approximate 52-acre area used as a burn dump from 1952 to 1973. The Discharger decommissioned the area in 1973;
 - b. An unlined 'household waste' landfill unit immediately south of the Old Landfill Mass (1976 Cell) which the Discharger clean-closed in 1995. The area is now a sedimentation basin;
 - c. A metals recycling and disposal area near the facility entrance (White Metals Disposal Area) that was clean closed in 1995;
 - d. A former septage pond area ("Old Septage Pond Area") in the northeastern part used for septage disposal from 1972 to 1990. The area consisted of about 22 unlined ponds. The southern portion of the area was used for expansion of the Old Landfill Mass and construction of the 90-91 Cell and two Class II surface impoundments at the facility. The remainder of the area was decommissioned in 1991; and

- e. Microwave Pond -- An area immediately north of the Old Landfill Mass where septage transfer operations were conducted. Also formerly known as the "Magic Pond," from 1990 to 1992 the Discharger operated a septage transfer station in the Microwave Pond area, accepting septage and chemical toilet wastes from offsite sources. The Discharger utilized temporary storage tank(s) to contain the septage and chemical toilet wastes for eventual offsite transport and disposal. The Discharger deployed a temporary liner to contain potential spills and contaminated liquids relating to the septage transfer station. The Discharger decommissioned the septage transfer station in 1995. The Discharger currently uses the Microwave Pond to collect precipitation and stormwater from the immediate area. The Discharger utilizes a manual pump to transfer accumulated stormwater from the Microwave Pond to SI-1.

Old Landfill Mass

15. Landfill Unit 1, Old Landfill Mass: The Discharger sited the Old Landfill Mass (OLM) in the east-sloping ravine described in Finding 13 without a liner containment system or a Title 27 compliant LCRS. Information in the record indicates that the OLM design may have relied on natural geologic materials for waste containment. The Discharger also installed limited leachate collection piping in the landfill toe area. To capture water from a natural spring and dewater the area a gravel subdrain with interceptor piping was installed beneath the landfill toe area and embankment.
16. In 1972, an embankment was constructed across the downstream end of the ravine to contain wastes at the landfill toe. The embankment is approximately 850 feet long, 240 feet wide at the base, 15 feet wide at the top, and 67 feet high. Reports on file (e.g., boring logs) indicate that the embankment may have been constructed in two stages and that the second stage partially overlapped lower lifts of waste. In 1989, a buttress (approximately 30 feet high and 50 feet wide) was constructed to provide additional support for the embankment. The buttress was designed to achieve a safety factor of 1.34 under assumed worst-case conditions.
17. In 1989 the Discharger improved the OLM LCRS as follows:
 - a. Connected the leachate and subdrain piping systems in the landfill toe area. The combined flow from both systems (up to 10 gpm on a year round basis) has since been managed as leachate;
 - b. A subdrain and collection piping was installed below the landfill embankment buttress constructed the same year;

- c. Five leachate extraction wells were installed in waste in the landfill toe area (i.e., west of the embankment) for monitoring and leachate extraction purposes. No leachate was subsequently detected in the wells, and they are now used as piezometers (see Finding 15).
 - d. Shallow leachate collection trenches filled with drainage material and covered with filter fabric were installed beneath the intermediate cover along the downslope perimeter of the landfill; and
 - e. The Discharger installed LFG collection piping in the trenches to collect landfill gas, plumbed to an onsite flare station in the northeast part of the OLM. The system operated primarily during periods of high leachate flows when more gas was generated in the LCRS. In 1995, the system was decommissioned as part of landfill closure.
18. The Landfill Unit 1, OLM which operated on or before 27 November 1984, the effective date of Title 27, is an “existing” waste management unit under Title 27 section 20080(d).

89-90 Cell

19. Landfill Unit 1, 89-90 Cell: In 1989, the Discharger constructed the 89-90 Cell adjacent to the southwest side of the OLM consisting of an unlined and lined portion:
- a. The 6.2-acre unlined “Winter 89 Cell”; and
 - b. The 1.9-acre lined “Summer 90 Cell” with a containment system consisting of a composite liner 60-mil HDPE primary liner, a 10 ounce/square yard geotextile and a twelve-inch gravel blanket LCRS. The Summer 90 Cell partially overlies the Winter 89 Cell and is adjacent to the OLM.
20. The Landfill Unit 1, 89-90 Cell, which began operations after 27 November 1984 is a “new” landfill unit under Title 27 section 20080(d).
21. The Discharger installed a subdrain (French drain) system beneath the downslope (southern) end of the 89-90 Cell to intercept high groundwater. The subdrain is approximately 620 feet long and 7 feet deep and is sloped to flow to a sump in the northeast corner of the 89-90 Cell. The Discharger equipped the sump with automatic pumps set to activate at a specified liquid level. The Discharger also constructed a pipe riser to the sump to allow for monitoring liquid levels and metered groundwater flow. No flows from the sump have been historically recorded since initial testing.

90-91 Cell

22. The Landfill Unit 2, 90-91 Cell: The Discharger constructed the 5.1-acre “90-91 Cell” west of Landfill Unit 1, OLM and northwest of Landfill Unit 1, 89-90 Cell with a composite liner containment system consisting of the following elements:
 - a. 1.5 compacted soil operations layer;
 - b. 60-mil single-sided HDPE, placed smooth side up;
 - c. 1-foot of compacted clay soil;
 - d. 10 ounce/square yard geotextile;
 - e. 12 inches of LCRS gravel; and
 - f. Compacted soil subgrade.
23. The Landfill Unit 2, 90-91 Cell, which began operations after 27 November 1984, is a “new” landfill unit under Title 27 section 20080(d).
24. Title 27 requires the Discharger to maintain separation of five (5) feet between wastes and the highest anticipated elevation of underlying groundwater beneath WMUs (Title 27, § 20240(c)).
25. In April 1991, following construction of the 90-91 Cell, the Discharger installed a groundwater dewatering system to ensure adequate separation from high groundwater. The system included dewatering well PW-1 upgradient of the 90-91 Cell and four (4) additional piezometers along the 90-91 Cell perimeter (PZs-103, 105, 115, and 116). Under an approved contingency plan per previous WDRs, groundwater extraction would be activated whenever the groundwater elevation exceeded a specified level at a piezometer corresponding to a maximum allowable groundwater elevation at the LCRS sump. Since its installation in 1991, groundwater pumping activities have been primarily limited to the wet season when groundwater levels are highest. Water pumped from PW-1 is discharged to SI-2 for onsite operational uses or fire suppression measures.
26. In *Landfill Unit 2 Evaluation of Groundwater Separation*, dated 13 July 2017, the Discharger evaluated groundwater separation between wastes contained in Landfill Unit 2 and the associated groundwater and piezometric surface elevations for Landfill Unit 2. The Discharger determined that as-built base liner elevations of the Landfill Unit 2, 90-91 Cell range from a maximum of 2,264 feet above MSL in the northwestern end of the unit to 2,254 feet above MSL in the southeastern end of the unit near the LCRS sump. Based on these as-built base liner elevations, the maximum allowable groundwater elevation for 5-foot separation ranges from 2,259 feet above MSL at the northwestern end of the unit to 2,249 feet above MSL at the southeastern end of the unit.

27. In November 2002, the Discharger installed leachate collection trenches (i.e., French drains) beneath the final cover along the northern perimeter of Landfill Unit 1 and eastern perimeter of Landfill Unit 2 to capture leachate seepage observed along the sides of the units. The trench at Landfill Unit 1 is approximately 4,300 feet long and the trench at Landfill Unit 2 is approximately 1,500 foot long. The trenches convey collected leachate to Pump Station 1 and Pump Station 2, respectively. No leachate seepage has been noted along the cover since installation of the trenches.

Surface Impoundments (Former)

28. Previous WDRs issued to the Discharger included requirements for regulating monitoring and post-closure maintenance of the surface impoundment WMUs listed in **Table 2**. The Discharger represents that it no longer uses, or intends to use, or is configured to use, the surface impoundment WMUs listed in **Table 2** to contain designated liquids. The Discharger further contends it satisfied all reasonable substantive closure requirements for the surface impoundment WMUs listed in **Table 2** and requests the Central Valley Water Board to consider declassification of the surface impoundment WMUs listed in **Table 2**. Declassification of the surface impoundment WMUs listed in **Table 2** would relieve the Discharger of requirements relating to monitoring and post-closure maintenance of the surface impoundment WMUs while allowing the Discharger to continue to use the declassified surface impoundment WMUs for operational purposes such as fire suppression and dust control.

Table 2—Summary of (Former) Surface Impoundment Waste Management Units (WMUs) at the Facility

Unit	Class	Size (Million Gallons)	Containment System	Period of Use
Surface Impoundment 1	Class II	5.2	Double-lined	1987- present
Surface Impoundment 2	Class II	1.3	Double-lined	1990- present

See Glossary for definitions of terms and abbreviations in table.

Surface Impoundment 1

29. Surface Impoundment 1: The Discharger constructed Surface Impoundment 1 (SI-1) in 1987 with containment system components consisting of an 80-mil HDPE liner underlain by a blanket type of leachate collection and recovery system

(LCRS) and four (4) feet of compacted clay liner. The LCRS consists of a geocomposite net on the sidewalls and five inches of gravel on the impoundment floor. The compacted clay is underlain by bedrock. The LCRS monitoring point for SI-1 consists of the LCRS sump (SI-1 SUMP). SI-1 has a storage capacity of 5.2 million gallons (MG) and a 1.4-acre footprint.

30. From 1990 until June 2013, the Discharger utilized SI-1 to store landfill leachate, landfill gas condensate, and septage generated by the Facility. The discharge of leachate, landfill gas condensate, and septage to SI-1 ceased in June 2013 when the Discharger discovered that the LCRS stopped collecting leachate and identified a leak in the SI-1 primary liner about 6 to 8 feet below the rim and seam separations in a few areas.

Surface Impoundment 2

31. Surface Impoundment 2: The Discharger constructed SI-2 with a containment system consisting of an HDPE liner, an LCRS, and an underlying clay liner. The LCRS for SI-2 is no longer operational and therefore is not sampled. SI-2 has a storage capacity of 1.3 million gallons (MG) and a 0.4-acre footprint.
32. Prior to 1994, the Discharger utilized SI-2 as a secondary, backup, or emergency storage to contain similar types of wastes stored in SI-1. The discharge of leachate, landfill gas condensate, and septage to SI-2 ceased in 1994 when the Discharger emptied and cleaned SI-2 and began using SI-2 as an operations pond for storage of fire suppression water. WDRs R5-2014-0022 limited the discharge of wastes to SI-2 to certain “inert liquids.” Water stored in the impoundment consists of stormwater from direct rainfall into the impoundment and groundwater pumped from the dewatering well upgradient of the 90-91 Cell (PW-1). In a 27 July 2026 letter regarding SI-2 the Discharger certified, in part, that since 1994 “...SI-2 has only been used for storage of inert liquids ...” and that facility drawings depicting the configuration of SI-2 indicate that “... it appears that SI-2 receives water via conveyance pipe only from well PW-1 and no other conveyance piping for non-inert liquids is connected to SI-2.”
33. Since 1994 the Discharger uses SI-2 as a “fire reservoir.” The Discharger relies on SI-2 to serve as the source of fire suppression water for the transfer station, including an electric fire pump that draws water from SI-2 to charge the fire sprinkler system and fire hydrant at the transfer facility. The Discharger utilizes precipitation, water from the dewatering well PW-1, and pumping water from SI-1 to maintain fire suppression water in SI-2. The Discharger uses precipitation and stormwater pumped from the adjacent microwave stormwater basin to maintain water levels in SI-1.

- a. The Discharger intends to use SI-1 to draft water in the case of a wildland fire.
- b. In 2024/2025, the Discharger installed an updated fire system served by a 20-inch diameter intake pipe near the bottom of SI-2. The updated fire system consists of a 175 horsepower (hp), 1,250 gallon per minute (gpm) diesel-powered fire pumping system serving fire sprinklers for the 46,000 square-foot transfer building, four (4) additional fire hydrants.

Pump Stations

33. The Discharger utilizes five (5) onsite pump stations to pump landfill liquids from various sources at the Facility to a central collection manhole north of Landfill Unit 1. The Discharger also pumps effluent from the site septic tanks and a septage acceptance facility to the central collection manhole through an HDPE pipe.
- a. Pump Station 1 (PS-1): Pumps leachate collected from Landfill Unit 1, including the leachate collection piping under the final cover, interceptor piping beneath the landfill toe embankment and buttress areas (commingled leachate and groundwater), and LCRS piping of the former 89-90 Cell to the central collection manhole.
 - b. Pump Station 2 (PS-2) pumps leachate collected from the Landfill Unit 2 LCRS sump to the central collection manhole. The Discharger disconnected an adjacent riser for the subdrain from the pump station, since the subdrain has been historically dry. The adjacent subdrain riser can be reconnected to PS-2 if needed.
 - c. Pump Station 3 (PS-3) pumps leachate collected from the leachate interceptor piping in the Landfill Unit 2 final cover, as well as LFG condensate collected by gravity drainage from the LFG collection system to a holding tank near the flare station. Both flows are then pumped from PS-2 northeast into the PS-2 discharge line to the central collection manhole.
 - d. Pump Station 4 (PS-4) pumps wash water and contact storm water from a holding tank in the McCourtney Road Transfer Station area to the central collection manhole.
 - e. Pump Station 5 (PS-5) pumps water from the Materials Recovery Facility and /or the Transfer Station Public Receiving Area to the central collection manhole.

Leachate Storage Tank Farm

34. In May 2012, the Discharger commenced installation of an above-ground Leachate Storage Tank Farm east of SI-1 (**Attachment B**) to replace SI-1 as the primary storage facility for leachate and other non-inert liquids generated at the Facility. The initial Leachate Storage Tank Farm consisted of eight (8) 15,000-gallon HDPE tanks installed in pairs, a central collection HDPE manhole, HDPE transfer piping, and valves to divert liquid flows to specific individual tanks. In June 2013, the Discharger commenced Leachate Storage Tank Farm operations.
35. The Discharger initially sized the Leachate Storage Tank Farm for two (2) days of storage of the peak flow from the pump stations (approximately 43,738 gpd). In 2020, the Discharger reduced leachate inflow rates at PS-1 by 10 to 15 gallons per minute by lining a 500-foot segment of the surface water drainage ditch near the upslope perimeter of Landfill Unit, thereby reducing the total required storage capacity of Leachate Storage Tank Farm. In 2020, the Discharger further increased the storage capacity of the Leachate Storage Tank Farm by adding four (4) 15,000-gallon HDPE tanks.
36. The Leachate Storage Tank Farm features twelve (12) 5,000-gallon HDPE tanks for liquid storage, each anchored per the manufacturer's recommendations. Leachate Storage Tank Farm provides up to 180,000 gallons of storage capacity. Each leachate storage tank is connected to a discharge pump, which pumps the stored Leachate Storage Tank Farm liquids to the Facility's leachate pump-out station.
37. The Discharger utilizes a leachate pump-out station adjacent to the Central Manhole to facilitate transfer of Leachate Storage Tank Farm liquids for offsite disposal. The leachate pump-out station is equipped with the operation switch for the leachate pump-out station, flow meter, flow totalizer, and a log for recording information relating to the volume of leachate pumped for offsite disposal.
38. According to the ROWD, the Discharger schedules a hauling contractor to provide transfer trucks for hauling landfill liquids for offsite disposal when landfill liquid volumes stored in the tank farm reach approximately 50% of the total storage capacity of the Leachate Storage Tank Farm. The Discharger represents that 50% of the total storage capacity of the Leachate Storage Tank Farm (90,000 gallons) corresponds to three (3) days of "buffer" storage capacity if contracted haul trucks are unavailable.

Waste Classification & Permitting

39. On 7 February 2014, the Central Valley Water Board adopted WDRs R5-2014-0022, classifying the Facility's WMUs as either Class II or Class III units for the discharge of designated waste (as defined per Wat. Code, § 13173), nonhazardous, and/or inert wastes to the Class II surface impoundments described in **Table 1** and **Table 2**. This Order continues the classifications, which are set forth above in **Table 1** and considers reclassification of the WMUs described in **Table 2**.
40. Some of the Facility's landfill WMUs are subject to federal Municipal Solid Waste (MSW) regulations promulgated under the Resource Conservation Recovery Act (RCRA) (42 U.S.C. § 6901 et seq.), as described below. Typically referred to as "Subtitle D," these regulations are now codified as 40 C.F.R. part 258 and implemented in part through the provisions California Code of Regulations, Title 27 (Title 27) and in accordance with State Water Resources Control Board (State Water Board) Resolution 93-62.
 - a. Neither of the cells in Landfill Unit 1 (i.e., Old Landfill Mass and 89-90 Cell) are subject to Subtitle D regulations because they did not accept wastes on or after 9 October 1991, the effective date of Subtitle D.
 - b. Landfill Unit 2's single cell (90-91 Cell) was subject to all of Subtitle D regulations because it accepted household wastes, operated on or after 9 October 1991, and did not close prior to the applicable federal deadline (9 October 1993).
41. The Discharger accepted nonhazardous solid wastes, including, but not limited to MSW, as defined under Title 27/Subtitle D regulations for discharge into Landfill Units 1 and 2. The Discharger also accepted de-watered sludge from offsite water treatment and wastewater treatment plants, and solids and sludge from the Facility surface impoundments. It is unknown whether such discharges to Landfill Unit 1 complied with current regulatory standards for sludge co-disposal contained in Title 27 sections 20200(d) and 20220(c) because most of Landfill Unit 1 (i.e., Old Landfill Mass area) is unlined. Other wastes historically discharged to Landfill Units 1 and 2 included wastes from clean-closing/decommissioning former operations areas; animal carcasses; treated or exempt medical wastes; and nonhazardous ash.
42. Previous WDRs authorized the discharge of hazardous asbestos to the Old Landfill Mass per California Health and Safety Code section 25143.7.
43. Neither surface impoundment WMU was authorized to accept hazardous or designated wastes, except for hazardous asbestos-containing wastes (i.e., wastes

containing >1% friable asbestos), as classified under the California Code of Regulations, title 22 (Title 22).

Site Conditions

44. The Facility is in the northern foothills of the western Sierra Nevada Mountains at an average elevation of about 2,250 feet MSL. Topographic relief in the area generally consists of hills and ridges separated by ravines and/or intermittent streams. Vegetation varies with topography and includes pine and oak trees; shrub growth such as manzanita and ceanothus; and various native grasses.
45. The Facility is in the Western Metamorphic Belt of the Sierra Nevada Mountains, a geologically complex region characterized by steeply dipping, northwest-southeast (NW-SE) trending ridges. Rock formations in the area are typically faulted and folded in a NW-SE direction consistent with the regional metamorphic fabric. The area generally consists of metamorphic rocks of sedimentary and igneous origin intruded by plutonic igneous rocks.
46. Two primary shear zones have been identified at the site, one trending north-northwesterly and a subordinate conjugate trending north-northeasterly. The latter merges into the former in the northern part of the site south of MW-4. The north-northwesterly shear zone then extends to a northwest trending ravine immediately north of the site. The ravine (likely another shear zone) is believed to act as an impermeable barrier to groundwater flow to the north but may redirect fracture flow to the northeast along its direction of shear. The widths of the shear zones at the site have not been well established but are estimated to range from about five to 15 feet. Secondary shear zones may also exist perpendicular to the primary shear zones onsite.
47. Bedrock at the Facility consists of metavolcanic schist, gneiss serpentinite, and amphibolite intruded by mafic diabase and gabbro dikes. Most bedrock types are steeply dipping and typically sheared, fractured and/or folded consistent with regional trends. Bedrock fracturing at the site tends to be in the direction of either of the two shear zones. Fractures are generally vertical and close with depth. Other fracture parameters affecting rock permeability and groundwater flow direction (e.g., lateral and vertical distribution; connectivity; size of opening, and mineralization) have not been well established.
48. Soils at the Facility consist primarily of Secca Series and rock outcrop soils, as classified by the United States Department of Agriculture's Natural Resources Conservation Service (formerly Soil Conservation Service and Forest Service). Secca series soil generally consists of up to 60 inches of gravelly-to-silty clay loam underlain by bedrock. Outcrops generally consist of weathered talc-schist

and serpentine. Onsite soils also include Aiken Series clay loam soils, most of which were excavated during landfill development. Areas of exposed bedrock include the south edge of the site near Wolf Mountain Road; the perimeter of the 90-91 Cell disposal area; and north and east sedimentation basin areas.

