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WASTE DISCHARGE REQUIREMENTS ORDER R5-2019-0072 AND MONITORING AND REPORTING PROGRAM

ORDER INFORMATION

Program:	Land Disposal (Title 27)
Order Type(s):	Waste Discharge Requirements (WDRs) and Monitoring and Reporting Program (MRP)
Status:	Final
Discharger:	County of Plumas
Facility:	Chester Municipal Solid Waste Class III Landfill
Address:	Old Dump Road, Chester, California 96020
County:	Plumas County
Prior Order(s):	Order No. 05-01-175

I, Patrick Pulupa, Executive Officer, hereby certify that the following is a full, true, and correct copy of the orders adopted by the California Regional Water Quality Control Board, Central Valley Region, on 11 October 2019.

Patrick Pulupa,
Executive Officer

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GLOSSARY OF COMMON ABBREVIATIONS, ACRONYMS & TERMS

ADC ..... Alternative Daily Cover

Antidegradation Policy ... Statement of Policy with Respect to Maintaining High Quality Waters in California, State Water Board Resolution 68-16

bgs ..... Below Ground Surface

BPTC ..... Best Practicable Treatment Control

C&D ..... Construction and Demotion Materials

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

COCs ..... Constituents of Concern

C-Soil ..... Contaminated Soil

CQA ..... Construction Quality Assurance

DEIR ..... Draft Environmental Impact Report

DMP ..... Detection Monitoring Program

DTSC ..... California Department of Toxic Substances Control

DWR ..... California Department of Water Resources

EC ..... Electrical Conductivity

EIR ..... Environmental Impact Report

EMP ..... Evaluation Monitoring Plan

FCPMP ..... Final Closure and Post-Closure Maintenance Plan

FEIR ..... Final Environmental Impact Report

FEMA ..... Federal Emergency Management Agency

GCL ..... Geocomposite Liner

HDPE ..... High-Density Polyethylene

JTD ..... Joint Technical Document

LCRS ..... Leachate Collection and Removal System

GLOSSARY

LEA	Local Enforcement Agency
LFG	Landfill Gas Condensate
MCE	Maximum Credible Earthquake
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
MSWLF	Municipal Solid Waste Landfill
MW	Monitoring Well
PCPMP	Preliminary Closure and Post-Closure Maintenance Plan
RCRA	Resource Conservation and Recovery Act
ROWD	Report of Waste Discharge
SPRRs	Standard Provisions and Reporting Requirements
Subtitle D	USEPA-promulgated MSW regulations under RCRA (see 40 C.F.R. part 258)
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
WQPS	Water Quality Protection Standard

(findings begin on next page)

FINDINGS

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

Introduction

1. County of Plumas (Discharger) owns and operates the Chester Municipal Solid Waste Class III Landfill (Facility), which is located approximately 5 miles east of Chester in Plumas County, Section 36, T29N, R7E, Mount Diablo Base and Meridian (MDB&M). The Facility's location is depicted on the Site Location Map in **Attachment A**.

2. As Facility's owner and operator, the Discharger is responsible for compliance with the Waste Discharge Requirements (WDRs) prescribed in this Order.

3. This Order encompasses the operation and corrective action of a single operating waste management unit (WMU) at the Facility, as specified in **Table 1**.

Table 1—Units Permitted under Order

WMU	Type	Class	Liner	Size	Status
[single unit]	Landfill	Class III	None	28 Acres	Operating

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

   a. Attachment A—Site Location Map

   b. Attachment B—Facility Map

   c. Attachment C—Preliminary Closure Plan

   d. Standard Provisions and Reporting Requirements, December 2015 Edition (SPRRs)

   e. Information Sheet

5. Also attached **is Monitoring and Reporting Program R5-2019-0072**, which establishes a Monitoring and Reporting Program (MRP) for discharges regulated under the WDRs prescribed herein. Compliance with the MRP and subsequent revisions thereto is required under this Order.

6. Any additional information set forth in the attached **Information Sheet** is also incorporated herein.

Waste /Unit Classification

7. The Facility's landfill is subject to federal municipal solid waste (MSW) regulations promulgated under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. section 6901 et seq. Typically referred to as "Subtitle D," these MSW regulations are now codified as 40 C.F.R. part 258, and implemented in part through the provisions in California Code of Regulations, title 27 (Title 27).

8. On 14 June 2001, the Central Valley Water Board adopted Order No. 05-01-175, classifying the Facility's WMU as a Class III unit for the discharge of inert construction and demolition waste during the dry season, from April through October, and green waste year-round. This Order continues such classifications, which are set forth above in **Finding 3**.

9. On 28 January 2019, 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.

10. The Facility's single active landfill unit is categorized as "an existing unit" (see Title 27, § 20164), which may continue to accept waste within the "existing footprint" depicted in **Attachment B**, provided that (a) waste receipts are sufficient to comply with financial assurances requirements (see Title 27, § 21110), and (b) early closure is not required due to environmental impacts or other regulatory concerns.

11. The "existing footprint" is defined by Title 27 as the area of the landfill covered by waste as of the date that the landfill became subject to Subtitle D. (See Title 27, § 20164.)

Alternative Daily / Intermediate Cover

12. In lieu of the daily cover required per Title 27, section 20680, the Discharger proposes to use an approved alternative daily cover (ADC) (see Title 27, §§ 20690, 20705), which consists of ash generated by the burning of green waste. Only a small amount of ash is employed relative to the amount of soil, if any is used at all, and is used as a binder of the native soil.

13. The proposed ADC has already been approved by the Local Enforcement Agency (LEA) and the Central Valley Water Board for use at the Facility.

14. In accordance with Title 27, section 20705, the Discharger has demonstrated that its proposed ADC materials: (a) will minimize percolation of liquids through

waste; and are (b) consistent with the classification of the WMU to which they are to be applied. The approved ADC material constituents and breakdown products are also included as part of the WQPS set forth in the MRP.

15. Intermediate cover of inactive portions at the Facility consists of native soils excavated from within the Facility's property.

Site Description

16. The Facility is situated on a 40-acre property comprised of Plumas County Assessor's Parcel Number (APN) 011-110-037, on "Old Dump" Road, near the town of Chester, California 96020.

17. The Facility is located in the southernmost portion of the Cascade Range within the Cascade-Sierra Nevada province of California, at an elevation of approximately 5,100 feet mean sea level (MSL) in a generally level area with an approximately two percent slope to the southwest. The area is part of a larger broad, gently sloping hillside formed by lava flows related to the Lassen Volcanic field. The WMU cover is sloped southwest, with an average gradient of approximately five percent. The WMU cover was regraded in 2004 as part of a corrective action plan to improve drainage and prevent ponding.

18. Land uses within one mile of the Facility include privately-owned timberland in all directions.

19. There are no domestic, industrial and agricultural supply wells within one mile of the Facility.

20. Class III WMUs must be designed and constructed to withstand a maximum credible earthquake. (Title 27, § 20370.) According to a site-specific seismic analysis for the Facility, such seismic events occurring along the Indian Valley Fault at a closest rupture distance of 16 miles would result in the following:

Table 2—Seismic Analysis
Maximum Credible Earthquake (MCE)

Magnitude	Peak Ground Acceleration	Return Period
6.5	0.21 g	475 years

21. Based on data from the nearest weather station (Chester Station ID 041700), the Facility has an annual average precipitation of 32 inches, and a mean pan evaporation of 53 inches per year.

22. WMUs must be constructed to accommodate storm water runoff from 24-hour precipitation events with a return period of 100 years for Class III WMUs, and a return period of 1,000 years for Class II WMUs. (See Title 27, § 20320.) According to the National Oceanic and Atmospheric Administration's (NOAA) Precipitation Frequency Atlas 14, Volume 6 (rev. 2014), the Facility's 100-year and 1,000-year, 24-hour rainfall events are estimated to result in 5.89 and 7.16 inches of precipitation, respectively.[1]

23. Storm water sedimentation basins are located south of the landfill, as depicted in **Attachment B**. Following the melting of snow and precipitation events, these stormwater basins will discharge to Bailey Creek, a tributary to Lake Almanor. The Facility is covered under the Industrial General Permit for storm water discharges, under Notice of Applicability and Waste Discharger Identification Number 5R32I025842.

24. According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (https://msc.fema.gov/portal), the Facility is not located within a 100-year floodplain.

Groundwater and Surface Water Conditions

25. The first encountered groundwater ranges from about ten feet to 28 feet below the native ground surface (bgs). Groundwater elevations range from about 5,140 feet MSL to 5,122 feet MSL. Known groundwater bearing zones beneath the Facility are restricted to a shallow perched zone within shallow soils overlying the bedrock (lava flow). Groundwater is intermittently present in the shallow perched zone.