49. Land uses in the area include agricultural, rural housing, and industrial uses generally limited to the landfill, transfer station, and an animal control facility (about 1,000 feet northwest of the site). Certain parcels adjacent to the north and east of Landfill belong to Nevada County and are zoned as open space. Historically, the Grass Valley area is famous for lode and placer gold mining, most of which occurred in the mid to late 1800s.
50. Surface water from the Facility drains to either of two (2) ephemeral streams, both of which flow to French Ravine about one-half mile east of the Facility. French Ravine also conveys tailwater from the Nevada Irrigation District's James and Cory ditches throughout the year. French Ravine flows into Wolf Creek which is a tributary to the Bear River. According to the Central Valley Water Board's *Water Quality Control Plan for the Sacramento and San Joaquin River Basins* (Basin Plan), the beneficial uses of the Bear River include: municipal and domestic use (MUN); agricultural supply (AGR); hydropower generation (POW); water contact recreation (REC-1); non-water contact recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); and wildlife habitat (WILD). Potential beneficial uses include migration of aquatic organisms (MIGR); and spawning, reproduction and/or early development (SPAWN).
51. The uppermost aquifer at the site occurs in weathered/fractured bedrock at depths ranging from approximately 101 feet below ground surface (bgs) at monitoring well DW-2 on the western side of the site to less than 12 feet bgs near the downstream end of the ravine on the eastern side of the site. Corresponding piezometric groundwater elevations range from about 2,238 feet MSL to about 2,080 feet MSL +/- 2 to 5 feet of seasonal variation. The overall direction of groundwater flow is to the east consistent with the site's pre-landfill topography and the average groundwater gradient is about 0.08 ft/ft based on piezometric data.
52. Evidence of perched groundwater has been observed in some areas of the Facility such as where underlying low permeability rock traps infiltrated water within the unsaturated zone. Natural springs and seeps have also been observed in areas, including fracture springs near monitoring wells MW-4 and MW-4A; ephemeral seeps near the toe of the Old Landfill Mass embankment; buried springs or seeps near the southern edge of the Old Landfill Mass; a buried perennial stream several hundred feet west of the Old Landfill Mass embankment

- heel; and offsite springs down gradient of the former Old Septage Pond Area. The combined annual flow from these springs varies between 5 and 25 gpm.
53. Spring water which once drained to the seasonal stream draining to the ravine prior to construction of the landfill portion of the Facility (Finding 13) is captured by various subdrain interceptor systems (Findings 15, 17, 21, and 83) and pumped to Leachate Storage Tank Farm.
 54. The actual groundwater flow direction and gradient at a given location at the Facility may differ from that indicated by groundwater elevation contour mapping due to a number of factors, including a lack of piezometric data (especially within the landfill footprint and former septage pond areas); geologic complexity of the site (e.g., faults, fractures, permeability variation, flow barriers); and hydrogeological phenomena (e.g., vertical gradients, recharge zones, mounds). Groundwater monitoring data indicates, for example, that a secondary flow direction may exist to the north or northeast where landfill impacts have been detected.
 55. Background groundwater quality in the uppermost aquifer at the Facility includes total dissolved solids (TDS) at about 233 mg/L, electrical conductivity at about 285 mg/L, chloride at about 4 mg/L, sulfate at about 10 mg/L, and bicarbonate alkalinity at about 182 mg/L.
 56. According to the Basin Plan, the designated beneficial uses of groundwater at the Facility are municipal and beneficial use (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PRO).
 57. There are approximately 50 domestic supply wells near the Facility. Within and immediately adjacent to the local drainage basin, at locations adjacent to the southeastern boundary of the Facility, approximately 22 residences extract groundwater for domestic use. According to the JTD, Nevada County records indicate approximately 15 percent of these residential properties had been developed as of 1976 with the remaining 85 percent developed subsequent to 1976. The approximate locations of these wells are depicted in **Attachment C**.
 58. The Facility is within the Foothills Fault System, a zone of NW-SE trending quaternary faults extending approximately 130 miles from about Jamestown (SW end) to Oroville (NW end). The closest mapped faults within this system include the Highway 49 fault about 5.5 miles to the south-SE; and the Swain Ravine, Spenceville, and Dewitt faults each about 12 miles to the west-NW, west, south-SW. respectively. The closest historically active fault in this system is the Cleveland Hills Fault about 25 miles to the NW near Oroville. In 1975, the

Cleveland Hills Fault registered a magnitude 5.8 on the Richter scale. There are no known Holocene faults within 1,000 feet of the facility.

59. Class III WMUs must be designed and constructed to withstand a maximum probable earthquake (MPE) (Title 27, § 20370.). The Discharger's site-specific seismic analysis indicates that the MPE is an earthquake occurring along the Cleveland Hills Fault approximately 25 miles northwest of the Facility near Oroville. The record indicates that according to a probabilistic approach (i.e., seismic hazard distributed across area rather than single source), the MPE earthquake is described by a maximum magnitude of 6.2, a peak horizontal ground acceleration of 0.16g, and a return period of 475 years.

Table 3—Seismic Analysis

Earthquake	Magnitude	Peak Ground Acceleration	Return Period
Max Probable (MPE)	5.8	0.16 g	475 Years

See Glossary for definitions of terms and abbreviations in table.

60. Based on data from the nearest weather station (Grass Valley #2), the Facility has an annual average precipitation of 53 inches. The 100-year, 24-hour precipitation event is 11.0 inches. The 1,000-year, 24-hour precipitation event for this station is 14.2 inches. The mean annual pan evaporation is 56.99 inches per year, as measured at the Lake Spaulding Dam Station approximately 25 miles northeast of the Facility.
61. Class III WMUs must be constructed to accommodate stormwater runoff from 24-hour precipitation events with a return period of 100 years for Class III WMUs. (See Title 27, § 20320.) According to National Oceanic and Atmospheric Administration's (NOAA) Precipitation Frequency Atlas 14, Volume 6 (rev. 2014), the Facility's 100-year, 24-hour rainfall events are estimated to result in 9.70 inches of precipitation, respectively. Source: [NOAA Precipitation Frequency Data Server](https://hdsc.nws.noaa.gov/hdsc/pfds) (<https://hdsc.nws.noaa.gov/hdsc/pfds>).
62. Stormwaters that flowed to the seasonal stream draining to the ravine prior to construction of the landfill portion of the Facility (Finding 13), are now captured by the Discharger's stormwater drainage system and conveyed to stormwater sedimentation basins situated in the southwest, west, and eastern perimeter of the Facility, as depicted in **Attachment A**. These sedimentation basins detain stormwater for silt and sediment control during the rainy season. Usually dry

during summer months, these sedimentation basins discharge to either of two (2) ephemeral streams, both of which flow to French Ravine.

63. The sedimentation basins depicted in **Attachment A** detain stormwater for silt and sediment control, as follows:
- a. Runoff from Landfill Unit 1, the southern half of Landfill Unit 2 flows to the first of two (2) sedimentation basins connected in series immediately southeast of the landfill for removal of coarse sediments. Sediment separation in the first basin (South Sedimentation Basin) is accomplished by means of a riser pipe plumbed to an outfall that discharges to the second basin (East Sedimentation Basin). The South Sedimentation Basin also has an emergency spillway into the East Basin;
 - b. Runoff from the Landfill Unit 1 toe embankment and the Leachate Storage Tank Farm flows by concrete-lined ditch to the East Sedimentation Basin; and
 - c. Runoff from the northern half of Landfill Unit 2 and the northwest area of the Facility flow directly via culvert to the North Sedimentation Basin.
64. The Facility is covered under the State Water Board's operative General Permit for Storm Water Discharges Associated with Industrial Activities, NPDES Permit No. CAS000001 (Industrial General Permit) where the State Water Board assigned the Facility the "Waste Discharger Identificaiton number 5S291024812 effective 18 April 2014.
65. According to the Federal Emergency Management Agency's (FEMA) [Flood Insurance Rate Map](https://msc.fema.gov/portal) (<https://msc.fema.gov/portal>), the Facility is not located within a 100-year floodplain.

Monitoring Networks

66. As of the date of this Order, the Facility's groundwater monitoring network consists of the existing and proposed monitoring wells listed in **Table 4**.

Table 4—Groundwater Monitoring Well Network

Well	Program	Monitored Unit	Point of Compliance (WQPS)	Zone	Status
MW-A-1*	Corrective Action	Landfill Unit 1	No	Upper	Active

Well	Program	Monitored Unit	Point of Compliance (WQPS)	Zone	Status
MW-A-2*	Corrective Action	Landfill Unit 1	No	Lower	Active
MW-1	Corrective Action	Landfill Unit 1	No	Upper	Piezometer Only
MW-2	Corrective Action	Landfill Unit 1	No	Upper	Active
MW-3	Detection	Landfill Unit 1;	Yes	Upper	Active
MW-4	Corrective Action	Landfill Unit 1	No	Upper	Active
MW-4A	Corrective Action	Landfill Unit 1	No	Lower	Active
MW-5	Corrective Action	Landfill Unit 1	No	Upper	Active
MW-6	Corrective Action	Landfill Unit 1	No	Upper	Active
MW-6A	Corrective Action	Landfill Unit 1	No	Lower	Active
MW-7	Abandoned	N/A	No	N/A	Abandoned
MW-8	Abandoned	N/A	No	N/A	Abandoned
MW-9	Detection	Landfill Unit 1	Yes	Upper	Active
MW-10	Abandoned	N/A	No	N/A	Abandoned
MW-11	Detection	Landfill Unit 1	Yes	Upper	Active
MW-12	Abandoned	N/A	No	N/A	Abandoned
MW-13	Corrective Action	Landfill Unit 1	No	Upper	Active

Well	Program	Monitored Unit	Point of Compliance (WQPS)	Zone	Status
MW-14	Corrective Action	Landfill Unit 1	No	Upper	Active
MW-15	Blind field blank	N/A	No	N/A	Active
MW-16	Corrective Action	Landfill Unit 1	No	Upper	Active
MW-17	Corrective Action	Landfill Unit 1	No	Upper	Active
MW-18	Corrective Action	Landfill Unit 2	No	Upper	Piezometer Only
MW-19	Background	Landfill Unit 1	No	Upper	Active
MW-20A	Corrective Action	Landfill Unit 1	No	Lower	Active
MW-20B	Corrective Action	Landfill Unit 1	No	Upper	Active
MW-21	Designated blind field blank (QCFB)	N/A	No	N/A	Active
MW-22	Corrective Action	Landfill Unit 1	No	Lower	Active
MW-23	Corrective Action	Landfill Unit 1	Yes	Lower	Active
MW-24	Corrective Action	Landfill Unit 1	Yes	Upper	Active
MW-25	Corrective Action	Landfill Unit 1	Yes	Upper	Active

Well	Program	Monitored Unit	Point of Compliance (WQPS)	Zone	Status
MW-26	Detection	Landfill Unit 1, Unit 2	No	Lower	Active
PW-1	Corrective Action	90/91 Cell dewatering well	No	Upper	Active
DW-1	Corrective Action	Landfill Unit 2	No	Upper	Active
DW-2	Background	Landfill Unit 1, Unit 2	Background	Lower	Active
PZ-100	DTW	Landfill Unit 2	LFG Monitoring	Upper	Active
PZ-101	DTW	Landfill Unit 2	LFG Monitoring	Upper	Active
PZ-102	DTW	Landfill Unit 2	LFG Monitoring	Upper	Active
PZ-103	DTW	Landfill Unit 1	No	Lower	Not Reliable
PZ-104	DTW	Landfill Unit 1, Unit 2	No	Lower	Active
PZ-105	DTW	Landfill Unit 2	LFG Monitoring	Upper	Active
PZ-106	DTW	Landfill Unit 1	No	Upper	Converted to MW-14
PZ-107	DTW	Background	Background	Upper	Active
PZ-108	DTW	Landfill Unit 1	No	Upper	Converted to MW-13
PZ-109	DTW	Landfill Unit 1	No	Upper	Active

Well	Program	Monitored Unit	Point of Compliance (WQPS)	Zone	Status
PZ-110	DTW	Landfill Unit 2	No	Upper	Active
PZ-111	DTW	Background	No	Upper	Active
PZ-112	DTW	Landfill Unit 2	No	Upper	Active
PZ-113	DTW	Landfill Unit 2	LFG Monitoring	Upper	Active
PZ-114	DTW	Landfill Unit 1	No	--	Inoperable
PZ-115	DTW	Landfill Unit 2	No	Upper	Active
PZ-116	DTW	Landfill Unit 1	LFG Monitoring	Lower	Active, Duplicate for PZ-103

See Glossary for definitions of terms and abbreviations in table.

67. A 1987 Solid Waste Assessment Test (SWAT) investigation found groundwater impacts down gradient (i.e., north and east) of the landfill units and some of the former operations areas (e.g., septage ponds, 1976 Cell). Constituents detected included certain volatile organic compounds (VOCs), primarily of chlorinated solvents, and elevated general minerals. Follow-up monitoring under the SWAT and previous WDRs delineated impacts to the site boundary and in nine (9) nearby privately-owned domestic wells, as identified below in **Table 5**.

Table 5—SWAT Delineated Impacts

Well	Parcel	Location	Distance From Facility
25-130-39	15431	Wolf Mountain Road	50' East
25-130-40	15483	Wolf Mountain Road	100' SE
25-140-14	15552	Wolf Mountain Road	200' SE
25-140-39	15543	Wolf Mountain Road	225' SE

Well	Parcel	Location	Distance From Facility
25-140-40	15605	Wolf Mountain Road	250' SE
25-140-41	15653	Wolf Mountain Road	400' SE
25-140-32	15719	Wolf Mountain Road	500' SE
25-140-33	15779	Wolf Mountain Road	600' SE
53-280-14	13585	Hidden Valley Road	200' NE

See Glossary for definitions of terms and abbreviations in table.

68. MW-23: Impacts historically detected in the nine (9) offsite domestic wells identified in Finding 67 primarily included Chlorobenzene (up to 1.2 µg/L), 1,1-Dichloroethane (up to 0.8 µg/L), and 1,2-Dichloroethene. Previous WDRs required the Discharger to monitor these domestic wells and report the data under the monitoring and reporting program. In previous WDRS, the Central Valley Water Board found that the wells do not meet Title 27 standards for monitoring and, as such, did not require that the Discharger to continue to monitor these offsite wells. However, the Central Valley Water Board required the Discharger to install a Title 27 compliant monitoring well in the southeast portion of the Facility to monitor the progress of corrective action in cleaning up groundwater and minimizing any potential future threat to nearby offsite domestic wells. In October 2015 the Discharger installed well MW-23 to the southeast of Landfill Unit 1 to satisfy this requirement.
69. MW-26: The Discharger installed MW-26 in October 2015 as a Detection Monitoring Program point of compliance for the former Class II surface impoundments pursuant to previous WDRs. The Discharger also used MW-26 to inform evaluation of corrective action measures employed related to LFG extraction system improvements (See Finding 83-85). Notwithstanding the Discharger's request to declassify both surface impoundment WMUs from "Class II" surface impoundments WMUs subject to Title 27 requirements (Finding 11.b), MW-26 continues to have the potential to yield data useful to evaluation of corrective action measures employed related to LFG extraction system improvements and as such shall remain part of the Facility's groundwater monitoring network.
70. PZ-104: Notwithstanding the Discharger's request to declassify both surface impoundment WMUs from "Class II" surface impoundments WMUs subject to Title

27 requirements (Finding 11.b), and for similar reasons as described in Finding 69, PZ-104 shall also remain part of the Facility's groundwater monitoring network.

71. The Discharger did not install lysimeters beneath the unlined portions of the landfill units, which generally predated Title 27 requirements for unsaturated zone monitoring. Installation of new or replacement lysimeters beneath landfill units was also infeasible because the units had already been developed. Most of the Facility's **unsaturated zone** monitoring network, consisting of the existing and proposed monitoring points listed in **Table 6**, are along the perimeter of the landfill units.

Table 6—Unsaturated Zone Monitoring Network

Monitoring Point ¹	Program	Monitored Unit	Status
LV-1	Corrective Action	89-90 Cell	Active
LV-2	Corrective Action	89-90 Cell	Non-Functional
LV-3	Corrective Action	89-90 Cell	Non-Functional
LV-4	Corrective Action	89-90 Cell	Non-Functional
LY-1	Corrective Action	OLM	Active
LY-2	Corrective Action	OLM	Non-Functional
LY-3	Corrective Action	Landfill Unit 2	Active
LY-4	Corrective Action	OLM	Active

See Glossary for definitions of terms and abbreviations in table.

1. LY-2 Non-functioning beginning in 2003.

72. All five "LV" lysimeters installed at Landfill Unit 2 (i.e., LVs-5 through 9) became nonfunctional and were abandoned in 2000.
73. Soil pore water monitoring data for the Facility is limited due to generally low liquid recovery rates from the lysimeters. Available data indicates that VOCs have been sporadically detected in lysimeters at the Facility, primarily those associated with the former Class II WMU, SI-1. Confirmed VOC detections have generally been limited to acetone (up to 145 µg/L), 2-Butanone (up to 154 µg/L), and Tert-Butyl Alcohol (up to 295 µg/L). General minerals also appear to be mildly elevated in

some of the lysimeters at the former Class II WMU, SI-1 (e.g., chloride above 100 mg/L in L-3, electrical conductivity up to 1,520 μ mhos/L in L-19), but exceedances have not been confirmed due to lack of fluid recovery in background. The Discharger in its monitoring reports attributes the VOC results to landfill gas and the inorganics to spatial variability. Given the low fluid recovery in the lysimeters at the former Class II WMU, SI-1, the relatively few VOCs detected, and likelihood of impacts from other sources (e.g., landfill gas, residual impacts from Septage ponds), no release from SI-1 was ever confirmed.

74. Since the Facility's landfill WMUs were fully permitted and operating as of 1 July 1991 and the installation of additional unsaturated zone monitoring devices would require unreasonable dismantling or relocating of permanent structures at the Facility, the Facility is exempt from Title 27 **unsaturated zone** monitoring requirements. (See Title 27, § 20415, subd. (d)(5).)
75. As of the date of this Order, the Facility's **surface water** monitoring network consists of the existing and proposed monitoring points listed in **Table 7**.

Table 7—Surface Water Monitoring Network

Monitoring Point	Function	Monitored Unit
SW-101	Detection	East Sedimentation Basin (SB-E)
SW-102	Detection	South Sedimentation Basin 2 (SB-S2)
SW-103	Detection	North Sedimentation Basin (SB-N)
SW-104	Background	Northwest
SW-105	Background	Southeast

See Glossary for definitions of terms and abbreviations in table.

76. As of the adoption of this Order, the above-described networks comply with the monitoring requirements of Title 27. (See 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

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

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

78. In accordance with Title 27, this Order, by virtue of its incorporation of the operative MRP and subsequent revisions thereto, establishes a WQPS for each WMU at the Facility.

Evaluation Monitoring

79. Pursuant to its 1996 WDRs, the Discharger prepared a final Evaluation Monitoring Program (EMP) Report, an Engineering Feasibility Study (EFS), and a Corrective Action Program (CAP) addressing releases at the Facility.
- a. The EMP Report concluded that leachate release from the landfill was the primary cause of observed groundwater impacts. The EMP Report also summarized the various short-term corrective action measures implemented associated with landfill and ancillary facility closure.
 - b. The EFS concluded that active remedial measures such as air sparging, groundwater pumping and treatment, and active bioremediation would be infeasible due to a lack of hydraulic control associated with the complex hydrogeology at the Facility. The report concluded that landfill closure would be the most feasible and effective means of corrective action. The EFS did not consider LFG extraction as a corrective action because, at the time of EFS preparation, LFG was not widely known as a common source of groundwater impacts.

Corrective Action

80. The Discharger's initial CAP incorporated the Final Closure and Postclosure Plan as the primary corrective action measure. The CAP also included a corrective action monitoring plan, water quality protection standard report; proposal for preventing leachate buildup at the Old Landfill Mass to promote embankment stability; and contingency plan for maintaining adequate groundwater separation at the 90-91 Cell. The Facility CAP includes closure of the landfill WMUs and ongoing LFG extraction and monitoring.
81. April 2000 sampling conducted by CalRecycle staff revealed the presence of elevated methane and VOCs in landfill gas at the Facility. Central Valley Water Board staff subsequently requested that the Discharger submit a Corrective Action Plan for landfill gas extraction to address landfill gas as a source of VOCs in groundwater. A two-phase amended CAP was ultimately approved, including a site-wide gas investigation to delineate gas sources and pathways (Phase 1) and a landfill gas extraction system design (Phase 2). Phase 1 included installation and sampling of 12 landfill perimeter gas probes and six (6) in-situ gas probes.

The Phase I report confirmed that landfill gas was migrating outside the waste mass and threatening groundwater quality.

82. The final LFG extraction system design plan was approved by the Regional Board staff on 5 May 2003 and incorporated into previous WDRs Order No. R5-2004-0022, which required gas monitoring. In 2004, the Discharger completed installation of the system, including three extraction wells at the 90-91 Cell (EWs-1 to 3), 21 extraction wells at the OLM (EWs-4 to 24), and three extraction wells at the 89-90 cell (EWs-25 to 27). The system also included headers, condensate lines, two 400 SCFM blowers, a flare station, and associated facilities, as depicted in **Attachment E**.
83. The Discharger maintains groundwater separation between Landfill Unit 2 and groundwater by utilizing the Landfill Unit 2 subdrain system (Finding 25), the piezometer network, and dewatering well, PW-1 during certain “high water events.” In its Corrective Action Measures Evaluation and Effectiveness Report, dated 22 May 2019, the Discharger described that during two (2) such “high water events” the Discharger suspended dewatering via PW-1, then lowered a downhole camera through the subdrain riser and observed water in the subdrain sump at elevations below the designated groundwater/separation elevation (2,249 feet, MSL). The Discharger concluded groundwater separation was maintained despite the lack of dewatering from PW-1 and that routing groundwater pumping from PW-1 is appropriate during “high water events.” These WDRs require the Discharger to maintain five (5) feet of separation between groundwater by requiring the Discharger to maintain certain groundwater elevations beneath Landfill Unit 2.
84. Previous WDRs required the Discharger to establish and maintain a GeoTracker® account and, in part, include information relating to all field points. In GeoTracker® the “GEO_Z” file provides field elevation measurements data for import into the GeoTracker® system, where elevation data should be submitted each time a new survey is performed. The Discharger’s GeoTracker® record is missing “GEO_Z” data for the field points relating to the groundwater monitoring network described in **Table 4**. These WDRs require the Discharger to review its GeoTracker® record and upload “Geo_Z” data for all field points relating to the groundwater monitoring network described in **Table 4**.
85. In April 2018, the Discharger implemented additional corrective action measures including, but not limited to, installation of additional LFG wells, replacement of LFG wellheads, balancing and maintenance of the LFG extraction system, and an evaluation of groundwater separation control beneath Landfill Unit 2. Following making improvements to the LFG extraction system the Discharger increased the

groundwater monitoring frequency for MW-26 from semi-annual to monthly for 6 months (October 2018 through to March 2019) to collect additional data for MW-26 to attempt to establish a baseline for statistical analysis, and to evaluate VOC concentrations in groundwater at MW-26 after the LFG extraction system improvements. The Discharger concluded, in part, that VOC detections in MW-26 groundwater were intermittent and had not been detected following making the improvements to the LFG extraction system. Subsequent VOC data submitted to GeoTracker® for MW-26 appear to affirm the Discharger's initial observations. In Corrective Action Measures Evaluation and Effectiveness Report, dated 22 May 2019, the Discharger concluded that the additional corrective action measures improved the Corrective Action Plan for the Facility and "... continues to effectively control LFG and protect water quality."

Unit Construction

86. Liners for **new Class II WMUs** (landfills and surface impoundments) 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).)
87. Liners for **new Class III WMUs** (landfills) must be designed and constructed to contain fluids (e.g., leachate, waste and landfill gas condensate), so as to be capable of preventing degradation of groundwater and surface water, even with inadequate site characteristics. (See Title 27, §§ 20310(c), 20330(a).)
88. These WDRs prohibit the construction of new Class II or Class III WMUs. In the event the Discharger seeks to construct new Class II or Class III WMUs these WDRs require the Discharger to seek updated WDRs for the Facility.

Landfill WMU Closure

89. Title 27 section 21769 requires submission of closure plans for all classified waste management units, including surface impoundments.
90. On 20 March 1997, Central Valley Water Board staff approved a revised Final Closure Plan (FCP) for the landfill (*see December 1996 Revised Final Closure Plan, McCourtney Road Landfill, prepared by Bryan A. Stirrat & Associates*). The revised FCP proposed contiguous closure of the OLM and 89-90 cell (i.e., Closure Landfill Unit 1 herein) and separate closure of the 90-91 cell (i.e., Closure Landfill Unit 2 herein). The FCP included plans for grading and capping the landfill WMUs; seeding for vegetative cover; installation of precipitation and drainage controls; decommissioning of the LCRS gas extraction system (including vertical well, collection piping, and flare station); and various technical reports supporting the

closure plan (e.g., slope stability, settlement analysis, liquids management). Closure was also intended as a corrective action measure to address impacts to groundwater (See Finding 80).

91. In 1998, the Discharger closed the landfill portion of the Facility by grading and capping the landfill WMUs; seeding for vegetative cover; installing precipitation and drainage controls; decommissioning of the LCRS gas extraction system (including vertical well, collection piping, and flare station); and preparing various technical reports supporting the closure plan (e.g., slope stability, settlement analysis, liquids management) required pursuant to Title 27. Closure activities also included corrective action measures to address impacts to groundwater. The installed final cover included the following elements, from top to bottom (**Attachment F**):
- a. Deck and adjacent slopes
 - i. Vegetative cover consisting of a native grass mix;
 - ii. Erosion resistant layer – 1.5 feet vegetative cover soil (including 6" topsoil);
 - iii. Low hydraulic conductivity (LHC) Layer – Geosynthetic clay liner with permeability less than 1E-09 cm/sec; and
 - iv. Foundation layer consisting of 2 feet of compacted soil.
 - b. Side Slopes
 - i. Vegetative cover consisting of a native grass mix;
 - ii. Erosion resistant layer – 1 foot vegetative cover soil (including 6" top soil);
 - iii. LHC layer consisting of 1 foot compacted clay soil with permeability less than 1E-06 cm/sec); and
 - iv. Foundation layer consisting of 2 feet of compacted soil.
92. The FCP included updated slope stability analysis for the landfill based on final refuse elevations. As in previous slope stability studies at the site, the eastern embankment slope was determined to be the critical slope for modeling purposes. The cross section developed for slope stability analysis extended from the base of the embankment buttress to the top of refuse at the 89-90 Cell. Groundwater, bedrock, the toe slope buttress and embankment, deep landfill refuse, and shallow landfill refuse were included as contacts in the model. Static analyses yielded a minimum factor of safety of 2.28, indicating stable slopes under static conditions. Dynamic analysis using design earthquake parameters (MPE of 6.0, PGA of 0.17g) also indicated stable slopes with a factor of safety (1.8) exceeding the minimum (1.5) required under Title 27 section 21750(f)(5). Displacement

analysis at the calculated yield acceleration (0.5g) also indicated dynamic stability with only a small amount of movement (0.5 to 0.6 cm) unlikely to affect the structural integrity of the unit.

93. Clay soil for the LHC layer constructed on the side slopes was imported from offsite (Ostrom Road Landfill, Yuba County) due to the unsuitability of onsite soil. Test pad results confirmed that the imported soil met project specifications and were correlated with laboratory permeability test results as part of project CQA. Other CQA measures for the LHC layer included maintenance of at least six inches of overlap between the GCL panels. For the vegetative cover layer, the top soil was amended with fertilizer and mulch to promote vegetative cover growth. The Final Closure Construction Quality Assurance Report was approved by Central Valley Water Board staff on 27 August 1999.
94. The Discharger graded the southwest portion of Landfill Unit 1 with an upper deck/crown (2,300 to 2,296 feet MSL) corresponding to the former 89-90 Cell area; the northwest portion with a middle deck (2,290 to 2,284 feet MSL); and the eastern part of the unit (2,274 to 2,264 feet MSL) with a lower deck. Each deck was graded to a three percent minimum slope for sheet flow drainage toward the north, east, and/or southeast. The sideslopes were graded to about 10H:1V on the NW side of the unit; 5.5H:1V on the northeast side of the unit (above the toe slope embankment); 3.5H:1V on the south and west sides of the unit; and 2H:1V along the lower portion of the toe slope embankment. A 20-foot wide bench was also cut into the toe slope embankment, as required under Title 27, every 50 feet of vertical height. Berms and four-foot wide concrete-lined V drains were constructed along the deck rims to capture and convey runoff down to the next deck level via overside drains. A concrete lined ditch was constructed along the landfill perimeter to capture and convey runoff from the unit to sedimentation basins north, east and southeast of the landfill
95. The Discharger graded Landfill Unit 2 with a NW-SE oriented, elongated cover deck approximately 400 feet long and 200 feet wide. The deck included a central spine from which slopes ranged from 3 percent to 10 percent at the deck rim. The NE half of the deck was plumbed for drainage similar to Landfill Unit 1, while the SE half of the deck was graded for sheet flow drainage to the southern sideslopes. Grades along the side slopes ranged from about 2.5H:1V on the SW side to 3.5H:1V on the NE side. A concrete lined ditch was constructed along the landfill perimeter to capture and convey runoff from the unit to sedimentation basins north, east and southeast of the landfill.

96. All landfill drainage facilities, including cover swales, drop inlets, overside drains, perimeter ditches, culverts, and the storm water pond were designed to have sufficient capacity to accommodate a 24-hour, 100-year storm event.

Surface Impoundment WMU Closure

97. Surface Impoundments shall be closed in accordance with Title 27 sections 21400 and 20950(c)(2), which requires removal of all free liquid and treatment of any residual liquid at the time of closure. Following removal and treatment of liquid wastes, surface impoundments shall be closed by clean closure, closure as a landfill, or closure as a land treatment unit. Unless the Dischargers demonstrate, and the Central Valley Water Board finds, that it is infeasible to attempt clean-closure of a surface impoundment, then all residual wastes, including sludges, precipitates, settled solids, and liner materials contaminated by wastes, shall be completely removed from the impoundment and discharged to an approved Unit (Title 27, § 21400(b)(1)).
98. During the summer of 2013, the Discharger removed liquids from SI-1 by pumping the liquids into tanker trucks for transport to and disposal at the Grass Valley wastewater treatment plant. The Discharger then allowed the sediment to dry in-place prior to sampling and removal. The Discharger removed approximately 260 cubic yards of sediment from SI-1.
99. In 2015 the Discharger removed residual wastes from both surface impoundment WMUs and cleaned and patched liner materials. The Discharger reported that the natural geologic materials beneath and adjacent to the impoundments are not contaminated; the impoundments contain only “inert liquids; and the results of monitoring and verification sampling identified no evidence of release.
100. Between October 6, 2022, and November 2, 2022, the Discharger exposed, cut and permanently capped four (4) leachate pipes and one septage effluent pipe leading from the landfill WMUs into SI-1. The Discharger cut the pipes at locations where, in the event of future pipe failure or cracking, no liquids would reach SI-1. The Discharger documented the pipe abandonment with photographs and descriptions of each location.
101. While cutting and capping the leachate lines (Finding 100) the Discharger observed two (2) significant cracks in the liner at a water depth of about 4.73 feet and 7.83 feet. On 15 November 2022, the Discharger repaired the 80-mil HDPE flexible membrane liner by patch and bead using extrusion welding techniques and new 80-mil HDPE liner materials.
102. In a 30 March 2023 *Request to Reclassify Class II Surface Impoundment SI-1*, the Discharger described activities conducted to disconnect SI-1 from the landfill

WMUs' leachate and septage effluent system. The report documented the cutting and capping landfill leachate collection pipes and septic system effluent pipes that formerly conveyed the liquids to the SI-1 (Finding 100). The report also documented the repairs the Discharger made to the SI-1 primary liner (Finding 101). The report further summarized prior work the Discharger completed to decommission SI-1 (Findings 98 and 99), increases to the capacity of the Leachate Tank Farm, and improvements made to the Transfer Station to reduce the overall quantity of contact water generated at the Facility.

103. The *Final Closure Plan, Volume I*, dated December 1996, described SI-2, or "Fire Water Impoundment" as having "...been modified to serve as a fire water source for the on-site fire suppression system. This use is anticipated throughout the closure and post-closure maintenance period." In WDRs R5-2014-0022, the Central Valley Water Board found that "[i]n 1994... the impoundment was cleaned out and since then has been used as an operations water pond, primarily for storage of fire suppression water. Liquids discharged to the impoundment include direct rainfall and uncontaminated groundwater from de-watering activities at Landfill Unit 2" (WDRs Order R5-2014-0022, Finding 77).
104. 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); State Water Board Resolution 93-62).
105. The Discharger uses the cleaned SI-1 and SI-2 surface impoundment WMUs to store "inert liquids" for use for dust control and fire suppression needs. In the ROWD, the Discharger described the Title 27 section 21400(b)(1) clean closure requirement to remove liner materials from the cleaned surface impoundment WMUs as "unreasonable, burdensome, and impractical" in consideration of the Discharger's use plans. The Discharger represents that removal of the cleaned liner materials would result in re-installation of the same or similar liner systems to support the storage of "inert liquids." The Discharger requested the Central Valley Water Board to approve the clean closure methods employed for the surface impoundment WMUs as an engineered alternative to the clean closure requirements set forth in Title 27 section 20080(b).
106. According to the ROWD, the 2019 California Fire Code (CFC) requires that a minimum fire flow of 1,125 gpm at 20 psi be provided for a minimum of two hours (135,000 gallons) for the fire sprinkler systems installed at the Transfer Station. The CFC further requires a minimum of one (1) fire hydrant with a flow of 1,750

gpm or less. The Discharger has approximately seven (7) fire hydrants onsite supported by a 1,250 gpm fire pump. For four (4) hours of firefighting at 1,250 gpm, the required firefighting volume to service the fire suppression system is 300,000 gallons. The Discharger represents that the storage capacity of SI-2 provides the required storage capacity with plus an approximate 2.0 factor of safety. Removal of the cleaned liner systems would likely require the Discharger to re-install a same or similar liner system to comply with the CFC requirements.

107. The Discharger has adequately demonstrated that removal of the liner materials from the cleaned surface impoundment WMUs for the purpose of satisfying the Title 27 prescriptive standard for clean closure of surface impoundments (Title 27, § 21400(b)(1)) would result in an unreasonable and unnecessary burden in comparison to the proposed engineered alternative to leave the cleaned liner materials in place for the purpose of supporting fire suppression efforts. The Discharger has further demonstrated that the proposed engineered alternative(s) is consistent with the performance goals of the prescriptive standard, as described above, and will afford at least equivalent water quality protections.

Final Closure

108. On 20 March 1997, Central Valley Water Board staff approved a revised Final Closure Plan (FCP) for the landfill (see December 1996 Revised Final Closure Plan, McCourtney Road Landfill, prepared by Bryan A. Stirrat & Associates). The revised FCP proposed contiguous closure of the OLM and 89-90 cell (i.e., Closure Landfill Unit 1 herein) and separate closure of the 90-91 cell (i.e., Closure Landfill Unit 2 herein). The FCP included plans for grading and capping the landfill units; seeding for vegetative cover; installation of precipitation and drainage controls; decommissioning of the LCRS gas extraction system (including vertical well, collection piping, and flare station); and various technical reports supporting the closure plan (e.g., slope stability, settlement analysis, liquids management). Required under Title 27. Closure was also intended as a corrective action measure to address impacts to groundwater.

Post-Closure Maintenance & Financial Assurances

109. Title 27 requires Dischargers applying for regulatory coverage to provide cost estimates, supported by sufficient detail to validate the plausibility of the estimate, for closure, post-closure maintenance, and corrective action costs due to known or reasonably foreseeable release (Title 27, §§ 21750(i), 21770, 22100(a)-(b), 22101(a), 20380(b)).
110. The Discharger initially described landfill closure in Final Closure Construction Quality Assurance Report, dated October 1988, and Revised Final Closure and

Post-Closure Maintenance Plan, dated March 1996. In September 2019 the Discharger revised the Post-Closure Maintenance Plan (2019 Revised Post Closure Plan). On 31 October 2024, the Discharger revised the post closure maintenance cost estimate, the non-water corrective action cost estimate, and certified that the 2019 Revised Post-Closure Plan is current since "...there have been no significant changes to the Landfill, landfill operations, or financial assurances requiring an amendment..." pursuant to Title 27 section 21865(a).

111. In a 2 April 2025 letter, CalRecycle wrote that "...the Post-Closure Maintenance Plan and Non-Water Release Corrective Action Plan, including the cost estimates (Annual Postclosure Maintenance Cost: \$347,804 and Non-Water Release Corrective Action Cost: \$529,868; both in 2024 dollars) are technically adequate in meeting the applicable requirements of Title 27."
112. The Discharger's 2019 Revised Post-Closure Plan as updated by the 2024 post-closure maintenance and non-water release cost estimates approved by CalRecycle is the operative document providing for post-closure maintenance of the landfill WMUs described in **Table 1** 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).)

Water Release Corrective Action Cost Estimate

113. In a 21 April 2010 letter, Central Valley Water Board staff wrote that the Discharger's water release cost estimate for all known or reasonably foreseeable releases, dated 2 April 2010 (Water Release Corrective Action Cost Estimate) "include \$55,000 per year for landfill gas flare maintenance, \$145,000 per year to continue quarterly groundwater monitoring and reporting, and \$105,000 per year for operation and maintenance labor. The estimate then assumes 20 years remaining for post-closure maintenance resulting in a total cost estimate of \$6,100,000" in 2010 Dollars. Central Valley Water Board staff further wrote that the "costs for groundwater monitoring and reporting ... are already included in financial assurances [cost estimates] for post-closure maintenance ..[and]... do not need to also be included in the cost estimate for corrective action. Therefore, the costs should be reduced by \$2,900,000, resulting in a total cost estimate of \$3,200,000" in 2010 dollars.
114. In Cost Estimate for Foreseeable Release, dated 15 April 2014, the Discharger prepared non-water release (\$108,200) and water release (\$28,644) cost estimates for corrective action due to a release from SI-1 or SI-2. The Discharger's water-release cost estimate considered costs for monitoring well

installation and subsequent groundwater monitoring necessary to characterize a short-term release resulting from emergency storage of leachate in SI-1.