26. The direction of groundwater flow is generally towards the southwest. The estimated average groundwater gradient is approximately 0.04 feet per foot. The estimated average groundwater velocity is 0.6 feet per year. The estimated hydraulic conductivity of native soils underlying the landfill unit ranges between 1×10^{-4} and 1×10^{-3} centimeters per second (cm/s).

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[1] NOAA Precipitation Frequency Data Server, https://hdsc.nws.noaa.gov/hdsc/pfds.

Monitoring Networks

27. The Facility's groundwater monitoring network consists of the monitoring wells as described below:

Table 3—Groundwater Monitoring Well Network

Monitoring Well	Program	Water-Bearing Zone	Status
CL-1	Detection	Shallow	Operational
CL-2	Detection	Shallow	Operational
CL-4A	Background	Shallow	Operational
CL-5	Detection	Shallow	Operational
CL-6	Detection and Corrective Action	Shallow	Operational
CL-7	Detection and Corrective Action	Shallow	Operational
CL-8	Detection and Corrective Action	Shallow	Operational

28. As discussed in **Finding 34**, monitoring wells CL-6, CL-7 and CL-8, though operational, do not consistently produce groundwater.

29. The Facility's unsaturated zone monitoring network consists of the following monitoring points:

Table 4—Unsaturated Zone Monitoring Network

Monitoring Point	Type	Program	Monitored Unit	Status
GP-4	Gas Probe	Detection	WMU Perimeter	Operational
GP-5	Gas Probe	Detection	WMU Perimeter	Operational
GP-6	Gas Probe	Detection	WMU Perimeter	Operational
GP-7	Gas Probe	Detection	WMU Perimeter	Operational

30. At the time this Order is adopted, the Discharger's groundwater monitoring program at the landfill did not satisfy the requirements contained in Title 27. Although concentration limits are established, the June 2014 Revised Water Quality Protection Standard Report (2014 WQPS Report) does not include a description of the statistical approach to be employed to calculate concentration

limits. Time Schedule H.B. requires submittal of a revised WQPS Report. (See Title 27, §§ 20415–20435.)

31. The Discharger's proposed Water Quality Protection Standard (WQPS), as approved in the operative MRP, is incorporated herein.

Groundwater Conditions and Corrective Actions

32. Monitoring data indicate background groundwater quality for first encountered groundwater has electrical conductivity (EC) ranging between 80 and 140 micromhos/cm, with total dissolved solids (TDS) ranging between 50 and 100 milligrams per liter (mg/L).

33. On 12 June 2001, the Discharger submitted its *Water Quality Protection Standard Report, Chester Landfill, Plumas County, California* (2001 WQPS Report) The 2001 WQPS Report suggested a release had occurred at the Facility sometime between 1991 and 2000. Downgradient monitoring wells CL-2 and CL-5 contained detectable concentrations of volatile organic compounds (VOCs) including dichlorodifluoromethane, trichlorofluoromethane, dichloroethane and trichloroethane. Additionally, downgradient monitoring wells CL-1, CL-2 and CL-5 showed increasing trends for bicarbonate, calcium, magnesium and sodium concentrations at the 95 percent confidence level.

34. As a result of these findings, Central Valley Water Board staff directed the Discharger to implement corrective actions. Corrective actions included adding cover material to non-operating areas of the Facility, re-grading the cap to improve surface runoff and discourage ponding, and improving the perimeter drainage ditches. Additionally, three additional downgradient monitoring wells, CL-6, CL-7 and CL-8, were installed in May 2002 to further aid in delineation of the groundwater impacts. These wells have failed to consistently produce water.

35. Following the implementation of corrective actions, VOCs have been intermittently detected in downgradient monitoring wells. Monitoring well CL-2 contained concentrations of 1,4-dichlorobenzene and cis-1,2-dichloroethene above the reporting limit (RL) in 2017. Monitoring well CL-5 has contained concentrations of di-isopropyl ether above the RL between 2012 and 2014. No VOCs were detected in 2018.

36. Following the implementation of corrective actions, downgradient monitoring well CL-2 has exceeded its established concentration limits for chloride, sulfate and potassium. Additionally, CL-2 shows increasing trends for TDS, chloride, bicarbonate, sulfate, calcium and magnesium concentrations.

37. These increasing trends may be associated with a trench originally intended to store ash produced by the burning of green waste, which may function as a storm water infiltration point as water commonly ponds within the trench and the trench has no low-permeability soil cover.

Unit Closure

38. On 28 January 2019, the Discharger submitted an updated Preliminary Closure and Post-Closure Maintenance Plan (PCPMP) providing for the scheduled closure of the Facility's single WMU in 2049.[2]

39. Per the PCPMP the Discharger proposes closure of the WMU with an engineered alternative final cover, as specified in **Attachment C**.

40. The Discharger has adequately demonstrated that construction of a final slope in accordance with the Title 27 prescriptive standard would be unreasonably and unnecessarily burdensome in comparison to the proposed engineered alternative. The Discharger has further demonstrated that the proposed engineered alternatives described in **Attachment C** are consistent with the performance goals of the prescriptive standard, as described above, and will afford at least equivalent water quality protections.

41. As discussed in **Attachment C**, the Discharger proposes a composite final cover for closure of the WMU. The final cover will consist of, in ascending order, the following layers:

    a. A 24-inch thick foundation layer.

    b. A low hydraulic conductivity layer consisting of 60-mil thick high-density polyethylene (HDPE) liner.

    c. An 18-inch vegetative soil layer.

42. The proposed final cover slopes specified in **Attachment C** are within Title 27 limits (i.e., 1¾ horizontal feet for every 1 foot of vertical gain) and supported by a static and dynamic slope stability analysis demonstrating that side slopes will remain stable. The final cover will include a 15-foot wide bench at minimum for every 50 feet of vertical gain. (See Title 27, § 21090, subd. (a).)

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[2] The closure date is an estimate and may be affected by several factors (e.g., fluctuating waste receipts).

43. The Discharger's proposed final cover, together with any modifications set forth in **Attachment C**, are hereby approved for closure of the WMUs identified in **Finding 38**.

Post-Closure Maintenance

44. The Discharger's PCPMP provides for post-closure maintenance of the WMU 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).) The PCPMP includes the following components:

    a. Inspection and maintenance of final cover, drainage features, all groundwater and unsaturated zone monitoring points, any onsite landfill gas extraction systems, and Facility security systems.

    b. Workplans for inspection, maintenance and monitoring during the post-closure maintenance period.

45. Once every five years during the post-closure maintenance period, aerial photographic maps of the closed landfill area will be made to identify and evaluate landfill settlement. Iso-settlement maps will be prepared to determine the amount of differential settlement occurring over the previous five years. Pursuant to Title 27, section 21090, subdivision (e)(2), this Order requires iso-settlement maps to be prepared and submitted every five years.

Financial Assurances

46. The Discharger's PCPMP includes cost estimates for: (a) closure; (b) post-closure maintenance; and (c) corrective action for foreseeable releases. As of the date of this Order, the Discharger's cost estimates, calculated in accordance with Title 27, are as follows:

Table 5—Financial Assurances Costs Estimates

Financial Assurance Requirement	Estimated Cost
Unit Closure (§§ 21820, 22206)	**$5,887,904**
Post-Closure Maintenance (§§ 22210–22212)	**$6,475,487**
Corrective Action (§§ 22220–22222)	**$308,237**

47. In a 24 June 2019 Notice of Violation (NOV) letter, CalRecycle notified the Discharger that they were in violation for failure to maintain adequate financial assurance for the Facility. The NOV stated that: the Discharger lacks a financial assurance mechanism for the approved corrective action cost estimate; the Discharger has not submitted the required capacity information needed to

determine the adequacy of the closure fund; and the closure, post-closure maintenance and corrective action cost estimates require adjustment for inflation. CalRecycle requested that the Discharger respond in writing by 9 July 2019. The Discharger is still working on its response.

48. This Order requires the Discharger to maintain financial assurances with CalRecycle in at least the Estimated Cost amounts specified above.

Compliance with Plans and Policies

49. This Order implements the Central Valley Water Board's *Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan),* which designates beneficial uses for surface water and groundwater and establishes water quality objectives (WQOs) necessary to preserve such beneficial uses. (See Wat. Code, § 13241 et seq.)

50. According to the operative *Basin Plan*, designated beneficial uses of the nearest surface water include water contact recreation (REC-1); warm freshwater habitat (WARM); cold freshwater habitat (COLD); wildlife habitat (WILD); migration of aquatic organisms (MIGR); and spawning, reproduction and/or early development (SPAWN).

51. Per the operative *Basin Plan*, designated beneficial uses of groundwater at the Facility include municipal and beneficial use (MUN); agricultural supply (AGR); industrial process supply (PRO).