115. Title 27 provides that for clean closed surface impoundment WMUs (see Finding 102), the surface impoundment WMUs are no longer subject to certain promulgated sections of Title 27, including obligations to prepare cost estimates and maintain financial assurances for the clean closed surface impoundment WMUs. (See Title 27, § 21400(b)(1)). These WDRs allow for the Discharger to seek relief from financial assurance obligations for the clean closed surface impoundment WMUs provided the Discharger records closure with the Nevada County Clerk-Recorder and provides copies of the recorded documents to the Central Valley Water Board.
116. The 2019 Revised Post-Closure Plan, as updated in 2024, includes cost 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, excluding corrective action, water release costs, are specified in **Table 8**.

Table 8—Cost Estimate Summary (2024 Dollars¹)

Requirement	Cost Estimate
Post-Closure Maintenance, annual	\$ 347,804*
Corrective Action, Non-Water Release	\$ 529,868*
Corrective Action, Water Release	Not Required

*2024 Dollars

**2024 Dollars, based on 2010 Dollar estimate, per United States Department of Labor, Consumer Price Index Calculator.

117. This Order requires the Discharger to maintain financial assurances with CalRecycle in at least the amounts specified in **Table 8**, adjusted annually for inflation, in accordance with Title 27. To the extent the costs estimates for closure (Title 27, §§ 21820, 22206) and post-closure maintenance (§§ 22210–22212) include costs related to the clean closed SI-1 and SI-2, this Order authorizes the

¹ The values herein represent a summary of Central Valley Water Board understanding of the available information and, as such are offered for informational purposes only. Actual cost estimate values, including consideration of adjustments for inflation for any given calendar year, are determined by CalRecycle.

Discharger to submit updated cost estimates for closure, post-closure maintenance excluding costs relating to the clean closed SI-1 and SI-2.

118. Nevada County Ordinance No. 2319, effective 9 July 2010, amended the General Code by establishing a schedule of parcel charges and gate fees for solid waste disposal. The Discharger's Division of Solid Waste general ledger funds serve as financial assurance for Nevada County. The parcel charges and gate fees funds the Discharger's Division of Solid Waste general ledger funds.
119. A "Pledge of Revenue" is a financial assurance mechanism meeting the requirements of Title 27 section 22245, by which a government unit promises to make specific, identified future revenue available to pay future post-closure maintenance costs and demonstrate financial responsibility for post-closure maintenance and/or corrective actions. (Title 27, §§ 22200(jj), 22228(e).) On 15 November 2024 the Discharger completed a Pledge of Revenue for the estimated post-closure costs.
120. This Order requires the Discharger to demonstrate the availability of financial resources to post-closure maintenance and corrective action activities with CalRecycle in at least the amounts required by minimum fund balances calculated pursuant to Title 27 section 22225(a)(2)(B) for the estimated cost amounts specified in **Table 8**, adjusted for inflation annually. This Order further requires the Discharger to make certain notifications and provide reports to the Central Valley Water Board relating to the Discharger's demonstrations to CalRecycle.
121. Potential liabilities and administrative remedies for financial assurances related violations include, but are not limited to, an order to cease and desist operations (see Title 27, § 22190; see also Wat. Code, § 13301) and/or imposition of civil liability (i.e., monetary penalties) (see Wat. Code, §§ 13268, 13350). Potential liability amounts take into consideration the economic benefit an operator receives from noncompliance with the regulations, based on applicable factors described in Title 27 and the penalty calculation methodology described in the State Water Board's operative Water Quality Enforcement Policy.
122. Filing of a false instrument with the Central Valley Water Board, a public office within the State of California, carries significant potential administrative, civil, and criminal sanctions (Wat. Code, §§ 13261, 13268; Pen. Code, § 115). In such cases, each filing of a false instrument is considered a separate violation.

California Environmental Quality Act

123. The issuance of this Order, which prescribes requirements and monitoring of waste discharges at an **existing facility**, with negligible or no expansion of its existing use, is exempt from the procedural requirements of the California

Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq., pursuant to California Code of Regulations, title 14, section 15301. The discharges authorized under this Order are substantially within parameters established under prior WDRs, particularly with respect to character and volume of discharges.

124. The Nevada County Board of Supervisors certified a final Mitigated Negative Declaration for closure of the landfill on 7 January 1997 (*Initial Study and Mitigated Negative Declaration, McCourtney Road Landfill Closure Project-1997*, prepared by the Nevada County Department of Sanitation; State Clearinghouse No. 96112030). The report found that the closure project would not have a significant impact on water quality provided that it was implemented consistent with the approved Final Closure and Post-Closure Maintenance Plan and applicable landfill regulations. The study did not identify any significant landfill gas issues at the site at the time, and no landfill gas controls were proposed as part of the final closure plan or as a mitigation measure. As noted in Finding 79, landfill gas was subsequently found to be a significant issue at the site, and it became necessary to install landfill gas controls after the landfill had been closed.

Other Regulatory Matters

125. 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.
126. 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.²
(Wat. Code, § 13241 et seq.)

127. 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.
128. Consistent with Title 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, will be required to address such releases through a Corrective Action Program. (See Title 27, §§ 20385, 20415, 20430.) Because this Order does not authorize any degradation in water quality, it complies with the *Antidegradation Policy*.
129. For the purposes of California Code of Regulations, title 23 (Title 23), section 2200, the Facility has a threat-complexity rating of **1-B**, 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. Complexity Category "B" reflects any discharger not included in Category A, with either (1) physical, chemical or biological treatment systems (except for septic systems with subsurface disposal), or (2) any Class II or Class III WMUs.

Reporting Requirements

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

[T]he regional board may require that any person who has discharged, discharges, or is suspected of having discharged or

² Designated beneficial uses surface water and groundwater are discussed in Finding 50 and Finding 56, respectively.

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.

131. The technical reports required under this Order, as well as those required under the operative MRP, are necessary to ensure compliance with prescribed WDRs and the provisions of Title 27, Subtitle D (40 C.F.R. part 258) and State Water Board Resolution 93-62. Additionally, the burdens associated with such reports are reasonable relative to the need for their submission.
132. 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

133. 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.
134. 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 27, § 21730.)
135. At a public meeting, the Central Valley Water Board heard and considered all comments pertaining to the discharges regulated under this Order.
136. 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, the WDRs Order No. R5-2014-0022 is rescinded, except for enforcement purposes, and that the Discharger and their agents, employees and successors shall comply with the following.

A. Discharge Prohibitions

Except as otherwise expressly directed below, the Discharger shall comply with all Standard Prohibitions (SPRRs, § C), which are incorporated herein, as well as the following.

1. The discharge of 'hazardous waste,' as defined per Title 23, section 2601, or 'designated' waste, as defined under Title 27, section 20164, to either of the closed landfill WMUs at the Facility (i.e., Landfill Units 1 and 2) or the former Class II surface impoundments (i.e., SI-1 and SI-2), is prohibited. The Department of Toxic Substances Control (DTSC) shall be immediately notified of any potential discharges of hazardous waste in violation of this Order.
2. The discharge of new or additional waste to either of the closed landfill units at the site is prohibited.
3. The discharge or return of leachate and/or landfill gas condensate to the landfill WMUs or the former Class II surface impoundments is prohibited.
4. The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses, or groundwater, is prohibited
5. The relocation or removal of solid waste from a closed landfill unit is prohibited, except as approved by the Central Valley Water Board consistent with this Order and Title 27 regulations (e.g., removal of unauthorized wastes).
6. Leachate and landfill gas (LFG) condensate shall not be discharged into Facility WMUs.

B. Discharge Specifications

Except as otherwise expressly directed below, the Discharger shall comply with all Standard Discharge Specifications (SPRRs, § D), which are incorporated herein, as well as the following.

1. 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.³
2. Landfill Gas Condensate and Leachate from landfill WMUs may only be discharged to the Leachate Storage Tank Farm.

C. Facility Specifications

The Discharger shall comply with all Standard Facility Specifications (SPRRs, § E) which are incorporated herein, as well as the following:

1. The maximum allowable groundwater elevation beneath Landfill Unit 2, 90-91 Cell is 2259 feet above MSL at the northwestern end of Landfill Unit 2, 90-91 Cell and 2249 feet above MSL at the southeastern end of Landfill Unit 2, 90-91 Cell.

D. Unit Construction Specifications

These WDRs do not authorize construction of new Class II or Class III WMUs. In the event the Discharger seeks to construct new Class II or Class III WMUs these WDRs require the Discharger to seek revised WDRs for the Facility.

E. Closure & Post-Closure Maintenance Specifications

Except as otherwise directed below, the Discharger shall comply with all Standard Closure and Post-Closure Specifications (SPRRs, § G) and closure-related Standard Construction Specifications (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), in accordance with section G of the SPRRs, at least two years prior to the proposed closure of any portion of any landfill.

³ 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.

2. The Discharger shall close and maintain closed landfills WMUs with the final cover components proposed in the operative Final Closure Plan (FCP), as described in **Finding 108** and **Attachment F**.
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.
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 (SPRRs, § H), as well as the following.

1. The Discharger shall maintain with CalRecycle assurances of financial responsibility for the amounts specified for each category in **Table 8**, adjusted annually for inflation.
2. A report regarding financial assurances, or a copy of the financial assurances report submitted to CalRecycle, shall be submitted to the Central Valley Water Board annually, no later than **1 June**.
3. If CalRecycle 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 CalRecycle; and

- b. Submit a report documenting such financial assurances to CalRecycle and the Central Valley Water Board.
- 4. The operative Post-Closure Maintenance Plan 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.
- 5. Whenever changed conditions increase the estimated costs of closure and post-closure maintenance, the Discharger shall promptly submit an updated CPMP to the Central Valley Water Board, CalRecycle and the LEA.

G. Monitoring Requirements

Except as otherwise directed below, the Discharger shall comply with all applicable Standard Monitoring Specifications (SPRRs, § I) and Standard Response to Release Specifications (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 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 and unsaturated zone detection monitoring program (DMP) in accordance with 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 27, sections 20385, 20415, and 20430, and Section I of the SPRRs.

H. Reporting Requirements

In addition to those Standard Provisions pertaining to notification and reporting obligations (see, e.g., §§ K.1-2, K.6, K.8-10), 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) (<https://geotracker.waterboards.ca.gov>). After uploading, the Discharger shall notify Central Valley Water Board staff via email at CentralVallySacramento@WaterBoards.ca.gov. The following information shall be included in the body of the email:

Attention:	Title 27 Compliance & Enforcement Unit
Report Title:	[Enter Report Title]
GeoTracker® Upload ID:	L10004835054
Facility:	McCourtney Road Landfill
County:	Nevada County
CIWQS Place ID:	240019

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.
4. **Within 90 days of adoption of this Order**, the Discharger shall complete a review its GeoTracker® record and upload “Geo_Z” data for all field points relating to the groundwater monitoring network described in **Table 4**.

I. Time Schedule

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

Table 9—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, and Section F of the SPRRs.	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 and Section F.27 of the SPRRs.	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, in accordance with Section E of this Order and Section G of the SPRRs.	2 Years Prior to Closure
4.	GeoTracker®	Upload “Geo_Z” data for all field points	90 days from WDRs Adoption

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 Title 27 (including those provisions not specifically referenced herein).
3. The Discharger may submit a written request for the Central Valley Water Board to release the Discharger from financial assurance requirements for SI-1 and SI-2, respectively.

LIST OF ATTACHMENTS

Attachment A—Site Map

Attachment B—Leachate Management
Attachment C—Area Wells
Attachment D—Monitoring Devices
Attachment E—Landfill Gas MANAGEMENT
Attachment F—Final Cover

Standard Provisions and Reporting Requirements for Non-Hazardous Discharges of
Waste Regulated under Subtitle D and/or Title 27, December 2015 Edition (SPRRs or
Standard Provisions)

Information Sheet

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

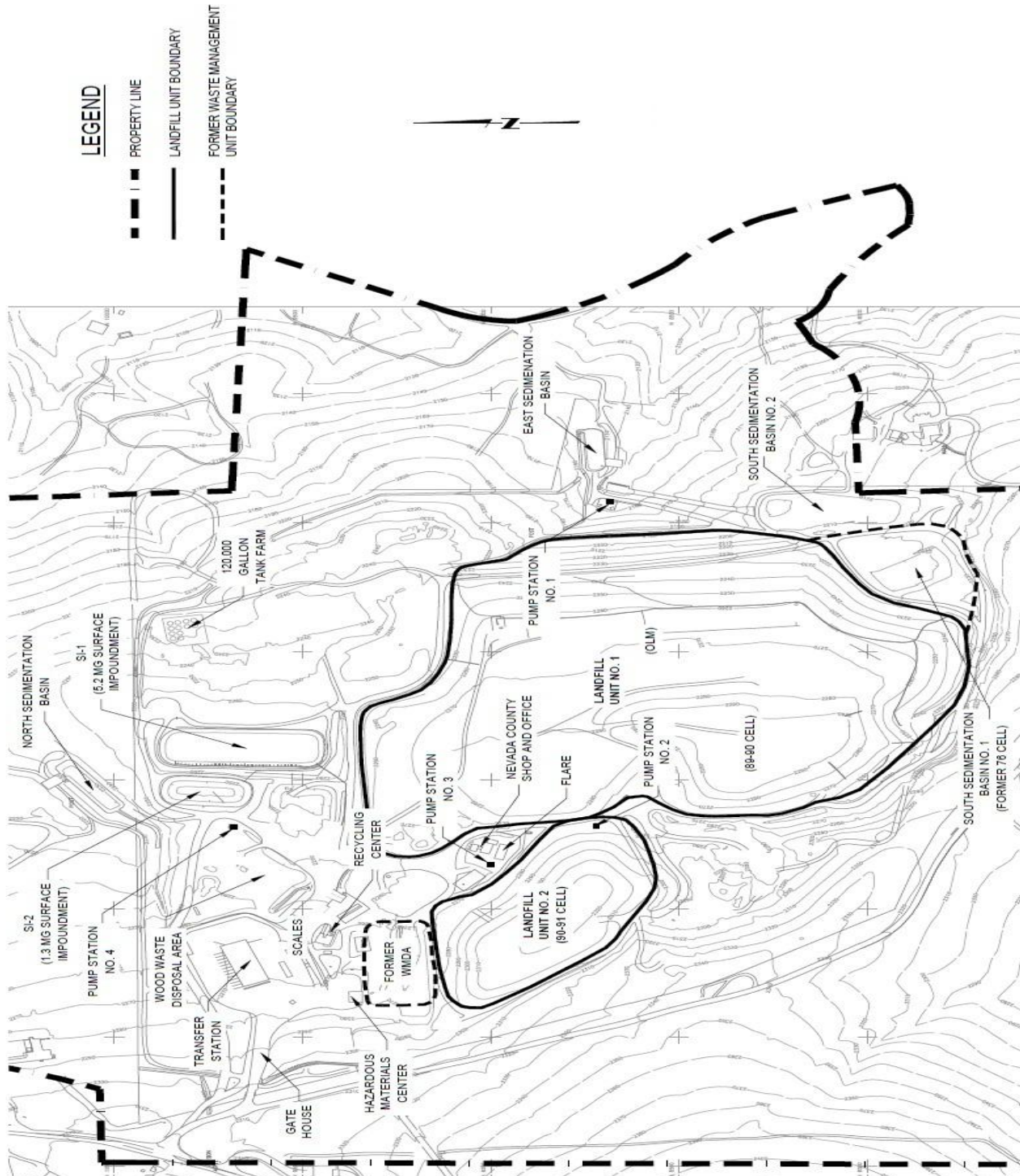
ENFORCEMENT

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

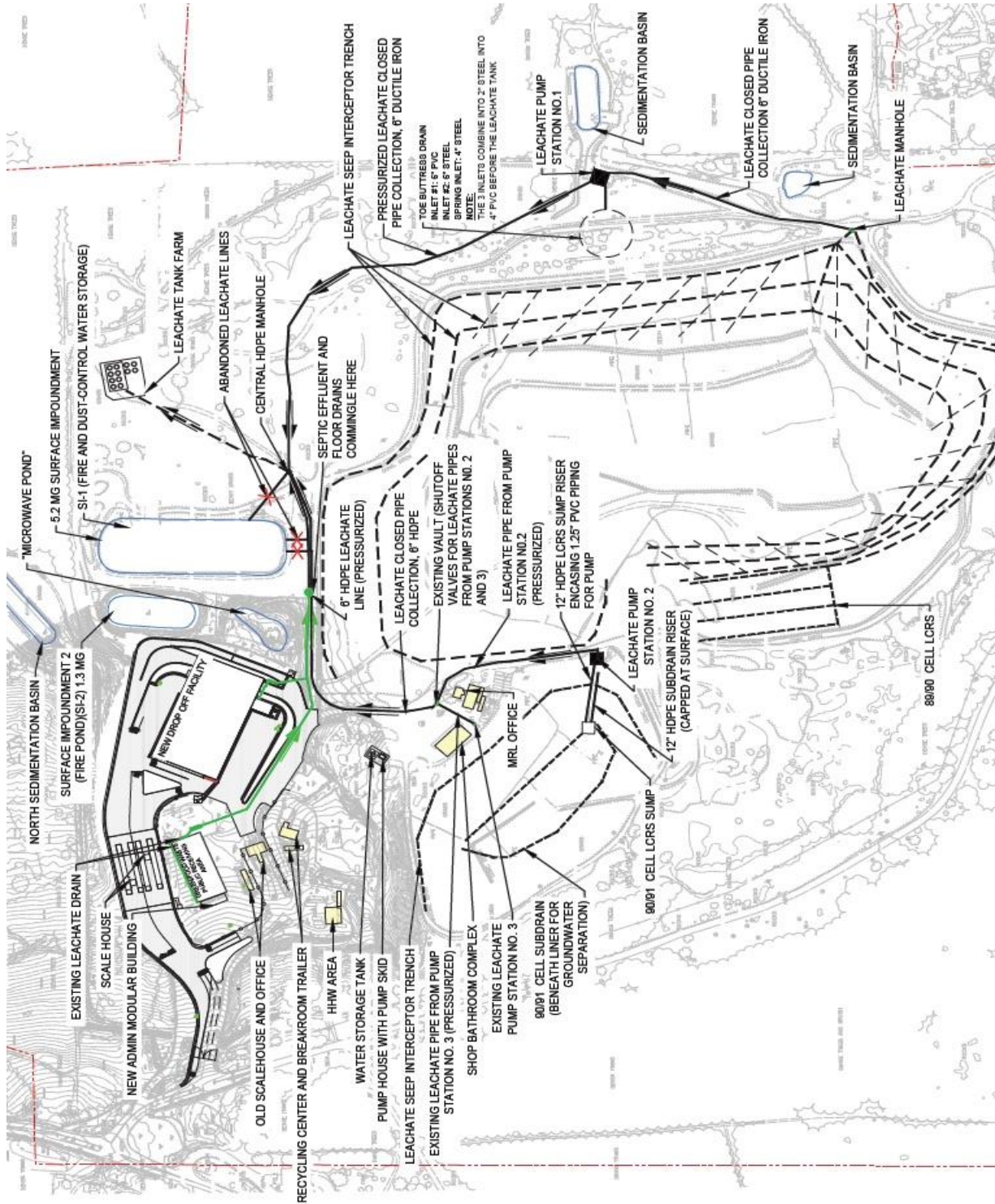
Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. To be timely, the petition must be received by the State Water Board by 5:00 pm on 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.