52. The State Water Resources Control 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 (BPTC).

53. Consistent with Title 27, this Order requires the Discharger to maintain the Facility so as to contain waste within the WMU, thereby preventing degradation of water quality. Accordingly, this Order complies with the *Antidegradation Policy*.

54. *Antidegradation Policy* applies to the discharge of waste to Chester Municipal Solid Waste Class III Landfill due to the presence of the unlined WMU at the Facility. The requirements of this Order are designed to ensure that any such wastes remain contained at the Facility and will not reach waters of the State.

The requirements of this Order reflect the Discharger's best efforts to control such wastes.

55. Downgradient monitoring wells CL-2 and CL-5 had historically contained detectable concentrations of VOCs, including dichlorodifluoromethane, trichlorofluoromethane, dichloroethane and trichloroethane, while downgradient monitoring wells CL-1, CL-2 and CL-5 showed increasing trends for bicarbonate, calcium, magnesium and sodium concentrations at the 95 percent confidence level. As a result of these findings, Central Valley Water Board staff directed the Discharger to implement corrective actions. Corrective actions included adding cover material to non-operating areas of the Facility, re-grading the cap to improve surface runoff and discourage ponding, and improving the perimeter drainage ditches. Additionally, three more downgradient monitoring wells, CL-6, CL-7 and CL-8, were installed in May 2002 to further aid in delineation of the groundwater impacts.

56. Following implementation of the corrective actions, groundwater quality data initially indicated steady to decreasing contaminant concentrations. However, downgradient monitoring well CL-2 exceeded concentration limits for chloride, sulfate and potassium, and shows increasing trends for TDS, chloride, bicarbonate, sulfate, calcium and magnesium concentrations. Additionally, 1,4-dichlorobenzene and cis-1,2-dichloroethene were detected in this well in 2017. These findings suggest that the corrective actions taken may not be adequate to control releases to groundwater. Compliance with this Order and the time schedule contained within, the attached SPRRs, and Monitoring and Reporting Program R5-2019-0072 represent BPTC of the discharge of waste to waters of the State. Therefore, the site complies with the *Antidegradation Policy*.

57. Any degradation that may result from the Facility's discharges to waters of the State would be consistent with the maximum benefit to the people of the State. Avoiding or preventing such degradation would require unearthing and re-engineering the Facility at significant expense to the County. From a water quality standpoint, implementing the BPTC measures required under this Order is a more effective use of the Discharger's limited resources.

Compliance with CEQA

58. 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 (CEQA Guidelines). The discharges authorized under this Order are substantially

within parameters established under prior WDRs, particularly with respect to character and volume of discharges.

Other Regulatory Considerations

59. Pursuant to Water Code section 106.3, subdivision (a), it is "the established policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes." Although this Order is not subject to Water Code section 106.3, as it does not revise, adopt or establish a policy, regulation or grant criterion, (see § 106.3, subd. (b)), it nevertheless promotes the policy by requiring discharges to meet maximum contaminant levels (MCLs) for drinking water, which are designed to protect human health and ensure that water is safe for domestic use.

60. For the purposes of California Code of Regulations, title 23 (Title 23), section 2200, the Facility has a threat-complexity rating of "**2-B**," where:

    a. Threat Category "2" reflects waste discharges that can impair receiving water beneficial uses, cause short-term water quality objective violations, cause secondary drinking water standard violations, and cause nuisances; 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.

61. Statistical data analysis methods outlined in the USEPA's 2009 *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* (*Unified Guidance*) are appropriate for determining compliance with Groundwater Limitations of this Order. Other methods may be appropriate as well.

Submission of Reports

62. This Order is 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 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.

63. The technical reports required under this Order, as well as those required under the separately issued MRP, are necessary to ensure compliance with prescribed WDRs and the provisions of Title 27.

Procedural Matters

64. All of the above information, as well as the information contained in the attached **Information Sheet** (incorporated herein), was considered by the Central Valley Water Board in prescribing the WDRs set forth below.

65. The Discharger, interested agencies and other 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.)

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

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

REQUIREMENTS

IT IS HEREBY ORDERED, pursuant to Water Code sections 13263 and 13267: that Order No. 05-01-175 is rescinded (except for enforcement purposes); and that the Discharger shall comply with the following requirements.

A. 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. Discharges of "hazardous waste" (as defined per Title 23, § 2601) at the Facility are strictly prohibited. The Department of Toxic Substances Control (DTSC) shall be immediately notified of any such discharges in violation of this Order.

2. Except as specifically authorized **in Section B.1** of this Order, discharges of "designated waste" (as defined per Wat. Code, § 13173) are strictly prohibited.

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 only discharge waste at the Facility as specified in the table below:

Table 6—Discharge Specifications

Waste	Discharges Authorized
Municipal Solid Waste (MSW)	LIMITED[3]
Inert Construction & Demolition Waste (C&D)	LIMITED[4]
Non-Hazardous C&D	NO
Contaminated Soil	NO
Leachate and Landfill Gas Condensate	NO
Asbestos Containing Material	NO
Treated Wood Waste	NO
Semi-Soils and Industrial Sludge	NO
Dredge Debris	NO
Special Wastes	NO

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

3. The Discharger shall use only the following as an ADC for landfill WMUs:

   a. The materials described in **Finding 12**; or

   b. Other materials demonstrated to meet the standards of Title 27, section 20705, and approved in writing by the Central Valley Water Board.

[3] MSW and C&D are accepted on an emergency basis, and between April and October, respectively.

[4] See Footnote 3.

4. The Discharger shall not apply ADC materials to areas with drainage beyond the contiguous landfill WMU unless:

    a. The Discharger demonstrates that resulting runoff will not pose a threat to surface water quality (accounting for sediment and suspended solids removal in a sedimentation basin); and

    b. The Central Valley Water Board approves of the demonstration in writing.

C. Facility Specifications—The Discharger shall comply with all Standard Facility Specifications (SPRRs, § E) which are incorporated herein.

D. Landfill Closure and Post-Closure Maintenance—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 the WMU at the Facility.

1. The Discharger shall submit a final or partial final closure and post-closure maintenance plan at least two years prior to the proposed closure of any portion of the WMU. The requirements for this plan are set forth in section G of the SPRRs.

2. The Discharger shall close the landfill with the final cover components proposed in its most recently submitted PCPMP, as approved per **Finding 43** and **Attachment C**. The Discharger shall obtain revised WDRs prior to closure of the WMU 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. The Discharger shall apply sufficient seed, binder and nutrients to the vegetative/erosion-resistant layer 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.

6. 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 final Closure Certification Report.

E. 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 Estimate Cost amounts specified for each category in **Finding 46** and **Table 5**, 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 Discharger's 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 Discharger's PCPMP 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 the Facility WMU;

   b. Preparation of detailed design specifications;

   c. Development of a Final Closure and Post-Closure Maintenance Plan (FCPMP); 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 PCPMP to the Central Valley Water Board, CalRecycle and the LEA.

F. Monitoring—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 MRP R5-2019-0072 and any subsequent revisions thereto.

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

3. For the WMU, the Discharger shall implement a groundwater and unsaturated zone detection monitoring program (DMP) in accordance with Title 27, sections 20385, 20415 and 20420.

4. The Discharger shall implement a corrective action program (CAP) in accordance with Title 27, sections 20385, 20415 and 20430, and Section I of the SPRRs.

5. Constituents of concern (COC) in water passing through the WMU's Point of Compliance (POC) shall not exceed concentration limits specified in the operative MRP. The POC is a vertical plane situated at the hydraulically downgradient limit of the WMU, extending through the uppermost underlying aquifer. (See Title 27, §§ 20164, 20405.)

G. General Provisions—Except as otherwise expressly directed below, the Discharger shall comply with the Standard General Provisions (SPRRs, § K), as well as the following.

1. Notwithstanding Section F.1, the provisions of this Order shall supersede any contrary provision in MRP R5-2019-0072 (and revisions thereto).

2. The Discharger shall comply with all applicable provisions of Title 27 and Code of Federal Regulations, title 40, part 258, including those not specifically referenced in this Order.

3. Measures implemented as part of a Corrective Action Program (e.g., landfill gas or groundwater extraction) shall not be terminated without express written approval by the Executive Officer. Central Valley Water Board staff shall be notified of all extraction system shutdowns lasting longer than 24 hours. For the purposes of this provision, "terminated" does not include:

   a. Extraction system shutdowns of less than 24 hours (e.g., routine maintenance); and

b. Planned periods of extraction system nonoperation, if previously approved in writing by Central Valley Water Board staff.

4. The Discharger shall ensure that operating personnel are familiar with this Order (including all attachments and SPRRs) and the operative MRP, both of which shall be kept onsite and made available at all times to operating personnel and regulatory agency personnel.