ATTACHMENT A—SITE MAP



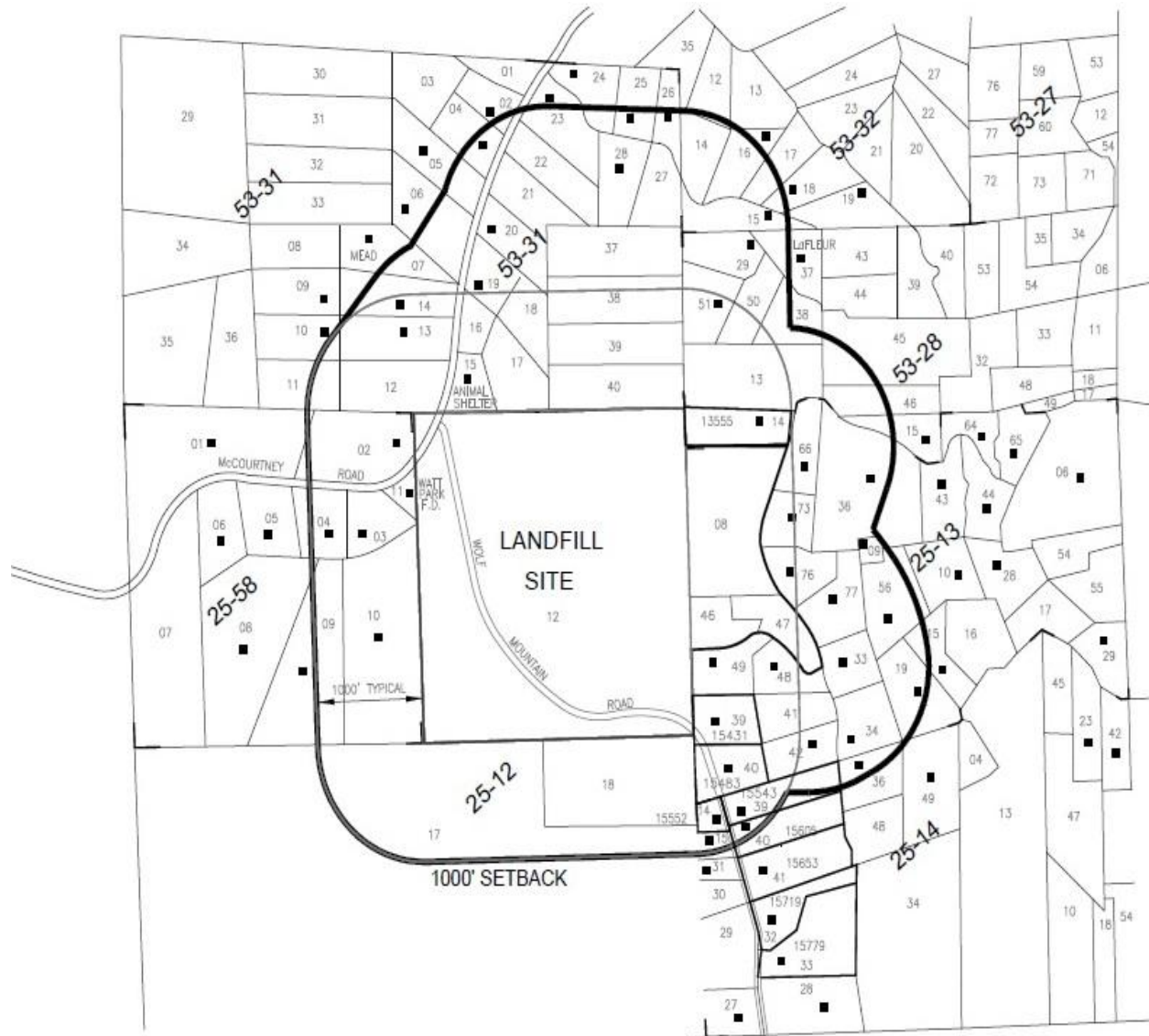
Site Map, NTS

ATTACHMENT B—LEACHATE MANAGEMENT



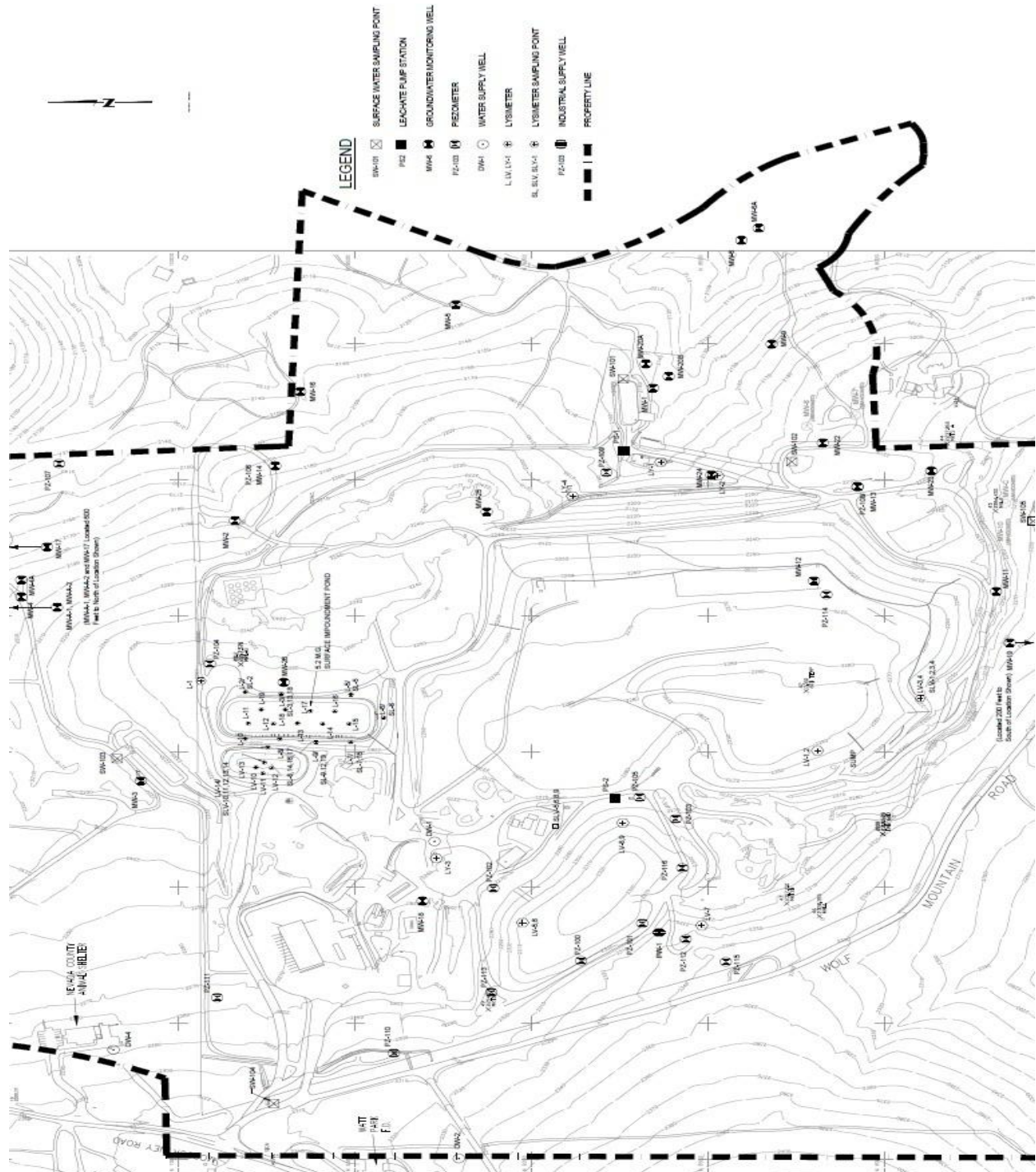
Leachate Management, NTS.

ATTACHMENT C—AREA WELLS



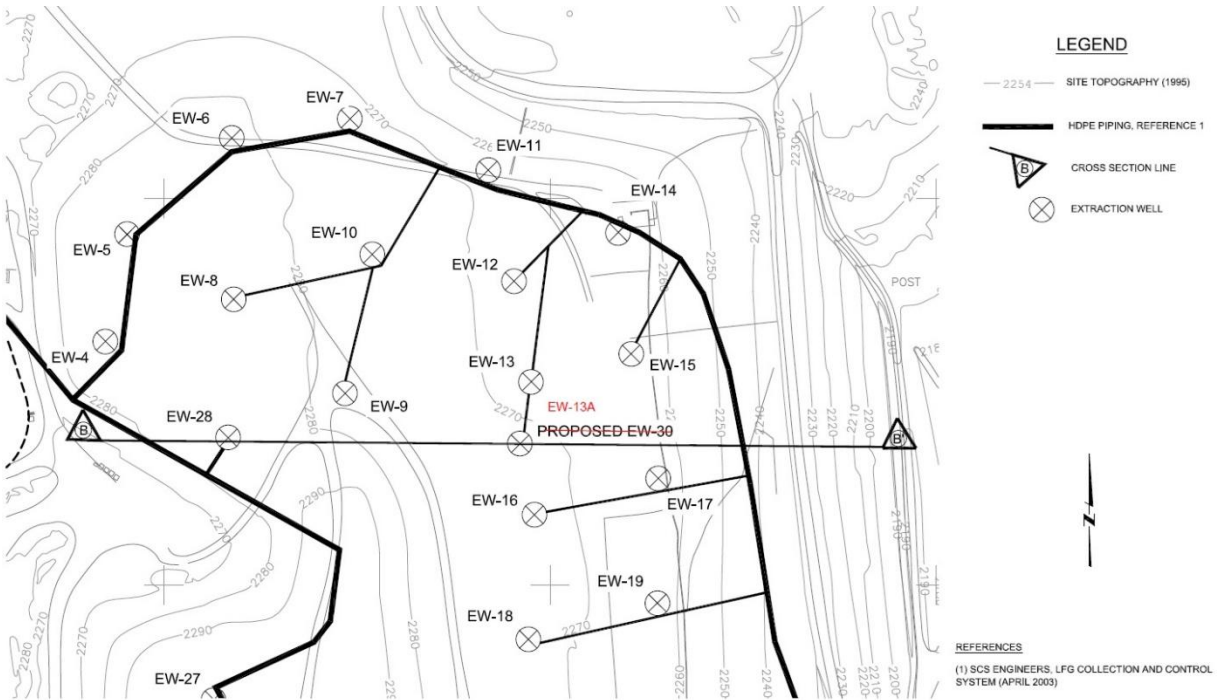
Area Wells, NTS

ATTACHMENT D—MONITORING DEVICES

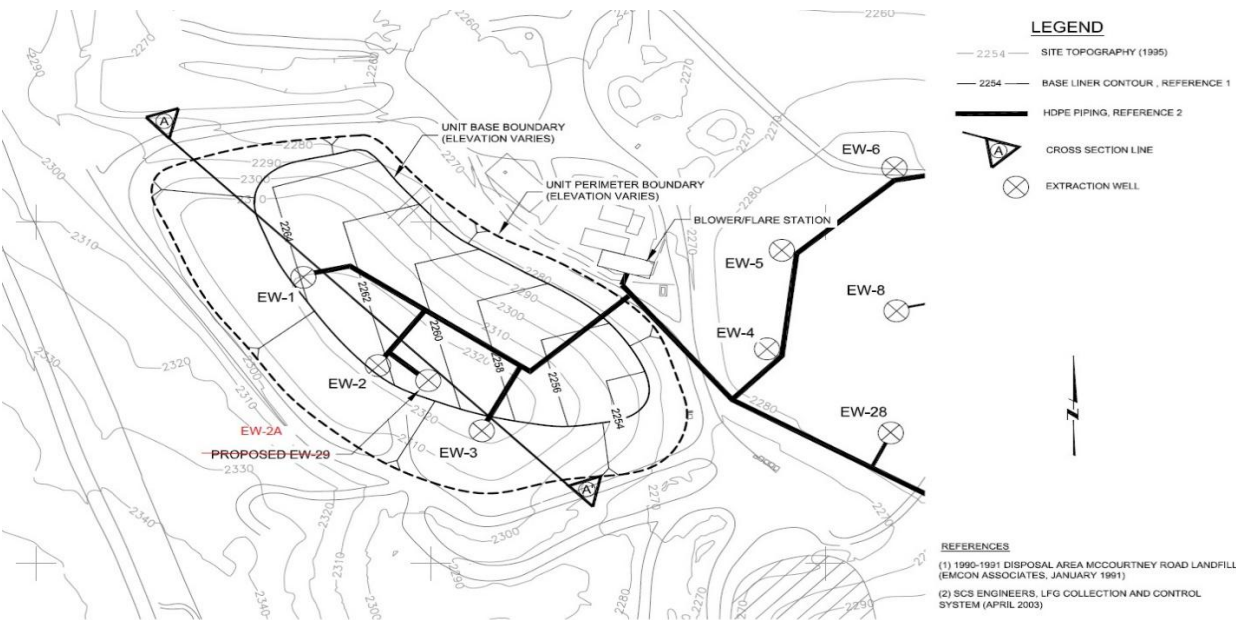


Monitoring Network, NTS

ATTACHMENT E—LANDFILL GAS MANAGEMENT



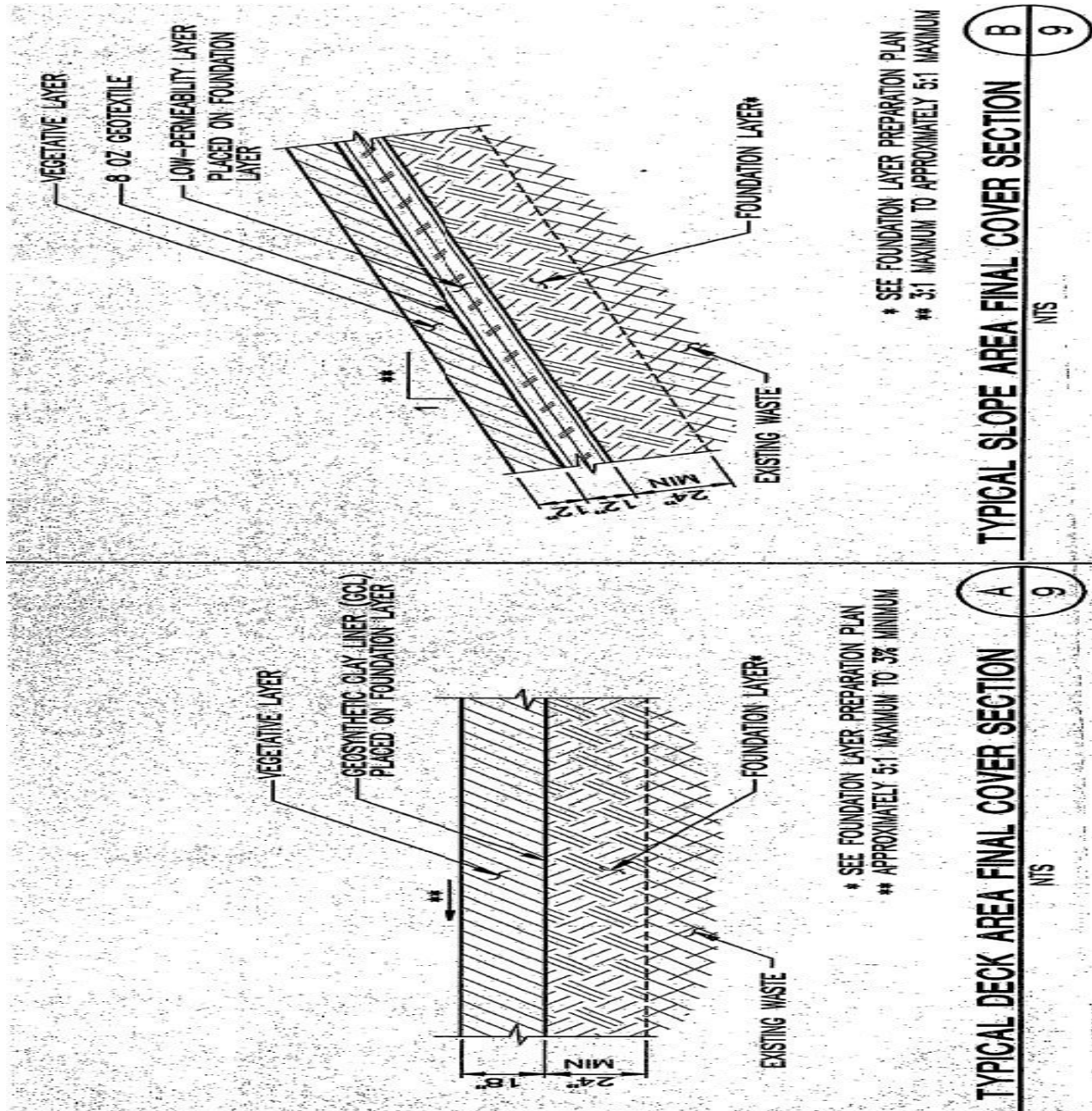
Landfill Unit 1, NTS



Landfill Unit 2, NTS

Landfill Gas Management, NTS.

ATTACHMENT F—FINAL COVER



Order— Final Cover, NTS

STANDARD PROVISIONS & REPORTING REQUIREMENTS

Non-Hazardous Discharges of Waste Regulated under Subtitle D and/or Title 27, December 2015 Edition

A. Applicability

1. These Standard Provisions and Reporting Requirements (SPRRs) are applicable to nonhazardous solid waste disposal sites that are regulated by the Central Valley Regional Water Quality Control Board (hereafter, Central Valley Water Board) pursuant to the provisions of California Code of Regulations, Title 27 ("Title 27"), section 20005 et seq., and municipal solid waste (MSW) landfills that are subject to the Federal Subtitle D regulations contained in 40 Code of Federal Regulations section 258 (hereafter, "Subtitle D" or "40 C.F.R. § 258.XX") in accordance with State Water Resources Control Board (State Water Board) Resolution 93-62. The Subtitle D regulations are only applicable to MSW landfills and therefore any requirements in these SPRRs that are referenced as coming from Subtitle D are not applicable to non-MSW waste management units such as Class II surface impoundments, Class II waste piles, and non-MSW landfill units. All Subtitle D requirements in these SPRRs are referenced with "[40 C.F.R. § 258.XX]" after the requirement.
2. "Order," as used throughout this document, means the Waste Discharge Requirements (WDRs) to which these SPRRs are incorporated.
3. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, and do not protect the Discharger from liabilities under federal, state, or local laws. This Order does not convey any property rights or exclusive privileges.
4. The provisions of this Order are severable. If any provision of this Order is held invalid, the remainder of this Order shall not be affected.
5. If there is any conflicting or contradictory language between the WDRs, the Monitoring and Reporting Program (MRP), or the SPRRs, then language in the WDRs shall govern over either the MRP or the SPRRs, and language in the MRP shall govern over the SPRRs.
6. If there is a site-specific need to change a requirement in these SPRRs for a particular landfill facility, the altered requirement shall be placed in the appropriate section of the WDRs and will supersede the corresponding SPRRs requirement. These SPRRs are standard and cannot be changed as part of the permit writing process or in response to comments, but they will be periodically updated on an as-needed basis.