5. All reports and monitoring data shall be submitted online in an appropriately formatted file via the State Water Board's GeoTracker Database, at http://geotracker.waterboards.ca.gov. (Title 23, §§ 3892(d), 3893.) Additional information regarding electronic submittals is accessible through the "Information" tab on the GeoTracker homepage.

   After uploading a document via GeoTracker, the submitting party shall notify Central Valley Water Board staff via email at centralvalleyredding@waterboards.ca.gov, including the following information body of the email:

Attention:	Groundwater Unit
Report Title:	[title of submitted report]
Discharger:	The County of Plumas
Facility:	Chester Municipal Solid Waste (MSW) Class III Landfill
County:	Plumas
CIWQS ID:	214195

6. All reports and workplans that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geological sciences, shall:

   a. Be prepared by, or under the direction of, professionals registered to practice in California pursuant to Business and Professions Code sections 6735, 7835 and 7835.1; and

   b. Bear the signature(s) and seal(s) of the responsible registered professional(s) described above.

H. Time Schedule—The Discharger shall complete all tasks according to the time schedule set forth below.

1. **Financial Assurances (due 1 June, annually):**

   Task 1: Submit an annual review of Financial Assurances for implementing and completing Facility closure.

   Task 2: Submit an annual review of Financial Assurances for post-closure maintenance.

   Task 3: Submit an annual review of Financial Assurances for initiating and completing corrective action.

2. **Revised Water Quality Protection Standard Report (due 29 November 2019):** Submit a revised Water Quality Protection Standard Report which proposes the methods for calculating concentration limits for review and approval, pursuant to Title 27, subchapter 3, article 1.

3. **Revised Corrective Action Plan (due 31 March 2020):** Submit a revised Corrective Action Plan which proposes activities and a timeframe to improve grading and intermediate cover condition.

4. **Final Closure Plans (due 2 years prior to closure):** Submit a final closure and post-closure maintenance plan, design plans, and CQA plan for review and approval (see all Closure and Post-Closure Specifications in Section E, above and Section G of the SPRRs).

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

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. The State Water Board must receive the petition by 5:00 p.m. 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 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions are available on the State Water Boards' Water Quality Petitions web page (http://www.waterboards.ca.gov/public_notices/petitions/water_quality), and will be provided upon request.

Attachments:
Attachment A—Site Location Map
Attachment B—Facility Map
Attachment C—Preliminary Closure Plan

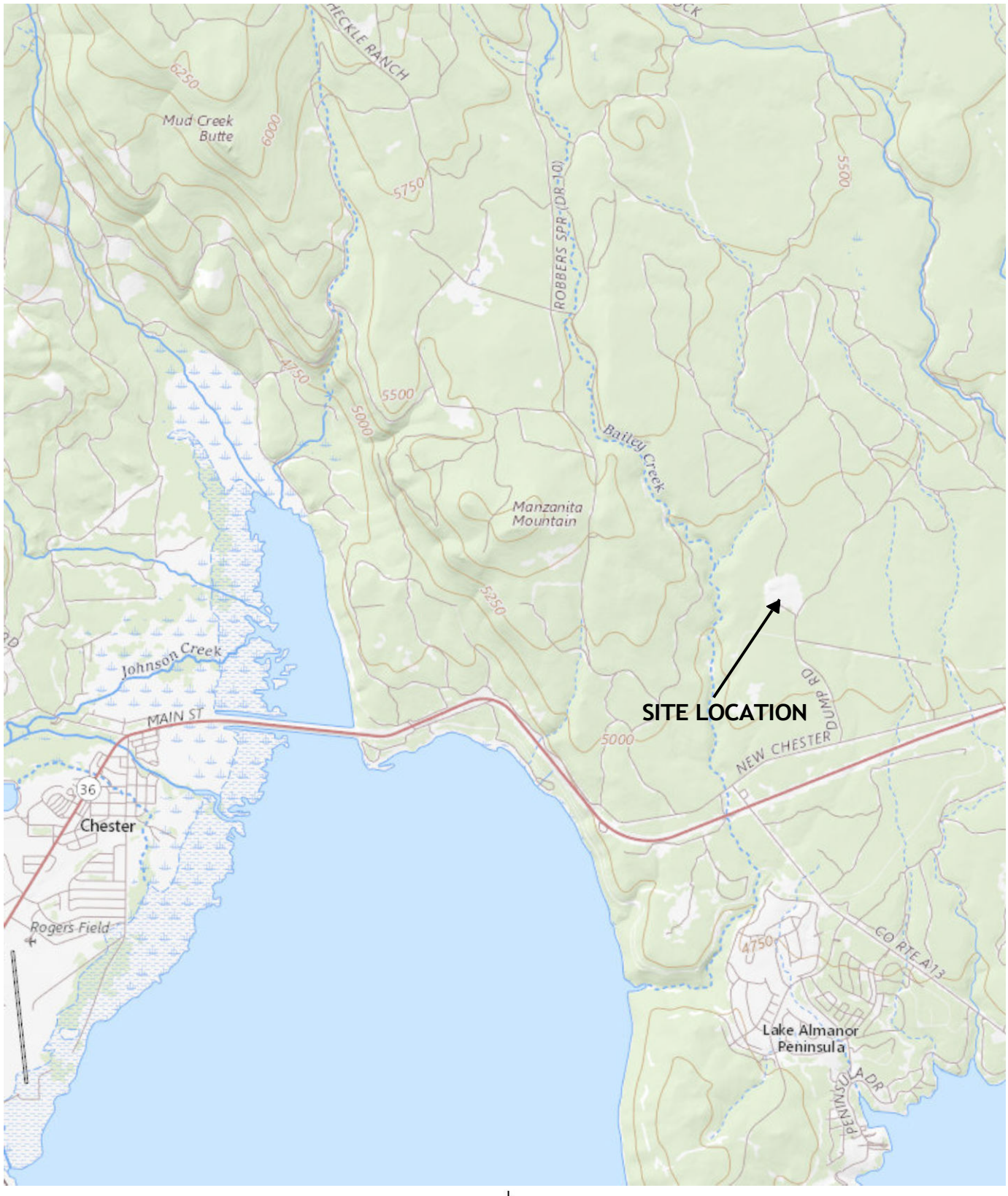
Monitoring and Reporting Program [Separate Order]

Information Sheet

ATTACHMENT A—SITE LOCATION MAP

(see map on next page)

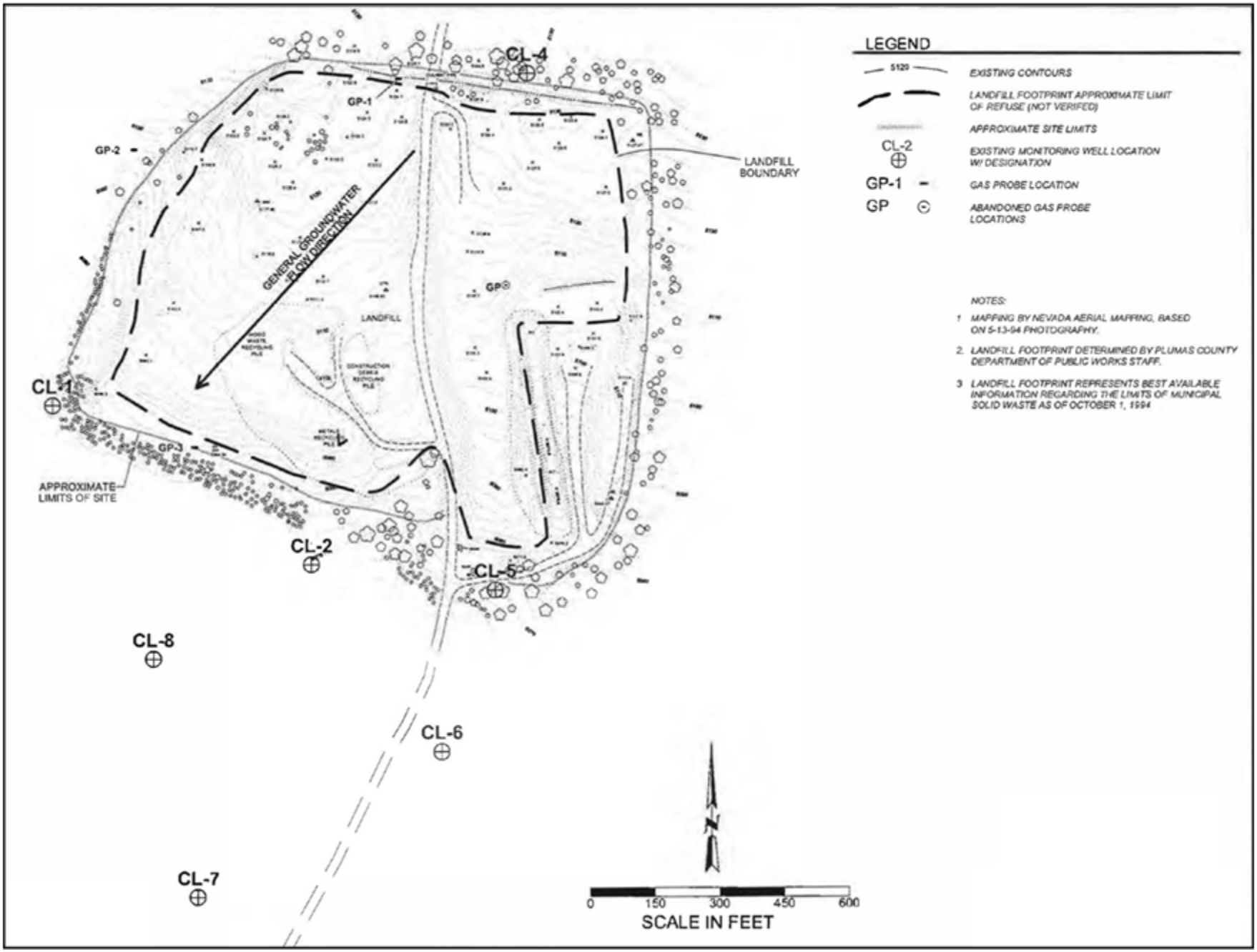
ATTACHMENT A



ATTACHMENT B—FACILITY MAP

(see map on next page)

ATTACHMENT B



ATTACHMENT C—PRELIMINARY CLOSURE PLAN

(plan begins on next page)

ATTACHMENT C

Excerpt from **Preliminary Closure Plan -** *Joint Technical Document/Report of Waste Discharge*, prepared by VESTRA Resources, Inc., dated 25 January 2019

Final Cover Placement:

Final cover will be placed when all areas of the landfill reach the proposed final waste grades or when the landfill reaches the end of its operational life, estimated to be 2049. Exact methods of final cover placement will be included in a Final Closure Plan submitted 2 years before closure. Proposed final cover construction and placement procedures are described in this section. Final cover grades designed to maintain drainage, prevent infiltration and reduce the impacts to health and safety and to take into consideration post-closure land use. The final cover will function with a minimum of maintenance and provide waste containment to protect the public health and safety by controlling vectors, fire, odor, litter, stormwater infiltration and landfill gas migration. The interim cover is compatible with future land use of non-irrigated grassland. The side slopes are designed to reduce erosion by specifying a protective vegetative layer suitable for protecting the HDPE flexible membrane liner, and the appropriate channel lining to control channel erosion. Two permanent benchmarks will be established on the final cover cap to monitor future subsidence. These benchmarks will be protected during construction of the final closure cap.

Initial Survey:

Prior to placement of the final cover, a survey will be prepared of the existing landfill topography. Data from this survey will be used to guide cover and grading operations.

Cover and Grading:

Cover and grading requirements specified in Title 27, section 21090, will be incorporated into the closure construction plans. The final cover will function with minimum maintenance and be compatible with post-closure land use of non-irrigated grassland.

The final cover is designed with an overall slope ranging from three percent along the top of the cover to a maximum of 10 percent along side-slopes. The design grade on the top of the landfill of three percent will prevent standing water. Erosion on the side slopes will be mitigated by the establishment of vegetation and shallow grade.

Final Cover Components:

1. Foundation Layer

   The foundation layer will consist of 24 inches of compacted clean material excavated from the onsite borrow area. The foundation layer shall be compacted to at least 90 percent of maximum dry density using the appropriate ASTM

standard. This material will be placed over compacted waste and the existing interim cover material. The foundation layer will also serve to establish the base grades of the final cap and be used to fill any depressions. A field survey will be conducted to determine where existing intermediate cover meets the requirements for the 24- inch foundation layer.

2. Low Hydraulic Conductivity Layer

   The low hydraulic conductivity layer will consist of a 60 mil HDPE flexible membrane liner that meets the material and construction specifications described in the CQA plan that is included Section 6.3. The low conductivity later will be placed to ensure a minimum of seams and defects in order to meet the minimum regulatory standard of $1x10^{-6}$ centimeters per second.

3. Vegetative Soil Layer

   The 18-inch vegetative soil layer will be constructed from onsite borrow material excavated onsite. The material will be screened to meet the material and construction specifications described in the CQA plan.

Final Grading:

Finished contours are designed to minimize infiltration and erosion. Final contours for the Chester facility will be constructed to prevent ponding of water and direct runoff away from the fill area. Maximum side slope grades are 10 percent or less; the top deck will be sloped at three to ten percent to facilitate drainage.

Final Site Face:

Side slopes shall be no steeper than 10 percent. Maximum height of the landfill top deck from the adjacent natural terrain is 40 feet. A seismic slope stability analysis was included in the Joint Technical Document. Seismic slope stability has been evaluated and found to be acceptable and in compliance with current standards.

Final Cover Survey:

A final cover survey will be performed following the completion of closure activities. This will be used to generate as-built plans to be included in the final closure report. The survey will be performed by an appropriately licensed professional using standard practices in place at the time of closure.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2019-0072

MONITORING AND REPORTING PROGRAM
FOR
COUNTY OF PLUMAS
CHESTER MUNICIPAL SOLID WASTE CLASS III LANDFILL
PLUMAS COUNTY

Separately issued pursuant to Water Code section 13267, subdivision (b)(1), this Order establishes a Monitoring and Reporting Program (MRP) for waste discharges regulated under Waste Discharge Requirements Order R5-2019-0072 (WDRs Order). Each of the Findings set forth in the WDRs Order, including those pertaining to the need for submission of reports, are hereby incorporated as part of this MRP Order.

This MRP Order may be separately revised by the Executive Officer, in accordance with their delegated authority under Water Code section 13223.

A. Monitoring Requirements

1. Groundwater Monitoring

a. **Required Network**—The groundwater monitoring network for the Facility's WMU shall consist of the wells listed below in **Table 1**. All compliance monitoring wells established for a Detection Monitoring Program (DMP) or Corrective Action Monitoring Program (CAMP) shall constitute monitoring points for the groundwater Water Quality Protection Standard (WQPS).

Table 1—Groundwater Monitoring Network

Monitoring Well	Program
CL-1	Detection
CL-2	Detection
CL-4A	Background
CL-5	Detection
CL-6	Detection and Corrective Action
CL-7	Detection and Corrective Action
CL-8	Detection and Corrective Action

As of the date of this Order, the Facility's groundwater monitoring network did not comply with Title 27 insofar as the Discharger did not submit written procedures for calculating concentration limits in its most recent WQPS Report. Accordingly, Section H of the WDRs Order requires the submittal of a Revised WQPS Report.

b. **Sample Collection and Analysis**—Groundwater samples shall be collected from each well, and analyzed for the field parameters and monitoring parameters specified in **Table 2** (in accordance with the specified schedule).[1]

Table 2—Groundwater Detection and Corrective Action Monitoring Program: Field Parameters and Monitoring Parameters

Field Parameters	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Temperature	TEMP	°F	March, April, May, August	Semiannually
Electrical Conductivity	SC	µmhos/cm	March, April, May, August	Semiannually
pH	PH	pH Units	March, April, May, August	Semiannually
Turbidity	TURB	NTUs	March, April, May, August	Semiannually

Monitoring Parameters	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
TDS	TDS	mg/L	March, April, May, August	Semiannually
Chloride	CL	mg/L	March, April, May, August	Semiannually
Carbonate	CACO3	mg/L	March, April, May, August	Semiannually
Bicarbonate	BICACO3	mg/L	March, April, May, August	Semiannually
Nitrate (as Nitrogen)	NO3N	mg/L	March, April, May, August	Semiannually
Sulfate	SO4	mg/L	March, April, May, August	Semiannually
Calcium	CA	mg/L	March, April, May, August	Semiannually
Magnesium	MG	mg/L	March, April, May, August	Semiannually
Potassium	K	mg/L	March, April, May, August	Semiannually
Sodium	NA	mg/L	March, April, May, August	Semiannually
Short List VOCs (per Attachment A)	(*various*)	µg/L	March, April, May, August	Semiannually

[1] Monitoring wells established for the DMP and CAMP constitute the monitoring points for the groundwater WQPS.

c. Additionally, the Discharger shall analyze for groundwater samples from each well for the Five-Year constituents of concern (COCs) listed in **Table 3**.[2]

Table 3—Groundwater Detection and Corrective Action Monitoring Program, Five-Year COC Monitoring Parameters

Parameter	GeoTracker Code	Units	Sampling & Reporting Freq.
Total Organic Carbon	TOC	mg/L	Every 5 Years Next Report Due: 2022
Dissolved Inorganics (per Attachment B)	(*various*)	µg/L	Every 5 Years Next Report Due: 2022
Extended List VOCs (per Attachment C)	(*various*)	µg/L	Every 5 Years Next Report Due: 2022
Semi-Volatile Organic Compounds (per Attachment D)	(*various*)	µg/L	Every 5 Years Next Report Due: 2022
Chlorophenoxy Herbicides (per Attachment E)	(*various*)	µg/L	Every 5 Years Next Report Due: 2022
Organophosphorus Compounds (per Attachment E)	(*various*)	µg/L	Every 5 Years Next Report Due: 2022

d. Each **March**, **April**, **May** and **August**, the Discharger shall also monitor the overall groundwater conditions specified in **Table 4**. The results of such monitoring shall be reported in each Semiannual Monitoring Report (SMR).