Standard Provisions & Reporting Requirements

7. Unless otherwise stated, all terms are as defined in Water Code section 13050 and in Title 27, section 20164.

B. Terms and Conditions

1. Failure to comply with any waste discharge requirement, monitoring and reporting requirement, or Standard Provisions and Reporting Requirement, or other order or prohibition issued, reissued, or amended by the Central Valley Water Board or the State Water Board, or intentionally or negligently discharging waste, or causing or permitting waste to be deposited where it is discharged into the waters of the state and creates a condition of pollution or nuisance, is a violation of this Order and the Water Code, which can result in the imposition of civil monetary liability [Wat. Code, § 13350(a)]
2. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to [Wat. Code, § 13381]:
 - a. Violation of any term or condition contained in this Order;
 - b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;
 - c. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge; or
 - d. A material change in the character, location, or volume of discharge.
3. Before initiating a new discharge or making a material change in the character, location, or volume of an existing discharge, the Discharger shall file a new report of waste discharge (ROWD), or other appropriate joint technical document (JTD), with the Central Valley Water Board [Wat. Code, § 13260(c) and § 13264(a)]. A material change includes, but is not limited to, the following:
 - a. An increase in area or depth to be used for solid waste disposal beyond that specified in waste discharge requirements;
 - b. A significant change in disposal method, location, or volume (e.g., change from land disposal to land treatment);
 - c. A change in the type of waste being accepted for disposal; or

Standard Provisions & Reporting Requirements

- d. A change to previously-approved liner systems or final cover systems that would eliminate components or reduce the engineering properties of components.
- 4. Representatives of the Central Valley Water Board may inspect the facilities to ascertain compliance with the waste discharge requirements. The inspection shall be made with the consent of the owner or possessor of the facilities or, if the consent is refused, with a duly issued warrant. However, in the event of an emergency affecting the public health or safety, an inspection may be made without consent or the issuance of a warrant [Wat. Code, §13267(c)].
- 5. The Central Valley Water Board will review this Order periodically and will revise these waste discharge requirements when necessary [Wat. Code, § 13263(e) and Title 27, § 21720(b)].
- 6. Except for material determined to be confidential in accordance with California law and regulations, all reports prepared in accordance with terms of this Order shall be available for public inspection at the offices of the Central Valley Water Board [Wat. Code, § 13267(b)]. Data on waste discharges, water quality, geology, and hydrogeology shall not be considered confidential.
- 7. A discharge of waste into the waters of the state is a privilege, not a right. No discharge of waste into waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, shall create a vested right to continue the discharge [Wat. Code, § 13263(g)].
- 8. Technical and monitoring reports specified in this Order are requested pursuant to the Water Code [§13267(b)]. Failure to furnish the reports by the specified deadlines or falsifying information in the reports, are misdemeanors that may be liable civilly in accordance with §13268(b) of the Water Code [Wat. Code, §13268(a)].

C. Standard Prohibitions

- 1. The discharge of liquid or semi-solid waste (waste containing less than 50 percent solids) is prohibited, except for the following when proposed in the ROWD/JTD and approved by this Order:
 - a. Dewatered sewage or water treatment sludge as described in Title 27, section 20220(c) provided it is discharged above a composite liner with a leachate collection and removal system (LCRS) [Title 27, § 20200(d)(3)].

Standard Provisions & Reporting Requirements

- b. Leachate and/or landfill gas condensate that is returned to the composite- lined waste management unit (with an LCRS) from which it came [Title 27, § 20340(g) and 40 C.F.R. § 258.28].
- 2. The discharge of wastes which have the potential to reduce or impair the integrity of containment structures or which, if commingled with other wastes in the waste management unit, could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products, which, in turn:
 - a. require a higher level of containment than provided by the unit; or
 - b. are 'restricted wastes'; or
 - c. impair the integrity of containment structures; is prohibited [Title 27, § 20200(b)].
- 3. The discharge of wastes outside of a waste management unit or portions of a unit specifically designed for their containment is prohibited.
- 4. The discharge of solid waste containing free liquid or which may contain liquid in excess of the moisture holding capacity as a result of waste management operations, compaction or settlement is prohibited.
- 5. The discharge of waste to a closed landfill unit is prohibited.
- 6. The discharge of waste constituents to the unsaturated zone or to groundwater is prohibited.
- 7. The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses, or groundwater is prohibited.

D. Standard Discharge Specifications

- 1. The Discharger is responsible for accurate characterization of wastes, including a determination of whether or not wastes will be compatible with containment features and other wastes at the waste management unit and whether or not the wastes are required to be managed as a hazardous waste [Title 27, § 20200(c)] or designated waste [Title 27, § 20210].
- 2. Leachate and landfill gas condensate collected from a waste management unit shall be discharged to the unit from which it came, or discharged to an appropriate waste management unit in accordance with Title 27 and in a manner consistent with the waste classification of the liquid [Title 27, § 20200(d) and § 20340(g)].

Standard Provisions & Reporting Requirements

3. The discharge of leachate or landfill gas condensate is restricted to those portions of a waste management unit that has a composite liner system and LCRS meeting the Federal Subtitle D requirements [40 C.F.R. § 258.28].
4. Leachate and condensate returned to a composite-lined landfill unit (when approved by this Order) shall be discharged and managed such that it does not cause instability of the waste, does not cause leachate seeps, does not generate additional landfill gas that is not extracted from the landfill by an active landfill gas extraction system, does not cause contaminants to enter surface water runoff, and does not cause leachate volumes to exceed the maximum capacity of the LCRS.
5. Any discharge of waste outside the portion of the landfill that was already covered with waste as of the landfill unit's respective Federal Deadline constitutes a "lateral expansion" and requires the installation of an approved composite liner system and LCRS [40 C.F.R. § 258.40(b)].
6. Wastes shall be discharged only into waste management units specifically designed for their containment and/or treatment, as described in this Order.
7. The discharge shall remain within the designated disposal area at all times.
8. The discharge of waste shall not cause a nuisance condition [Wat. Code, § 13050(m)].

E. Standard Facility Specifications

1. All waste management units shall be designed, constructed, and operated to ensure that wastes, including leachate, will be a minimum of 5 feet above the highest anticipated elevation of underlying groundwater [Title 27, § 20240(c)], including the capillary fringe.
2. Surface and subsurface drainage from outside of a waste management unit shall be diverted from the unit [Title 27, § 20365(e)].
3. Interim cover is daily and intermediate cover [Title 27, § 20750(a)]. Interim cover over wastes discharged to a landfill shall be designed and constructed to minimize percolation of liquids through the wastes [Title 27, § 20705(b)].
4. Intermediate cover consisting of compacted earthen material of at least twelve (12) inches shall be placed on all surfaces of the fill where no

Standard Provisions & Reporting Requirements

additional solid waste will be deposited within **180 days** [Title 27, § 20700(a)].

5. During wet weather conditions, the facility shall be operated and graded to minimize leachate generation.
6. The Discharger shall immediately notify the Central Valley Water Board staff of any slope failure occurring at a waste management unit. Any failure which threatens the integrity of containment features or the waste management unit shall be promptly corrected in accordance with an approved method [Title 27, § 21710(c)(2)].
7. The Discharger shall **immediately** notify Central Valley Water Board staff of any flooding, unpermitted discharge of waste off-site or outside of waste management units, equipment failure, or other change in site conditions which could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.
8. The Discharger shall limit water used for facility maintenance within landfill areas to the minimum amount necessary for dust control and construction.
9. The Discharger shall maintain in good working order any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.
10. The Discharger shall lock all groundwater monitoring wells with a lock on the well cap or monitoring well box. All monitoring devices shall be clearly labeled with their designation including all monitoring wells, LCRS risers, and lysimeter risers and shall be easily accessible for required monitoring by authorized personnel. Each monitoring device shall be clearly visible and be protected from damage by equipment or vehicles.
11. The Discharger shall ensure that methane and other landfill gases are adequately vented, removed from landfill units, or otherwise controlled to prevent the danger of adverse health effects, nuisance conditions, degradation, or the impairment of the beneficial uses of surface water or groundwater due to migration through the unsaturated zone.
12. The Discharger shall maintain the depth of the fluid in the sump of each landfill unit at the minimum needed for efficient pump operation (the depth at which the pump turns on given the pump intake height and maximum pump cycle frequency).
13. The depth of fluid on the landfill liner shall not exceed **30 centimeters** (cm) [40 C.F.R. § 258.40(a)(2)]. This regulation is interpreted by the

Standard Provisions & Reporting Requirements

Central Valley Water Board to exclude the leachate sump. The Discharger shall **immediately** notify the Central Valley Water Board staff by telephone, and follow up in writing within **seven** days if monitoring reveals that the depth of fluid on any portion of the liner (excluding the sump) exceeds 30 cm (approximately 12 inches). The written notification shall include a timetable for remedial or corrective action necessary to achieve compliance with the leachate depth limitation.

14. Each LCRS shall be tested at least annually to demonstrate proper operation. The results of the tests shall be compared with earlier tests made under comparable conditions [Title 27, § 20340(d)].
15. The Discharger shall maintain a *Storm Water Pollution Prevention Plan* and *Monitoring Program and Reporting Requirements* in accordance with State Water Board Order No. 2014-0057-DWQ (Industrial General Permit) or most recent general industrial storm water permit), or retain all storm water on-site.
16. Internal site drainage from surface or subsurface sources shall not contact or percolate through wastes.
17. New MSW landfill units or lateral expansions of existing units shall not be sited in a "wetland" [as defined in 40 C.F.R. § 232.29(r)] unless there is no practical alternative; steps have been taken to assure no net loss of wetland; the landfill unit will not degrade the wetland; the unit will not jeopardize threatened or endangered species or produce adverse modification of a critical habitat or violate any requirement of the Marine Protection, Research, and Sanctuaries Act of 1972 [40 C.F.R. § 258.12].

F. Standard Construction Specifications

1. The Discharger shall submit for review and approval at least 90 days prior to proposed construction, design plans and specifications for new landfill modules that include the following:
 - a. Detailed construction drawings showing all required liner system components, the LCRS, leachate sump, unsaturated zone monitoring system, any proposed landfill gas monitoring and extraction points, and access to the LCRS for required annual testing.
 - b. A Construction Quality Assurance (CQA) Plan prepared by a California-registered civil engineer or certified engineering geologist, and that meets the requirements of Title 27, section 20324.

Standard Provisions & Reporting Requirements

- c. A geotechnical evaluation of the area soils, evaluating their use as the base layer or reference to the location of this information in the ROWD/JTD [Title 27, § 21750(f)(4)].
 - d. Information about the seismic design of the proposed new module (or reference to the location of this information in the ROWD/JTD) in accordance with Title 27, section 20370.
 - e. A revised water quality monitoring plan for groundwater detection monitoring (or information showing the existing plan is adequate) in accordance with Title 27, section 20415.
 - f. An Operation Plan (or reference to the location of this information in the ROWD/JTD) meeting the requirements of Title 27, section 21760(b).
- 2. All containment structures shall be designed by, and construction shall be supervised by, a California registered civil engineer or a certified engineering geologist, and shall be certified by that individual as meeting the prescriptive standards, or approved engineered alternative design, in accordance with this Order prior to waste discharge.
- 3. The Discharger shall not proceed with construction until the construction plans, specifications, and all applicable construction quality assurance plans have been approved. Waste management units shall receive a final inspection and approval of the construction by Central Valley Water Board staff before use of the unit commences [Title 27, § 20310(e)].
- 4. Any report, or any amendment or revision of a report, that proposes a design or design change that might affect a waste management unit's containment features or monitoring systems shall be approved by a California registered civil engineer or a certified engineering geologist [Title 27, § 21710(d)].
- 5. Materials used in containment structures shall have appropriate chemical and physical properties to ensure that such structures do not fail to contain waste because of pressure gradients, physical contact with waste or leachate, chemical reactions with soil or rock, climatic conditions, the stress of installation, or because of the stress of daily operations [Title 27, § 20320(a)].
- 6. Waste management units and their respective containment structures shall be designed and constructed to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping [Title 27, § 20365(a)].

Standard Provisions & Reporting Requirements

7. The Discharger shall design storm water conveyance systems for Class III units for a 100-year, 24-hour storm event, and shall design storm water conveyance systems for Class II units for a 1,000-year, 24-hour storm event [Title 27, § 21750(e)(3)].
8. All Class III landfill units shall be designed to withstand the maximum probable earthquake and Class II waste management units shall be designed to withstand maximum credible earthquake without damage to the foundation or to the structures that control leachate, or surface drainage, or erosion, or gas [Title 27, § 20370(a)].
9. The Discharger shall perform stability analyses that include components to demonstrate the integrity of the landfill foundation, final slopes, and containment systems under both static and dynamic conditions throughout the landfill's life including the closure period and post-closure maintenance period [Title 27, § 21750(f)(5)].
10. New waste management units and expansions of existing units shall not be located on a known Holocene fault [Title 27, § 20260(d)].
11. Liners shall be designed and constructed to contain the fluid, including landfill gas, waste, and leachate [Title 27, § 20330(a)].
12. Hydraulic conductivities shall be determined primarily by appropriate field test methods in accordance with accepted civil engineering practice. The results of laboratory tests with both water and leachate, and field tests with water, shall be compared to evaluate how the field permeabilities will be affected by leachate. It is acceptable for the Discharger to use appropriate compaction tests in conjunction with laboratory hydraulic conductivity tests to determine field permeabilities as long as a reasonable number of field hydraulic conductivity tests are also conducted [Title 27, § 20320(c)].
13. Hydraulic conductivities specified for containment structures other than the final cover shall be relative to the fluids (leachate) to be contained. Hydraulic conductivities for the final cover shall be relative to water [Title 27, § 20320(b)].
14. A test pad for each barrier layer and final cover shall be constructed in a manner duplicating the field construction. Test pad construction methods, with the designated equipment, shall be used to determine if the specified density/moisture-content/hydraulic conductivity relationships determined in the laboratory can be achieved in the field with the compaction equipment to be used and at the specified lift thickness [Title 27, § 20324(g)(1)(A)].

Standard Provisions & Reporting Requirements

15. Performance requirements for geosynthetic membranes shall include, but are not limited to, a need to limit infiltration of water, to the greatest extent possible; a need to control landfill gas emissions; mechanical compatibility with stresses caused by equipment traffic, and for final covers the result of differential settlement over time and durability throughout the post-closure maintenance period [Title 27, § 20324(i)(1)].
16. The Discharger shall ensure proper preparation of the subgrade for any liner system that includes a GCL so as to provide a smooth surface that is free from rocks, sticks, or other debris that could damage or otherwise limit the performance of the GCL.
17. The Discharger shall propose an electronic leak location survey of the top liner for any new landfill module in the construction quality assurance plan unless the Discharger demonstrates that a leak location survey is not needed.
18. Leachate collection and removal systems are required for Class II landfills and surface impoundments, MSW landfills, and for Class III landfills which have a liner or which accept sewage or water treatment sludge [Title 27, § 20340(a)].
19. All new landfill units or lateral expansions of existing units that require a LCRS shall have a blanket-type LCRS that covers the bottom of the unit and extends as far up the sides as possible. The LCRS shall be of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and by any equipment used at the unit [Title 27, § 20340(e)].
20. The LCRS shall be designed, constructed, maintained, and operated to collect and remove twice the maximum anticipated daily volume of leachate from the waste management unit [Title 27, § 20340(b)].
21. Leachate collection and removal systems shall be designed and operated to function without clogging through the scheduled closure of the landfill unit and during the post-closure maintenance period.
22. The LCRS shall be designed to maintain the depth of fluid over any portion of the LCRS of no greater than 30 cm [40 C.F.R. § 258.40(a)(2)], excluding the leachate sump. The leachate sump, leachate removal pump, and pump controls shall be designed and set to maintain a fluid depth no greater than the minimum needed for efficient pump operation [Title 27, § 20340(c)].

Standard Provisions & Reporting Requirements

23. All construction of liner systems and final cover systems shall be performed in accordance with a Construction Quality Assurance Plan certified by a registered civil engineer or a certified engineering geologist [Title 27, § 20323].
24. The Construction Quality Assurance program shall be supervised by a registered civil engineer or a certified engineering geologist who shall be designated the CQA officer [Title 27, § 20324(b)(2)].
25. The Discharger shall ensure that a third party independent of both the Discharger and the construction contractor performs all of the construction quality assurance monitoring and testing during the construction of a liner system.
26. The Discharger shall notify Central Valley Water Board staff at least **14 days** prior to commencing field construction activities including construction of a new lined cell or module, construction of a final cover, or any other construction that requires Central Valley Water Board staff approval under this Order.
27. The Discharger shall submit for review and approval at least **60 days** prior to proposed discharge, final documentation required in Title 27 Section 20324(d)(1)(C) following the completion of construction of a new lined landfill module. The report shall be certified by a registered civil engineer or a certified engineering geologist and include a statement that the liner system was constructed in accordance with the approved design plans and specifications, the CQA Plan, the requirements of the WDRs, and that it meets the performance goals of Title 27. The report shall contain sufficient information and test results to verify that construction was in accordance with the design plans and specifications, the construction quality assurance plan, and the performance goals of Title 27.
28. The Discharger shall not discharge waste onto a newly constructed liner system until the final documentation report has been reviewed and an acceptance letter has been received.
29. Prior to placement of waste in a new landfill unit, the Discharger shall monitor any pan lysimeter for the unit that has received enough rainfall to flood the LCRS sump. If liquid is detected in the pan lysimeter, the Discharger shall verify that the liquid is not from a leak in the primary liner system before waste can be accepted to the new module.

Standard Provisions & Reporting Requirements

G. Standard Closure and Post-Closure Specifications

1. The Discharger shall submit a final or partial final closure and post-closure maintenance plan at least **two years** prior to the anticipated date of closure [Title 27, § 21780(d)(1)].
2. The Discharger shall notify the Central Valley Water Board in writing that a landfill unit or portion of a unit is to be closed either at the same time that the California Department of Resources Recycling and Recovery (CalRecycle) is notified or **180 days** prior to beginning any final closure activities, whichever is sooner [Title 27, § 21710(c)(5)(A)]. The notice shall include a statement that all closure activities will conform to the most recently approved final or partial final closure plan and that the plan provides for site closure in compliance with all applicable federal and state regulations [Title 27, § 21710(c)(5)(C)].
3. Initiation of closure activities shall begin within **30 days** of final waste receipt, or within one year of receipt of most recent waste if additional capacity remains [40 C.F.R. § 258.60(f)].
4. Closure activities shall be completed within **180 days** of the beginning of closure activities unless an extension is granted by the Executive Officer [40 C.F.R. § 258.60(g)].
5. The Discharger shall carry out both mandatory closure and normal closure of a waste management unit or a portion of a unit in accordance with a closure and post-closure maintenance plan approved by the Central Valley Water Board [Title 27, § 20950(a)(1)] through the issuance of closure waste discharge requirements.
6. The Discharger shall notify the Central Valley Water Board that a preliminary closure and post-closure maintenance plan has been prepared and placed in the operating record by the date of initial receipt of waste at any new MSW landfill unit or lateral expansion of any existing unit [40 C.F.R. § 258.60(d)]. This notification shall be included in the cover letter transmitting the preliminary closure and post-closure maintenance plan.
7. In addition to the applicable provisions of Title 27, the preliminary closure and/or the post-closure maintenance plans for MSW landfill units shall include the following:
 - a. A description of the steps necessary to close all MSW landfill units at any point during their active life in accordance with the cover design requirements [40 C.F.R. § 258.60(c)];

Standard Provisions & Reporting Requirements

- b. An estimate of the largest area of the landfill unit(s) ever requiring a final cover at any time during the active life of the unit(s) [40 C.F.R. § 258.60(c)(2)];
 - c. An estimate of the maximum inventory of wastes ever on-site over the active life of the waste management facility [40 C.F.R. § 258.60(c)(3)]; and
 - d. A schedule for completing all activities necessary to satisfy the closure criteria in 40 C.F.R. section 258.60 [40 C.F.R. § 258.60(c)(4)].
- 8. The final closure and post-closure maintenance plan for the waste management unit shall include at least the following: an itemized cost analysis, closure schedule, any proposed final treatment procedures, map, changes to the unit description presented in the most recent ROWD, federal requirements for a MSW facility, land use of the closed unit, and a construction quality assurance plan [Title 27, § 21769(c) & (d)].
- 9. Closure of each waste management unit shall be under the direct supervision of a registered civil engineer or certified engineering geologist [Title 27, § 20950(b)].
- 10. The final cover of closed landfills shall be designed, graded, and maintained to prevent ponding and soil erosion due to high run-off velocities [Title 27, § 21090(b)(1)(A)].
- 11. The final grading design shall be designed and approved by a registered civil engineer or certified engineering geologist [Title 27, § 21090(b)(1)(C)].
- 12. All final cover designs shall include a minimum 1-foot thick erosion resistant layer [Title 27, § 21090(a)(3)(A)].
- 13. The Discharger shall close the landfill with minimum 15-foot wide benches every 50 vertical feet [Title 27, § 21090(a)].
- 14. Final cover slopes shall not be steeper than a horizontal to vertical ratio of one and three quarters to one and designs having any slopes steeper than a horizontal to vertical ratio of three to one, or having a geosynthetic component, shall have these aspects of their design specifically supported in the slope stability report required in Title 27, section 21750(f)(5) [Title 27, § 21090(a)].
- 15. For any portions of the final cover installed after July 18, 1997, for which the Central Valley Water Board has not approved a slope and foundation

Standard Provisions & Reporting Requirements

stability report on or before that date, the Discharger shall meet the requirements of Title 27, section 21750(f)(5) [Title 27, § 21090(a)(6)].

16. Areas with slopes greater than ten percent, surface drainage courses, and areas subject to erosion by wind or water shall be designed and constructed to prevent such erosion [Title 27, § 21090(b)(2)].
17. The Discharger shall design storm water conveyance systems for closed Class III units for a 100-year, 24-hour storm event, and shall design storm water conveyance systems for closed Class II units for a 1,000-year, 24-hour storm event [Title 27, § 21750(e)(3)].
18. Closed landfill units shall be provided with at least two permanent surveying monuments, installed by a licensed land surveyor or by a registered civil engineer, from which the location and elevation of all wastes, containment structures, and monitoring facilities can be determined throughout the post-closure maintenance period [Title 27, § 20950(d)].
19. Following closure of any MSW landfill units, the Discharger shall notify the Executive Officer that the deed to the landfill facility property, or some other instrument that is normally examined during a title search, has been recorded and a copy placed in the operating record. The notation on the deed shall in perpetuity notify any potential purchaser of the property that the land has been used as a landfill facility and that use of the land is restricted to the planned use described in the post-closure maintenance plan [Title 27, § 20515(a)(4) and §21170, and 40 C.F.R. § 258.60(i)].
20. Construction or repair of the final cover system's low-hydraulic conductivity layer is to be carried out in accordance with an approved construction quality assurance plan [Title 27, § 21090(b)(1)(E)].
21. The Discharger shall incorporate into the closure and post-closure maintenance plan a cover-integrity monitoring and maintenance program which includes at least the following: a periodic leak search, periodic identification of other problem areas, prompt cover repair, and vegetation maintenance [Title 27, § 21090(a)(4)].
22. The Discharger shall complete a final cover survey upon completion of closure activities for that portion of the landfill. The final cover surveys shall include an initial survey and map [Title 27, § 21090(e)(1). **Every five years**, the Discharger shall conduct a survey of the closed landfill cover and submit an iso-settlement map accurately depicting the estimated total change in elevation of each portion of the final cover's low-hydraulic-conductivity layer [Title 27, § 21090(e)(2)].

Standard Provisions & Reporting Requirements

23. Within **30 days** of completion of all closure activities, the Discharger shall certify that all closure activities were performed in accordance with the most recently approved final closure plan and CQA Plan, and in accordance with all applicable regulations. The Discharger shall also certify that closed landfill units shall be maintained in accordance with and approved post-closure maintenance plan [Title 27, § 21710(c)(6)].
24. Within **180 days** of completion of closure construction activities, the Discharger shall submit final documentation of closure, including the Certification of Closure. The closure documents shall include a final construction quality assurance report and any other documents necessary to support the certification [Title 27, § 21880].
25. The post-closure maintenance period shall continue until the Central Valley Water Board determines that wastes remaining in the landfill unit(s) no longer pose a threat to water quality [Title 27, § 20950(a)(1)].
26. The Discharger shall conduct a periodic leak search to monitor of the integrity of the final cover in accordance with the schedule in the approved final post- closure maintenance plan [Title 27, § 21090(a)(4)(A)].
27. The Discharger shall periodically inspect and identify problems with the final cover including areas that require replanting, erosion, areas lacking free drainage, areas damaged by equipment operations, and localized areas identified in the required five-year iso-settlement survey [Title 27, § 21090(a)(4)(B)].
28. The Discharger shall repair the cover promptly in accordance with a cover repair plan to be included in the final post-closure maintenance plan [Title 27, § 21090(a)(4)(C)].
29. Throughout the post-closure maintenance period, the Discharger shall maintain the structural integrity and effectiveness of all containment structures, maintain the final cover as necessary to correct the effects of settlement and other adverse factors, continue to operate the LCRS as long as leachate is generated and detected, maintain the monitoring systems, prevent erosion and related damage of the final cover due to drainage, and protect and maintain surveyed monuments [Title 27, § 21090(c)].
30. Post-closure maintenance shall be conducted for a minimum period of 30 years or until the waste no longer poses a threat to environmental quality, whichever is greater [Title 27, § 21180(a) and Title 27, § 21900(a)].

Standard Provisions & Reporting Requirements

H. Standard Financial Assurance Provisions

1. The Discharger shall establish an irrevocable fund for closure and post-closure maintenance to ensure closure and post-closure maintenance of each classified unit in accordance with an approved closure and post-closure maintenance plan [Title 27, § 20950(f) and § 22207(a)].
2. The Discharger shall obtain and maintain assurances of financial responsibility for initiating and completing corrective action for all known and reasonably foreseeable releases from the waste management unit [Title 27, §20380(b), § 22221, and § 22222].

I. Standard Monitoring Specifications

1. The water quality monitoring program shall include appropriate and consistent sampling and analytical procedures and methods designed to ensure that monitoring results provide a reliable indication of water quality at all monitoring points and background monitoring points [Title 27, § 20415(e)(4) and 40 C.F.R. § 258.53(b)].
2. All monitoring systems shall be designed and certified by a registered geologist or a registered civil engineer [Title 27, § 20415(e)(1)].
3. All monitoring wells shall be cased and constructed in a manner that maintains the integrity of the monitoring well bore hole and prevents the bore hole from acting as a conduit for contaminant transport [Title 27, § 20415(b)(4)(A)].
4. All sample chemical analyses of any material shall be performed by a laboratory certified by the California Department of Health Services [Wat. Code, § 13176(a)].
5. A Detection Monitoring Program for a new landfill facility shall be installed, operational, and one year of monitoring data collected from background monitoring points prior to the discharge of wastes [Title 27, § 20415(e)(6)].
6. Background for water samples or soil-pore gas samples shall be represented by the data from all samples taken from applicable background monitoring points during that reporting period (at least one sample from each background monitoring point).
7. The Discharger shall submit for approval, establish, and maintain an approved Sample Collection and Analysis Plan. The Sample Collection and Analysis Plan shall at a minimum include:

Standard Provisions & Reporting Requirements

- a. Sample collection procedures describing purging techniques, sampling equipment, and decontamination of sampling equipment;
- b. Sample preservation information and shipment procedures;
- c. Sample analytical methods and procedures;
- d. Sample quality assurance/quality control (QA/QC) procedures;
- e. Chain of Custody control; and
- f. Sample analysis information including sample preparation techniques to avoid matrix interferences, method detection limits (MDLs), practical quantitation limits (PQLs) and reporting limits (RLs), and procedures for reporting trace results between the MDL and PQL.

If required by the Executive Officer, the Discharger shall modify the Sample Collection and Analysis Plan to conform with this Order.

8. For any given monitored medium, the samples taken from all monitoring points and background monitoring points to satisfy the data analysis requirements for a given reporting period shall all be taken **within a span not to exceed 30 days**, unless a longer time period is approved, and shall be taken in a manner that ensures sample independence to the greatest extent feasible. Specific methods of collection and analysis must be identified. Sample collection, storage, and analysis shall be performed according to the most recent version of USEPA Methods, such as the latest editions, as applicable, of: (1) Methods for the Analysis of Organics in Water and Wastewater (USEPA 600 Series), (2) Test Methods for Evaluating Solid Waste (SW-846, latest edition), and (3) Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020), and in accordance with the approved Sample Collection and Analysis Plan. Appropriate sample preparation techniques shall be used to minimize matrix interferences.
9. If methods other than USEPA-approved methods or Standard Methods are used, or there is a proposed alternant USEPA method than the one listed in the MRP, the proposed methodology shall be submitted for review and approval prior to use, including information showing its equivalence to the required method.
10. The **methods of analysis and the detection limits** used must be appropriate for the expected concentrations. For the monitoring of any constituent or parameter that is found in concentrations which produce

Standard Provisions & Reporting Requirements

more than 90% non-numerical determinations (i.e., “trace” or “ND”) in data from background monitoring points for that medium, the analytical method having the lowest MDL shall be selected from among those methods which would provide valid results in light of any matrix effects or interferences.

11. The laboratory reporting limit (RL) for all reported monitoring data shall be set no greater than the practical quantitation limit (PQL).
12. **“Trace” results** - results falling between the MDL and the PQL - shall be reported as such, and shall be accompanied both by the estimated MDL and PQL values for that analytical run.
13. Laboratory data shall not be altered or revised by the Discharger. If the Discharger observes potential lab errors, it shall identify the issue in the monitoring report and shall describe steps that will be taken to prevent similar errors in the future.
14. **MDLs and PQLs** shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. These MDLs and PQLs shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the lab, rather than simply being quoted from USEPA analytical method manuals. In relatively interference-free water, laboratory-derived MDLs and PQLs are expected to closely agree with published USEPA MDLs and PQLs. MDLs and PQLs shall be reported.
15. If the laboratory suspects that, due to a change in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived MDL/PQL values, the results shall be flagged in the laboratory report accordingly, along with estimates of the detection limit and quantitation limit actually achieved. **The MDL shall always be calculated such that it represents the lowest achievable concentration associated with a 99% reliability of a nonzero result.** The PQL shall always be calculated such that it represents the lowest constituent concentration at which a numerical value can be assigned with reasonable certainty that it represents the constituent’s actual concentration in the sample. Normally, PQLs should be set equal to the concentration of the lowest standard used to calibrate the analytical procedure.
16. All **QA/QC** data shall be reported, along with the sample results to which they apply, including the method, equipment, analytical detection and quantitation limits, the percent recovery, an explanation for any recovery that falls outside the QC limits, the results of equipment and method

Standard Provisions & Reporting Requirements

blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name and signature of a responsible person from the laboratory. **Sample results shall be reported unadjusted for blank results or spike recoveries.** In cases where contaminants are detected in QA/QC samples (i.e., field, trip, or lab blanks), the accompanying sample results shall be appropriately flagged, but the analytical results shall not be adjusted.

17. Unknown chromatographic peaks shall be reported, flagged, and tracked for potential comparison to subsequent unknown peaks that may be observed in future sampling events. Identification of unknown chromatographic peaks that recur in subsequent sampling events may be required.
18. The sampling interval of each monitoring well shall be appropriately screened and fitted with an appropriate filter pack to enable collection of representative groundwater samples [Title 27, § 20415(b)(4)(B)]. Groundwater samples shall not be field-filtered prior to laboratory analysis [40 C.F.R. § 258.53(b)]. Groundwater samples needing filtering (e.g., samples to be analyzed for dissolved metals) shall be filtered by the laboratory prior to analysis.
19. Groundwater elevations shall be measured in each well immediately prior to purging, each time groundwater is sampled. The owner or operator shall determine the rate and direction of groundwater flow each time groundwater is sampled. Groundwater elevations in wells which monitor the same waste management area shall be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow rate and direction [40 C.F.R. § 258.53(d)].
20. Monitoring wells, piezometers, and other measurement, sampling, and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program [40 C.F.R. § 258.51(c)(2)]. Monitoring devices that cannot be operated and maintained to perform to design specifications shall be replaced after review and approval of a report (i.e., work plan) for the proposed replacement devices.
21. All borings are to be logged during drilling under the direct supervision of a registered geologist or registered civil engineer with expertise in stratigraphic well logging [Title 27, § 20415(e)(2)].
22. Soils are to be described according to the Unified Soil Classification System [Title 27, § 20415(e)(2)(A)]. Rock is to be described in a manner

Standard Provisions & Reporting Requirements

appropriate for the purpose of the investigation [Title 27, § 20415(e)(2)(B)].

23. The Discharger shall submit a work plan for review and approval at least **60 days** prior to installation or abandonment of groundwater monitoring wells.
24. The Discharger shall provide Central Valley Water Board staff a minimum of **one-week** notification prior to commencing any field activities related to the installation or abandonment of monitoring devices.
25. The water quality protection standard shall consist of the constituents of concern (COC), concentration limits, and the point of compliance. The water quality protection standard shall apply during the active life of the waste management unit, closure period, post-closure maintenance period, and any compliance period under Title 27, section 20410 [Title 27, § 20390].
26. The point of compliance at which the water quality protection standard applies is a vertical surface located at the hydraulically downgradient limit of the waste management unit that extends through the uppermost aquifer underlying the unit [Title 27, § 20405].
27. The compliance period is the minimum period of time during which the Discharger shall conduct a water quality monitoring program and is the number of years equal to the active life of the waste management unit plus the closure period [Title 27, § 20410(a)].
28. The groundwater monitoring system shall include a sufficient number of monitoring points, installed at appropriate locations, to yield groundwater samples from the uppermost aquifer that represent the quality of groundwater that has not been affected by a release from the waste management unit [Title 27, § 20415(b)(1)(A)].
29. The Detection Monitoring Program shall include a sufficient number of monitoring points, installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer that represent the quality of groundwater passing the point of compliance to allow the detection of a release from the waste management unit [Title 27, § 20415(b)(1)(B)1.].
30. Additional monitoring points shall be added as necessary to provide the best assurance of the **earliest possible detection** of a release from the waste management unit [Title 27, § 20415(b)(1)(B)2.].

Standard Provisions & Reporting Requirements

31. The Detection Monitoring Program shall also include a sufficient number of monitoring points installed at appropriate depths and locations to yield groundwater samples from other aquifers or perched zones not already monitored to provide the earliest possible detection of a release from the waste management unit [Title 27, § 20415(b)(1)(B)3. and 4., and §20420(b)].
32. A surface water monitoring system shall be established to monitor each surface water body that could be affected by a release from the waste management unit [Title 27, § 20415(c)].
33. An unsaturated zone monitoring system shall be established for each waste management unit [Title 27, § 20415(d)].
34. The Discharger shall notify Central Valley Water Board staff within **seven days** if fluid is detected in a previously dry LCRS, unsaturated zone monitoring system, or if a progressive increase is detected in the volume of fluid in a LCRS [Title 27, § 21710(c)(3)].
35. Driller's logs for all monitoring wells shall to be submitted to the Central Valley Water Board and the Department of Water Resources [Wat. Code, § 13751 and Title 27, § 20415(b)(3)].
36. Groundwater elevation, temperature, electrical conductivity, turbidity, and pH are to be accurately measured at each well each time groundwater is sampled [Title 27, § 21415(e)(13)].
37. The groundwater flow rate and direction in the uppermost aquifer and in any zones of perched water and in any additional portions of the zone of saturation being monitored shall be determined at least quarterly [Title 27, § 20415(e)(15)].
38. The Discharger shall graph all analytical data from each monitoring point and background monitoring point and shall submit the graphs to the Central Valley Water Board annually [Title 27, § 20415(e)(14)].
39. For each waste management unit, the Discharger shall collect all data necessary for selecting appropriate data analysis methods for establishing background values for each constituent of concern and for each monitoring parameter [Title 27, § 20420(c)]. The Discharger shall propose a data analysis method that includes a detailed description of the criteria to be used for determining "measurably significant" (as defined in Title 27, section 20164) evidence of a release from the waste management unit and determining compliance with the water quality protection standard [Title 27, § 20415(e)(6) and (7)].

Standard Provisions & Reporting Requirements

40. For statistical analysis of data, the Discharger shall use one of the methods described in Title 27, section 20415(e)(8)(A)-(E). A non-statistical data analysis method can be used if the method can achieve the goal of the particular monitoring program at least as well as the most appropriate statistical method [Title 27, § 20415(e)(8)]. The Discharger shall use a statistical or nonstatistical data analysis method that complies with Title 27, section 20415(e)(7, 8, 9, and 10), to compare the concentration of each constituent of concern or monitoring parameter with its respective background concentration to determine whether there has been a measurably significant evidence of a release from the waste management unit. For any given monitoring point at which a given constituent has already exhibited a measurably significant indication of a release at that monitoring point, the Discharger may propose to monitor the constituent, at that well, using a concentration-versus-time plot.
41. The Discharger may propose an alternate statistical method [to the methods listed under Title 27, section 20415(e)(8)(A-D)] in accordance with Title 27, section 20415(e)(8)(E), for review and approval.
42. The statistical method shall account for data below the practical quantitation limit (PQL) with one or more statistical procedures that are protective of human health and the environment. Any PQL validated pursuant to Title 27, section 20415(e)(7) that is used in the statistical method shall be the **lowest concentration (or value) that can be reliably achieved** within limits of precision and accuracy specified in the WDRs or an approved Sample Collection and Analysis Plan for routine laboratory operating conditions that are available to the facility. The Discharger's technical report (Sample Collection and Analysis Plan and/or Water Quality Protection Standard Report), pursuant to Title 27, section 20415(e)(7), shall consider the PQLs listed in Appendix IX to Chapter 14 of Division 4.5 of Title 22, CCR, for guidance when specifying limits of precision and accuracy. For any given constituent monitored at a background or downgradient monitoring point, an indication that falls between the MDL and the PQL for that constituent (hereinafter called a "trace" detection) shall be identified and used in appropriate statistical or non-statistical tests. Nevertheless, for a statistical method that is compatible with the proportion of censored data (trace and ND indications) in the data set, the Discharger can use the laboratory's concentration estimates in the trace range (if available) for statistical analysis, in order to increase the statistical power by decreasing the number of "ties".
43. The water quality protection standard for organic compounds which are not naturally occurring and not detected in background groundwater samples shall be taken as the detection limit of the analytical method used (e.g., USEPA methods 8260 and 8270).