Table 4—Groundwater Conditions Monitoring

Parameter	GeoTracker Code	Monitoring Freq.	Reporting Freq.
Elevation (Well-Specific)	ELEV	March, April, May, August	Semiannually
Gradient	(none)	March, April, May, August	Semiannually
Flow Rate[3]	(none)	March, April, May, August	Semiannually

[2] Five-Year COCs were last monitored in 2017, and shall be analyzed again in 2022.

[3] To the extent feasible, the Discharger shall determine ground water flow rate and direction in: (1) the uppermost aquifer; (2) any zones of perched water; and (3) in any

2. Unsaturated Zone Monitoring

a. **Required Network**—The Discharger's unsaturated zone monitoring network shall consist of the landfill gas (LFG) monitoring points (gas probes) specified in **Table 5**. Each of these monitoring points shall be operated and maintained in accordance with Title 27, sections 20415 and 20420. As of the date of this Order, the Discharger's unsaturated zone monitoring network complies with the requirements of Title 27.

Table 5—Unsaturated Zone Monitoring Network

Monitoring Point	Program	Monitored Unit
GP-4	Detection and Corrective Action	WMU Perimeter
GP-5	Detection and Corrective Action	WMU Perimeter
GP-6	Detection and Corrective Action	WMU Perimeter
GP-7	Detection and Corrective Action	WMU Perimeter

additional portions of the zone of saturation monitored pursuant to Title 27, section 20415, subdivision (b)(1).

b. **Sample Collection and Analysis**—Samples shall be collected from each of the Facility's gas probes, and analyzed for the monitoring parameters specified below in **Table 6**. Monitoring results for the unsaturated zone shall be included in monitoring reports, and shall include an evaluation of potential impacts of the Facility on the unsaturated zone and compliance with the WQPS.

Table 6—Unsaturated Zone Detection and Corrective Action Monitoring Program: Field Parameters and Monitoring Parameters

Monitoring Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Methane	(*none*)	Percent by Volume	Quarterly	Semiannually
Carbon Dioxide	(*none*)	Percent by Volume	Quarterly	Semiannually
Oxygen	(*none*)	Percent by Volume	Quarterly	Semiannually
Volatile Organic Compounds, Short List (see Attachment A)	(*various*)	µg/L	Quarterly	Semiannually

c. Every five years, soil gas vapor shall be analyzed for the Extended List Volatile Organic Compounds (VOCs) per **Table 7**.

Table 7—Unsaturated Zone Detection Monitoring Program, Five-Year COC Monitoring Parameters

Parameter	GeoTracker Code	Units	Sampling & Reporting Freq.
Extended List VOCs (per Attachment C)	(*various*)	µg/L	Every 5 Years

3. **Leachate Seep Monitoring**—Leachate that seeps to the surface from the Facility's WMU shall, upon detection, be sampled and analyzed for the field parameters and monitoring parameters specified in **Table 8**. The results of such monitoring shall be reported in the following SMR.

Table 8—Leachate Seep Monitoring, Field Parameters and Monitoring Parameters

Field Parameters	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Total Flow	(none)	Gallons	Upon Detection	Semiannually
Flow Rate	FLOW	Gallons/Day	Upon Detection	Semiannually
Electrical Conductivity	SC	µmhos/cm	Upon Detection	Semiannually
pH	PH	pH Units	Upon Detection	Semiannually

Monitoring Parameters	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
TDS	TDS	mg/L	Upon Detection	Semiannually
Chloride	CL	mg/L	Upon Detection	Semiannually
Carbonate	CACO3	mg/L	Upon Detection	Semiannually
Bicarbonate	BICACO3	mg/L	Upon Detection	Semiannually
Nitrate (as Nitrogen)	NO3N	mg/L	Upon Detection	Semiannually
Sulfate	SO4	mg/L	Upon Detection	Semiannually
Calcium	CA	mg/L	Upon Detection	Semiannually
Magnesium	MG	mg/L	Upon Detection	Semiannually
Potassium	K	mg/L	Upon Detection	Semiannually
Sodium	NA	mg/L	Upon Detection	Semiannually
Total Organic Carbon	TOC	mg/L	Upon Detection	Semiannually
Dissolved Inorganics (Attachment B)	(*various*)	µg/L	Upon Detection	Semiannually
Volatile Organic Compounds, Extended List (Attachment C)	(*various*)	µg/L	Upon Detection	Semiannually
Semi-Volatile Organic Compounds (Attachment D)	(*various*)	µg/L	Upon Detection	Semiannually

4. General Monitoring Provisions

a. Detection Monitoring Systems

i. All detection and corrective action monitoring systems designed and constructed pursuant to this Order shall be a certified by a California-licensed professional civil engineer or geologist (Qualified Professional) as meeting the requirements of Title 27.

ii. The Discharger shall revise its DMP system, the groundwater detection monitoring system (after review and approval by Central Valley Water Board staff) as needed each time a new landfill cell or module is constructed.

iii. The Discharger shall comply with the DMP and CAMP provisions of Title 27 for groundwater, and the unsaturated zone in accordance with Standard Monitoring Specifications in Section I of the Standard Provisions and Reporting Requirements (SPRRs) and the Monitoring Specifications in Section G of the WDRs.

b. Sample Collection and Analysis Plan (SAP)

i. All samples shall be collected, preserved and transported in accordance with the approved Sample Collection and Analysis Plan (SAP) and the quality assurance/quality control (QA/QC) standards therein.[4]

ii. The Discharger may use alternative analytical test methods (including new USEPA-approved methods), provided that the alternative methods have method detection limits (MDLs) equal to or lower than the analytical methods specified in this MRP, and are identified in the approved SAP.

[4] The most current SAP for the Facility was submitted in December 2009, with an amendment to the SAP submitted in February 2010, and a second amendment submitted in January 2011.

B. Additional Facility Monitoring

1. Regular Visual Inspection—The Discharger shall perform regular visual inspections at the Facility in accordance with **Table 9** and **Table 10**. Results of these regular visual inspections shall be included in SMRs.[5]

Table 9—Regular Visual Inspections

Category	Observations
Within Unit	• Evidence of ponded water at any point on unit outside of any contact storm water structures on the active face of unit (record affected areas on map). • Evidence of erosion and/or of day-lighted refuse.
Unit Perimeter	• Evidence of leachate seeps, estimated size of affected area and flow rate (record affected areas on map). • Evidence of erosion and/or of day-lighted refuse.
Receiving Waters	• Floating and suspended materials of waste origin—presence or absence, source and size of affected areas. • Discoloration and turbidity—description of color, source and size of affected areas.

Table 10—Regular Visual Inspection Schedule

Category	Wet Season (1 Oct. to 30 April)	Dry Season (1 May to 30 Sept.)
Active Units	Weekly	Monthly
Inactive or Closed Units	Monthly	Quarterly

2. Annual LCRS Testing—All Leachate Collection and Removal Systems (LCRS) shall be tested annually to demonstrate proper operation, with the

[5] The Facility is frequently inaccessible due to heavy snow during winter months. In the event that the Facility cannot be safely accessed, observations shall be conducted as soon as conditions permit.

results of each test being compared to the results of prior testing.[6] (See Title 27, § 20340, subd. (d).)

3. **Annual Facility Inspections**—Prior to **30 September** of each year, the Discharger shall inspect the Facility to assess repair and maintenance needs for drainage control systems, cover systems and groundwater monitoring wells; and preparedness for winter conditions (e.g., erosion and sedimentation control). If repairs are made as result of the annual inspection, problem areas shall be photographed before and after repairs. Any necessary construction, maintenance, or repairs shall be completed by **31 October**.

4. **Major Storm Events**—Within **seven days** of any storm event capable of causing damage or significant erosion (Major Storm Event), the Discharger shall inspect the Facility for damage to any precipitation, diversion and drainage facilities, and all landfill side slopes. Necessary repairs shall be completed within 30 days of the inspection. The Discharger shall take photos of any problem areas before and after repairs.