Standard Provisions & Reporting Requirements

44. Alternate statistical procedures may be used for determining the significance of analytical results for common laboratory contaminants (i.e., methylene chloride, acetone, diethylhexyl phthalate, and di-n-octyl phthalate) if part of an approved water quality protection standard. Nevertheless, analytical results involving detection of these analytes in any background or downgradient sample shall be reported and flagged for easy reference by Central Valley Water Board staff.
45. **Confirmation of Measurably Significant Evidence of a Release.** Whenever a constituent is detected at a detection monitoring point at a concentration that exceeds the concentration limit from the water quality protection standard, the Discharger shall conduct verification sampling to confirm if the exceedance is due to a release or if it is a false-positive (unless previous monitoring has already confirmed a release for that constituent at that monitoring point). An exceedance of the concentration limit from the water quality protection standard is considered measurably significant evidence of a release that must be either confirmed or denied. There are two separate verification testing procedures:
 - a. Standard Monitoring Specification I.46 provides the procedure for analytes that are detected in less than 10% of the background samples such as non- naturally occurring constituents like volatile organic compounds; and
 - b. Standard Monitoring Specification I.47 provides the procedure for analytes that are detected in 10% or greater of the background samples such as naturally occurring constituents like chloride.
46. **Verification Procedure for Analytes Detected in Less than 10% of Background Samples.** The Discharger shall use the following non-statistical method for all analytes that are detected in less than 10% of the background samples. The non-statistical method shall be implemented as follows:
 - a. **Initial Determination of Measurably Significant Evidence of a Release.** Identify each analyte in the current detection monitoring point sample that exceeds either its respective MDL or PQL, and for which a release has not been previously confirmed. The Discharger shall conclude that the exceedance provides a preliminary indication of a release or a change in the nature or extent of the release, at that monitoring point, if **either**:
 - i. The data contains two or more analytes that equal or exceed their respective MDLs; or

Standard Provisions & Reporting Requirements

- ii. The data contains one or more analyte that equals or exceeds its PQL.

b. Discrete Retest [Title 27, § 20415(e)(8)(E) and § 20420(j)(1-3)]:

- i. In the event that the Discharger or Central Valley Water Board staff concludes (pursuant to paragraph I.46.a., above) that there is a preliminary indication of a release, then the Discharger shall immediately notify Central Valley Water Board staff by phone or e-mail and, within 30 days of such indication, shall collect two new (retest) samples from the monitoring point where the release is preliminarily indicated and analyze them for the constituents that caused the need for the retest.
- ii. **Confirmation of a Release.** As soon as the retest data are available, the Discharger shall conclude that measurably significant evidence of a release is confirmed if (not including the original sample) two or more analytes equal or exceed their respective MDLs or if one or more analyte equals or exceeds its PQL. The Discharger shall then:
 - (A) **Immediately** verbally notify the Central Valley Water Board whether or not the retest confirmed measurably significant evidence of a release for the analyte at the monitoring point, and follow up with written notification submitted by certified mail within seven days of the verbal notification; and
 - (B) Carry out the requirements of Section J, **RESPONSE TO A RELEASE** if a release has been confirmed.
 - (C) Add any five-year analyte that is confirmed per this method to the monitoring parameter list such that it is monitored during each regular monitoring event.

47. **Verification Procedure for Analytes Detected in 10% or Greater of the Background Samples.** The Discharger shall use either a statistical or non-statistical method pursuant to Title 27, section 20415(e)(8)(E) for all analytes that are detected in 10% or greater of the background samples. The Discharger shall use one of the statistical methods required in Title 27, section 20415(e)(8)(E) unless another method has been proposed by the Discharger in a Water Quality Protection Standard Report

Standard Provisions & Reporting Requirements

(or equivalent report) and approved by the Central Valley Water Board in a Monitoring and Reporting Program pursuant to Title 27, section 20415(e)(8)(A-D)] or section 20415(e)(8)(E). The method shall be implemented as follows:

- a. **Initial Determination of Measurably Significant Evidence of a Release.** The Discharger shall compare the value reported by the laboratory for each analyte to the statistically-derived concentration limit from the most recent report (Annual Monitoring Report or Water Quality Protection Standard Report) that uses the approved statistical procedure. If the value exceeds the concentration limit for that constituent, the Discharger shall conclude that there is measurably significant evidence of a release [Title 27, § 20420(i)].
- b. **Retest Method** [Title 27, § 20415(e)(8)(E) and § 20420(j)(1-3)].
 - i. In the event that the Discharger or Central Valley Water Board staff concludes (pursuant to paragraph 1.47.a., above) that there is a preliminary indication of a release, then the Discharger shall immediately notify Central Valley Water Board staff by phone or e-mail and, within 30 days [Title 27, § 20415(e)(3)] of such indication, the Discharger shall implement a verification procedure/retest option, in accordance with Title 27, sections 20415(e)(8)(E) and 20420(j)(2). The verification procedure shall include either a single “composite” retest (i.e., a statistical analysis that augments and reanalyzes the data from the monitoring point that indicated a release) or shall consist of at least two “discrete” retests (i.e., statistical analyses each of which analyzes only newly-acquired data from the monitoring point that indicated a release) [Title 27, § 20415(e)(8)(E)]. The Discharger may use an alternate method previously approved by the Central Valley Water Board and included in the Monitoring and Reporting Program. The verification procedure shall comply with the requirements of Title 27, section 20415(e)(8)(E) in addition to the performance standards of Title 27, section 20415(e)(9). The retest samples shall be collected from the monitoring point where the release is preliminarily indicated and shall be analyzed for the constituents that caused the need for the retest. For any indicated monitoring parameter or constituent of concern, if the retest results of one or more of the retest data

Standard Provisions & Reporting Requirements

suites confirm the original indication, the Discharger shall conclude that measurably significant evidence of a release has been confirmed.

- ii. **Confirmation of a Release.** As soon as the retest data are available, the Discharger shall evaluate the results pursuant to paragraph I.47.b.1, above and shall:
 - (A) **Immediately** verbally notify the Central Valley Water Board whether or not the retest confirmed measurably significant evidence of a release for the analyte at the monitoring point, and follow up with written notification submitted by certified mail within seven days of the verbal notification; and
 - (B) Carry out the requirements of Section J, **RESPONSE TO A RELEASE** if a release has been confirmed.
 - (C) Add any five-year analyte that is confirmed per this method to the monitoring parameter list such that it is monitored during each regular monitoring event.

- 48. **Physical Evidence of a Release.** If the Discharger determines that there is a significant physical evidence of a release, the Discharger shall immediately verbally notify Central Valley Water Board staff and provide written notification by certified mail within 7 days of such determination, and within 90 days shall submit an amended report of waste discharge to establish an Evaluation Monitoring Program [Title 27, § 20385(a)(3) and § 20420(l)(1) & (2)].

J. Response to Release

- 1. **Measurably Significant Evidence of a Release Has Been Confirmed.** If the Discharger has confirmed that there is measurably significant evidence of a release from a waste management unit pursuant to Standard Monitoring Specification I.46 or I.47, then the Discharger shall:
 - a. **Immediately** sample all monitoring points in the affected medium at that waste management unit and determine the concentration of all monitoring parameters and constituents of concern for comparison with established concentration limits. Because this constituent of concern scan does not involve statistical testing, the Discharger will need to collect and analyze only a single water sample from each monitoring point in the affected medium [Title 27, § 20420(k)(1)].

Standard Provisions & Reporting Requirements

- b. Within 14 days** of confirming measurably significant evidence of a release, the Discharger shall (for releases from MSW landfill units) notify all persons who own the land or reside on the land that directly overlies any portion of the plume of contamination if contaminants have migrated off-site if indicated by sampling of detection monitoring wells [40 C.F.R. § 258.55(g)(1)(iii)].
- c. Within 90 days** of confirming measurably significant evidence of a release, the Discharger shall submit an amended report of waste discharge to establish an Evaluation Monitoring Program meeting the requirements of Title 27, sections 20420(k)(5)(A-D), including but not limited to the results of sampling pursuant to paragraph J.1.a, above. The Evaluation Monitoring Program shall be designed for the collection and analysis of all data necessary to assess the nature and extent of the release and to determine the spatial distribution and concentration of each constituent throughout the zone affected by the release [Title 27, § 20420(k)(5) and § 20425(b)]. For releases from MSW landfill units, the Evaluation Monitoring Program shall also include any additional proposals necessary to comply with 40 C.F.R. § 258.55, particularly the additional monitoring well required by 40 C.F.R. § 258.55(g)(1)(ii).
- d. Within 180 days** of confirming measurably significant evidence of a release, the Discharger shall submit to the Central Valley Water Board an initial engineering feasibility study for a Corrective Action Program necessary to meet the requirements of Title 27, section 20430. At a minimum, the initial engineering feasibility study shall contain a detailed description of the corrective action measures that could be taken to achieve background concentrations for all constituents of concern [Title 27, § 20420(k)(6)].
- e.** If the Discharger confirms that there is measurably significant evidence of a release from the waste management unit at any monitoring point, the Discharger may attempt to demonstrate that a source other than the waste management unit caused the evidence of a release or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation or by natural variation in groundwater, surface water, or the unsaturated zone. The Discharger may make a demonstration pursuant to Title 27, section 20420(k)(7) in addition to or in lieu of submitting both an amended report of waste discharge or an engineering feasibility study; however, the Discharger is not relieved of the requirements and due dates of Title 27, sections 20420(k)(6) & (7) unless Central Valley Water Board staff agree that the demonstration successfully shows that a source other than the waste management unit caused

Standard Provisions & Reporting Requirements

the evidence of a release or that the evidence resulted from error in sampling, analysis, or statistical evaluation or from natural variation in groundwater, surface water, or the unsaturated zone. In order to make this demonstration, the Discharger shall notify the Central Valley Water Board by certified mail of the intent to make the demonstration **within seven days** of determining measurably significant evidence of a release, and shall submit a report **within 90 days** of determining measurably significant evidence of a release [Title 27, § 20420(k)(7)].

- f. **Within 90 days** of the date that the Evaluation Monitoring Program from paragraph J.1.c is approved (the date is it established), the Discharger shall complete and submit the following:
 - i. **Results and Assessment for the Evaluation Monitoring Program.** A report with the results and assessment based on the approved Evaluation Monitoring Program [Title 27, § 20425(b)].
 - ii. **Updated Engineering Feasibility Study.** An updated engineering feasibility study for corrective action based on the data collected to delineate the release and data from the ongoing monitoring program required under Title 27, section 20425(e) [Title 27, § 20425(c)].
 - iii. **Amended ROWD for a Corrective Action Program.** An amended report of waste discharge to establish a Corrective Action Program meeting the requirements of Title 27, section 20430 based on the data collected to delineate the release and based on the updated engineering feasibility study [Title 27, § 20425(d)].
- g. The Discharger shall (for releases from MSW landfill units) discuss the results of the updated engineering feasibility study, prior to the final selection of a remedy, in a public meeting with interested and affected parties [40 C.F.R. § 258.56(d)].

K. General Provisions

- 1. In the event the Discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the Discharger shall notify the appropriate Central Valley Water Board office by telephone as soon as it or its agents have knowledge of such noncompliance or potential for noncompliance, and shall confirm this

Standard Provisions & Reporting Requirements

notification in writing **within two weeks**. The written notification shall state the nature, time, and cause of noncompliance, and shall describe the measures being taken to prevent recurrences and shall include a timetable for corrective actions.

2. All reports and transmittal letters shall be signed by persons identified below:
 - a. For a corporation: by a principal executive officer of at least the level of senior vice-president.
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor.
 - c. For a municipality, state, federal or other public agency: by either a principal executive officer or ranking elected or appointed official.
 - d. A duly authorized representative of a person designated in a, b or c above if:
 - i. The authorization is made in writing by a person described in a, b, or c of this provision;
 - ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a Unit, superintendent, or position of equivalent responsibility (a duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - iii. The written authorization is submitted to the Central Valley Water Board.
 - e. Any person signing a document under this Section shall make the following certification:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are

Standard Provisions & Reporting Requirements

significant penalties for submitting false information, including the possibility of fine and imprisonment.

3. The Discharger shall take all reasonable steps to minimize any adverse impact to the waters of the State resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature, extent, and impact of the noncompliance.
4. The owner of the waste management facility shall have the continuing responsibility to assure protection of waters of the state from discharged wastes and from gases and leachate generated by discharged waste during the active life, closure, and post-closure maintenance period of the waste management units and during subsequent use of the property for other purposes.
5. The fact that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order shall not be regarded as a defense for the Discharger's violations of this Order.
6. The Discharger shall notify the Central Valley Water Board of a material change in; the types, quantity, or concentrations of wastes discharged; site operations and features; or proposed closure procedures, including changes in cost estimates. This notification shall be given a reasonable time before the changes are made or become effective. No changes shall be made without Central Valley Water Board approval following authorization for closure pursuant to the site Notification of Closure [Title 27, § 21710(a)(4)].
7. The Discharger shall maintain legible records of the volume and type of each waste discharged at each waste management unit or portion of a unit, and the manner and location of discharge. Such records shall be maintained by the Discharger until the beginning of the post-closure maintenance period. These records shall be on forms approved by the State Water Board or Central Valley Water Board and shall be maintained at the waste management facility until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the State Water Board or Central Valley Water Board at any time during normal business hours. At the beginning of the post-closure maintenance period, copies of these records shall be sent to the Central Valley Water Board [Title 27, § 21720(f)].
8. In the event of any change in landowner or the operator of the waste management facility, the Discharger shall notify the succeeding owner or

Standard Provisions & Reporting Requirements

operator in writing of the existence of this Order. A copy of that notification shall be sent to the Central Valley Water Board.

9. In the event of any change of ownership or responsibility for construction, operation, closure, or post-closure maintenance of the waste discharge facilities described in this Order, the Discharger shall notify the Central Valley Water Board prior to the effective date of the change and shall include a statement by the new Discharger that construction, operation, closure, or post-closure maintenance will be in compliance with this Order and any revisions thereof [Title 27, § 21710(c)(1)].
10. To assume ownership or operation under this Order, the succeeding owner or operator must apply in writing to the Central Valley Water Board requesting transfer of the Order within **14 days** of assuming ownership or operation of this facility. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory requirements contained in General Provision K.2 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. Transfer of this Order shall be approved or disapproved by the Central Valley Water Board.

L. Storm Water Provisions

1. New and existing Class III landfills shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return period [Title 27, § 20260(c)].
2. New and existing Class II landfills shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return period [Title 27, § 20250(c)].
3. The Discharger shall design storm water conveyance systems for Class III units for a 100-year, 24-hour storm event, and shall design storm water conveyance systems for Class II units for a 1,000-year, 24-hour storm event [Title 27, § 21750(e)(3)].
4. MSW landfills located in a 100-year floodplain shall demonstrate that the landfill unit will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health or the environment [40 C.F.R. § 258.11(a)].

Standard Provisions & Reporting Requirements

5. Waste management units and their respective containment structures shall be designed and constructed to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping under the precipitation conditions for the unit [Title 27, § 20365(a)].
6. Precipitation on landfills or waste piles which is not diverted by covers or drainage control systems shall be collected and managed through the LCRS, which shall be designed and constructed to accommodate the precipitation conditions for each class unit [Title 27, § 20365(b)].
7. Diversion and drainage facilities shall be designed, constructed, and maintained to [Title 27, § 20365(c)]:
 - a. accommodate the anticipated volume of precipitation and peak flows from surface runoff and under the precipitation conditions for the waste management unit:
 - b. effectively divert sheet flow runoff laterally, via the shortest distance, into the drainage and collection facilities;
 - c. prevent surface erosion;
 - d. control and intercept run-on, in order to isolate uncontaminated surface waters from water that might have come into contact with waste;
 - e. take into account:
 - i. for closed waste management units and for closed portions of units, the expected final contours of the closed unit, including its planned drainage pattern;
 - ii. for operating portions of waste management units other than surface impoundments, the unit's drainage pattern at any given time;
 - iii. the possible effects of the waste management unit's drainage pattern on and by the regional watershed;
 - iv. the design capacity of drainage systems of downstream and adjacent properties by providing for the gradual release of retained water downstream in a manner which does not exceed the expected peak flow rate at the point of discharge if there were no waste management facility; and

Standard Provisions & Reporting Requirements

- f. preserve the system's function. The Discharger shall periodically remove accumulated sediment from the sedimentation or detention basins as needed to preserve the design capacity of the system.
- 8. Collection and holding facilities associated with precipitation and drainage control systems shall be emptied immediately following each storm or otherwise managed to maintain the design capacity of the system [Title 27, § 20365(d)].
- 9. Surface and subsurface drainage from outside of a waste management unit shall be diverted from the unit [Title 27, § 20365(e)].
- 10. Cover materials shall be graded to divert precipitation from the waste management unit, to prevent ponding of surface water over wastes, and to resist erosion as a result of precipitation [Title 27, § 20365(f)].

Any drainage layer in the final cover shall be designed and constructed to intersect with the final drainage system for the waste management unit in a manner promoting free drainage from all portions of the drainage layer [Title 27, §20365(f)]. [paste SPRRs here]

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

[TENTATIVE] WASTE DISCHARGE REQUIREMENTS ORDER R5-20XX-XXXX
FOR
NEVADA COUNTY DEPARTMENT OF PUBLIC WORKS
MCCOURTNEY ROAD LANDFILL
Nevada County

INFORMATION SHEET

The Nevada County Department of Public Works (Discharger) owns and operates the closed McCourtney Road Landfill (Facility) approximately four (4) miles southwest of Grass Valley in Nevada County. Active landfill operations occurred from 1973 to 1992 accepting primarily household waste from incorporated and unincorporated areas of western Nevada County (e.g., Nevada City, Grass Valley, Lake of the Pines). In November 1992 the Discharger stopped accepting waste in the Facility landfill and commenced operation of an onsite transfer station as an alternative. The Discharger transports waste to Anderson Landfill in Shasta County and the Lockwood Landfill in Storey County, Nevada.

The landfill portion of the Facility was sited at the head of a small east-sloping ravine that included a seasonal stream draining to the east. An embankment was constructed across a downstream portion of the ravine as part of the landfill containment system. The seasonal stream was subsequently buried during landfill development. The oldest landfill unit is unlined where the newer units are partially or fully lined containment systems.

In 1998 the Discharger completed closure of the landfill portion of the Facility by installing a final cover system pursuant to Title 27 and implementing corrective action measures to address impacts to groundwater. In 2004 the Discharger installed a landfill gas extraction system as a corrective action measure to reduce threats to groundwater quality and made efficiency improvements in 2014. In 2015, the Discharger installed additional monitoring wells to further evaluate the corrective action efforts employed. The subsequent data obtained from those wells indicate detectable VOC concentrations are less than the analytical reporting limit.

Changes to Landfill Liquid Management

Up until June 2013 the Discharger used one or both of two (2) Class II surface impoundments to contain landfill liquids such as leachate and landfill gas condensate. Beginning in 2013 the Discharger commenced use of a new dedicated Leachate Storage Tank Farm as an alternative strategy to store landfill liquids. The Leachate Storage Tank Farm features twelve (12) 5,000-gallon HDPE tanks to provide up to 180,000 gallons of storage capacity, roughly equivalent to six (6) days of storage. The Discharger utilizes a leachate pump out station to facilitate transfer of stored landfill liquids for offsite disposal.

INFORMATION SHEET

Closure and Declassification of the Class II Surface Impoundments

After the Discharger began using the Leachate Storage Tank Farm in 2013, the Discharger clean-closed the Class II surface impoundments, in part, by emptying, cleaning, and physically disconnecting the units from landfill liquid management infrastructure. However, the Discharger kept liner materials in place to support storage of “inert liquids” for use for dust control and fire suppression needs. Since the Title 27 prescriptive standard for clean closure generally requires complete removal of liner materials too, the Discharger described compliance with this element of the Title 27 prescriptive standard as “unreasonable, burdensome, and impractical.”

These WDRs consider the clean closure efforts employed by the Discharger and certain California Fire Code requirements cited by the Discharger to find that the Discharger has adequately demonstrated that removal of the cleaned liner materials from the cleaned surface impoundment WMUs would result in an unreasonable and unnecessary burden in comparison to the alternative of leaving the cleaned liner materials in place for the purpose of supporting fire suppression efforts.

By satisfying the clean closure requirements for the Class II surface impoundments, the former Class II surface Impoundments would no longer be subject to certain promulgated sections of Title 27, including the financial assurance obligations.