5. **Five-Year Iso-Settlement Surveys (Closed Landfill Units)**—The Discharger shall conduct a five-year iso-settlement survey of each closed landfill unit, and produce an iso-settlement map accurately depicting the estimated total change in elevation of each portion of the final cover's low-hydraulic-conductivity layer. For each portion of the landfill, this map shall show the total lowering of the surface elevation of the final cover, relative to the baseline topographic map. (Title 27, § 21090, subds. (e)(1)-(2).)

[6] As of the date of this Order, the Facility does not have a LCRS.

C. Reporting Requirements

Table 11—Summary of Reporting Schedule

Report	End of Reporting Period	Due Date
Semiannual Monitoring Report (§ C.1)	30 June, 31 December	1 August, 1 February
Annual Monitoring Report (§ C.2)	31 December	1 February
Leachate Seep Notification via Phone or Email (§ C.3)	(Continuous)	Immediately upon Discovery
Written Leachate Seep Report (§ C.3)	(Continuous)	7 Days After Discovery
Facility Inspection Report (§ C.4)	31 October	15 November
Major Storm Event Report (§ C.5)	(Continuous)	7 Days After Discovery
Survey / Iso-Settlement Map (§ C.6)	Every 5 Years	5 Years After Closure
Financial Assurances Report (§ C.7)	31 December	1 June

1. **Semiannual Monitoring Reports (SMRs)**—On **1 August** and **1 February**[7] of each year, the Discharger shall submit SMRs in accordance with the provisions below.

   a. For each groundwater monitoring point addressed by the report, the SMR shall contain a description of:

      i. The time of water level measurement;

[7] The 1 Feb. Semiannual Monitoring Report may be combined with the Annual Monitoring Report (due on the same date), provided that the combination is clearly indicated in the title of the report.

ii. The type of pump (or other device) used for purging and the elevation of the pump intake relative to the elevation of the screened interval;

iii. The method of purging used to stabilize water in the well bore before the sample is taken including the pumping rate; the equipment and methods used to monitor field pH, temperature, and conductivity during purging; results of pH, temperature, conductivity, and turbidity testing; and the method of disposing of the purge water;

iv. The type of pump (or other device) used for sampling, if different than the pump or device used for purging; and

v. A statement that the sampling procedure was conducted in accordance with the approved SAP.

b. The SMR shall include a **map or aerial photograph** showing the locations of observation stations, monitoring points, and background monitoring points.

c. The SMR shall include an **estimated quarterly groundwater flow rate and direction** in: (1) the uppermost aquifer; (2) any zones of perched water; and (3) any additional zone of saturation monitored based upon water level elevations taken prior to the collection of the water quality data submitted in the report. (See Title 27, § 20415, subd. (e)(15).)

d. The SMR shall include **cumulative tabulated monitoring data** for all monitoring points and constituents for groundwater, unsaturated zone, leachate, and surface water (if required under this Order). Concentrations below the laboratory reporting limit (RL) shall not be reported as “ND” unless the reporting limit is also given in the table. Otherwise they shall be reported “<” RL (e.g., <0.10). Absent specific justification for reporting in other units, all units shall be as required in **Table 2**, **Table 3**, **Table 6**, **Table 7**. (See SPRRs, § I.)

e. The SMR shall include **laboratory statements of results** of all analyses evaluating compliance with the WDRs.

f. The SMR shall include an evaluation of the concentration of each monitoring parameter, or Five-Year COC, when such sampling is conducted, as compared to the current concentration limits, and the results of any required verification testing for constituents exceeding a concentration limit. In the event of verified exceedances of concentration limits for wells or constituents not

already in corrective action monitoring, the Discharger shall report any actions taken under Section J of the SPRRs (Response to Release).

g. The SMR shall include a summary of all **Regular Visual Inspections** (§ B.1) conducted during the reporting period.

h. The SMR shall include a summary of inspection, leak search, and repair of final covers on any closed landfill units in accordance with an approved final post-closure maintenance plan as required by Sections G.26-29 of the SPRRs (Standard Closure and Post-Closure Maintenance Specifications).

2. **Annual Monitoring Reports (AMRs)**—On **1 February** of each year,[8] the Discharger shall submit AMRs in accordance with the provisions below.

a. The AMR shall include graphs showing historical trends for monitoring parameters at each background and compliance monitoring point.[9] All monitoring parameters shall be graphed to show historical trends at each monitoring point and background monitoring point, for all samples taken within at least the previous five calendar years. All analyses for Five-Year COC monitoring parameters with detections shall be graphically presented in the graph. Each graph shall plot the concentration of one or more constituents for the period of record for a given monitoring point or background monitoring point, at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values.[10]

b. The AMR shall also include the following:

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[8] See instructions in **Footnote 7** regarding combination of AMR with the 1 Feb. SMR.

[9] If analyzed and detected during the annual reporting period, Five-Year COC monitoring parameters shall be included in the graphs as well.

[10] Graphical analysis of monitoring data may be used to provide significant evidence of a release.

i. An evaluation of the monitoring parameters with regard to the cation/anion balance, and a graphical presentation using a Stiff diagram, Piper graph or Schoeller plot;

ii. All historical monitoring data for which there are detectable results, including data for the previous year, shall be submitted in tabular form in a digital file[11];

iii. Quarterly hydrographs of each well showing the elevation of groundwater with respect to the elevations of the top and bottom of the screened interval and the elevation of the pump intake[12];

iv. A comprehensive discussion of the compliance record, and the result of any corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the WDRs Order;

v. A map showing the area and elevations in which filling has been completed during the previous calendar year, a comparison to final closure design contours, and a projected year in which each discrete landfill module will be filled;

vi. A written summary of the monitoring results, indicating any changes made or observed since the previous AMR; and

vii. Updated concentration limits for each monitoring parameter at each monitoring well based on the new data set.

3. **Leachate Seep Reporting**—Upon discovery of seepage from any disposal area within the Facility, the Discharger shall **immediately** report such seepage to the Central Valley Water Board via telephone or email; and **within seven days**, submit a written report with the following information:

a. Map(s) depicting the location(s) of seepage;

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[11] For the purposes of this Order, the Central Valley Water Board regards submittal of data in hard copy and digital formats as necessary for statistical analysis and periodic review. (Title 27, § 20420, subd. (h).)

[12] Hydrographs shall be prepared quarterly, but submitted annually.

b. Estimated flow rate(s);

c. A description of the nature of the discharge (e.g., all pertinent observations and analyses);

d. Verification that samples have been submitted for analyses of the Field Parameters and Monitoring Parameters listed in **Table 8**Table 8, and an estimated date that the results will be submitted to the Central Valley Water Board; and

e. Corrective measures underway or proposed, and corresponding time schedule.

4. **Annual Facility Inspection Report**—By **15 November** of each year, the Discharger shall submit a report describing the results of the inspection and the repair measures implemented, preparations for winter, and include photographs of any problem areas and the repairs. (See MRP, § B.3.)

5. **Major Storm Event Reports**—Immediately following each post-storm inspection described in Section B.4 of this MRP, the Discharger shall notify Central Valley Water Board staff of any damage or significant erosion (upon discovery). Subsequent repairs shall be reported to the Central Valley Water Board (together with before and after photos of the repaired areas) within 14 days of completion.

6. **Survey and Iso-Settlement Map (Closed Landfill Units)**—The Discharger shall submit all iso-settlement maps prepared in accordance with Section B.5 of this MRP. (See Title 27, § 21090, subd. (e).)

7. **Financial Assurances Report**—By **1 June** of each year, the Discharger shall submit a copy of the annual financial assurances report due to CalRecycle that updates the financial assurances for closure, post-closure maintenance, and corrective action.

8. **Water Quality Protection Standard Reporting**—The Discharger shall submit Water Quality Protection Reports (WQPS Reports) as required per see Section E.2 of this MRP.

9. **General Reporting Provisions**

a. **Transmittal Letters**—Each report submitted under this MRP shall be accompanied by a Transmittal Letter providing a brief overview of the enclosed report, as well as the following:

i. Any violations found since the last report was submitted, a description of all actions undertaken to correct the violation

(referencing any previously submitted time schedules for compliance), and whether the violations have been corrected[13];

ii. A statement from the submitting Discharger, or its authorized agent, signed under penalty of perjury, certifying that, to the best of the signer's knowledge, the contents of the enclosed report are true, accurate and complete.

b. **Monitoring Data and Reports**—All monitoring data and reports under this MRP shall be submitted via the State Water Board's Geotracker Database at https://geotracker.waterboards.ca.gov. (See Title 23, § 3890 et seq.; Title 27, div. 3.)

After uploading each report, the Discharger shall notify Central Valley Water Board staff via email at CentralValleyRedding@WaterBoards.ca.gov. The following information shall be included in the body of the email:

Attention:	Groundwater Unit
Report Title:	[Title]
GeoTracker Upload ID:	[Number]
Discharger Name:	County of Plumas
Facility Name:	Chester Municipal Solid Waste Class III Landfill
County:	Plumas County
CIWQS Place ID:	214195

c. **Data Presentation and Formatting**—In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. Additionally, the submitted data shall be summarized in such a manner so as to illustrate clearly the compliance with waste discharge requirements or the lack thereof.

d. **Compliance with SPRRs**—All reports submitted under this MRP shall comply with applicable provisions of the SPRRs, including those in Section I (Standard Monitoring Specifications) and Section J (Response to Release).

[13] If no violations have occurred since submittal of the last report, the Transmittal Letter shall so state.

e. **Additional Requirements for Monitoring Reports**—Monitoring reports submitted under this MRP (e.g., AMRs and SMRs) shall include a discussion of relevant field and laboratory tests, and the results of all monitoring conducted at the site shall be reported to the Central Valley Water Board in accordance with the reporting schedule above for the calendar period in which samples were taken or observations made.

D. Record Retention Requirements—The Discharger shall maintain permanent records of all monitoring information, including without limitation: calibration and maintenance records; original strip chart recordings of continuous monitoring instrumentation; copies of all reports required by this MRP; and records of all data used to complete the application for WDRs. Such records shall be legible, and show the following for each sample:

1. Sample identification and the monitoring point or background monitoring point from which it was taken, along with the identity of the individual who obtained the sample;

2. Date, time and manner of sampling;

3. Date and time that analyses were started and completed, and the name of the personnel and laboratory performing each analysis;

4. A complete list of procedures used (including method of preserving the sample, and the identity and volumes of reagents used);

5. A calculation of results; and

6. The results of all analyses, as well as the MDL and practical quantitation limit (PQL) for each analysis (all peaks shall be reported).

E. Water Quality Protection Standard (WQPS)

1. Components of WQPS

a. For **each WMU**, the WQPS shall consist of: (i) all COCs; (ii) the concentration limit applicable for each COC; (iii) the verification retesting procedure to confirm measurably significant evidence of a release; the point of compliance (POC); and (iv) all water quality monitoring points for each monitored medium.

b. For **naturally occurring constituents**, the WQPS shall consist of: (i) naturally occurring COCs; (ii) the concentration limits of each naturally occurring COC; (iii) the POC; and (iv) all monitoring points.

2. WQPS Reports

a. **2014 Revised WQPS Report**—The Discharger has not proposed the methods for calculating concentration limits in the updated June 2014 Revised WQPS Report. The concentration limits are provided, but the method employed for concentration limit calculations is not described in detail. Previously submitted SMRs and AMRs have provided analysis of variance (ANOVA) with respect to groundwater. The ANOVA analysis is used to determine if the median concentration of an inorganic constituent is significantly higher in any of the compliance wells when compared to background concentrations detected in the upgradient background well. A Mann-Kendall trend analysis is also conducted for several inorganic constituents to determine whether a statistically significant increasing trend is present.

b. **Submittal of New Revised WQPS Report**—Pursuant to Section H of the WDRs Order, the Discharger is required to submit a further revised WQPS Report proposing methods for calculating concentration limits, which shall be updated annually for each monitoring well based on new and historical monitoring data, and shall be employed in monitoring reports to indicate possible landfill influences to groundwater quality.

c. Any proposed changes to the WQPS, other than annual update of the concentration limits, shall be submitted in a new WQPS Report for review and approval.

d. All WQPS Reports shall be certified by a Qualified Professional (per MRP, § A.4.a.i), and contain each of the following components

i. An identification of all distinct bodies of surface water and groundwater[14] that could be affected in the event of a release from a WMU or portion thereof;

ii. A map of monitoring points and background monitoring points for the DMPs for groundwater, surface water (if required) and the unsaturated zone, as well as the POC in accordance with Title 27, section 20405;

[14] This list shall include at least the uppermost aquifer and any permanent or ephemeral zones of perched groundwater underlying the facility.

iii. An evaluation the perennial direction(s) of groundwater movement within the uppermost zone(s);

iv. A proposed statistical method for calculating concentration limits for monitoring parameters and COCs detected in at least 10 percent of the background data (naturally-occurring constituents) using a statistical procedure from subdivisions (e)(8)(A)-(D) or (e)(8)(E) of Title 27, section 20415; and

v. A re-testing procedure to confirm or deny measurably significant evidence of a release (see Title 27, §§ 20415(e)(8)(E), 20420, subds. (j)(1)-(3)).

e. If subsequent sampling of the background monitoring point(s) indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to waste management activities at the site, the Discharger may request modification of the WQPS.

3. Monitoring Parameters—A select group of constituents monitored during each sampling event, monitoring parameters are the waste constituents, reaction products, hazardous constituents and physical parameters that provide a reliable indication of a release from a given WMU. The monitoring parameters under this Order are as follows:

a. For **Groundwater**, those monitoring parameters listed in **Table 2**.

b. For the **Unsaturated Zone**, those monitoring parameters listed in **Table 7**; and

c. For **Leachate**, those monitoring parameters listed in **Table 8**.

4. Constituents of Concern (COCs)—COCs include a larger group of waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in

the WMU, and are required to be monitored every five years.[15] (See Title 27, §§ 20395, 20420(g).)

The COCs under this Order are: for Groundwater, listed in Table 2 and Table 3; for the Unsaturated Zone, listed in Table 6 and Table 7; and for Leachate, listed in Table 8.

These tables selectively incorporate the Five-Year COCs listed in MRP Attachment B (Dissolved Inorganics), MRP Attachment C (Volatile Organic Compounds, Extended List), MRP Attachment D (Semi-Volatile Organic Compounds) and MRP Attachment E (Chlorophenoxy Herbicides and Organophosphorus Compounds).

The Discharger's last Five-Year COCs Report was submitted in the 2017 AMR. Five-Year COCs are due to be monitored again in 2022.

5. **Concentration Limits**—The concentration limit of each naturally occurring COC shall be determined as follows:

a. By calculation in accordance with a statistical method in accordance with Title 27, section 20415, subdivision (e)(8); or

b. By an alternate statistical method in accordance with Title 27, section 20415, subdivision (e)(8)(E).

The methods for calculating concentration limits were not described in detail in the June 2014 Revised WQPS Report. The methods for calculating concentration limits will be updated in the forthcoming revised WQPS Report. Section H of WDRs Order requires submittal of a revised WQPS Report. Upon approval, the concentration limits will be calculated using the data analysis methods described in the revised WQPS Report.

6. **Retesting Procedures to Confirm Release**—If monitoring results indicate measurably significant evidence of a release per Section I.45 of the SPRRs, the Discharger shall:

a. For analytes detected in less than 10 percent of background samples (e.g., non-naturally occurring), the Discharger shall use the non-statistical retesting procedure required per Section I.46 of the SPRRs (Standard Monitoring Specifications).

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[15] More frequent monitoring may be required pursuant to a Corrective Action Monitoring Program.

b. For analytes detected in at least 10 percent of background samples (naturally occurring), the Discharger shall use one of the statistical retesting procedures required per Section I.47 of the SPRRs.

7. **Point of Compliance (POC)**—For purposes of the WQPS, the POC of each WMU shall be the vertical surface located at the hydraulically down-gradient limit extending through the uppermost underlying aquifer. Monitoring Wells **CL-1**, **CL-2** and **CL-5** are POC monitoring locations for the Facility's single WMU.

8. **Monitoring Points**—A monitoring point is a well, device, or location specified in the WDRs, which monitoring is conducted and at which the WQPS applies. The monitoring points are listed in **Table 1** (Groundwater) and **Table 5** (Unsaturated Zone).

9. **Compliance Period**—The Compliance Period for the WMU shall be the number of years equal to its active life plus the closure period. The compliance period is the minimum period during which the Discharger shall conduct a water quality monitoring program subsequent to a release from the WMU. The compliance period shall begin anew each time the Discharger initiates an Evaluation Monitoring Program. (See Title 27, § 20410.)

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

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. The State Water Board must receive the petition by 5:00 p.m. 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 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions are available on the State Water Boards' Water Quality Petitions web page (http://www.waterboards.ca.gov/public_notices/petitions/water_quality), and will be provided upon request.

MRP Glossary

MRP Attachments

Attachment A—Volatile Organic Compounds, Short List
Attachment B—Dissolved Inorganics (Five-Year COCs)
Attachment C—Volatile Organic Compounds, Extended List (Five-Year COCs)
Attachment D—Semi-Volatile Organic Compounds (Five-Year COCs)
Attachment E—Chlorophenoxy Herbicides and Organophosphorus Compounds (Five-Year COCs)

MRP GLOSSARY

AMR.....Annual Monitoring Report

ANOVA.....Analysis of Variance

COCs.....Constituents of Concern

CAMP.....Corrective Action Monitoring Program

DMP.....Detection Monitoring Program

Five-Year COCs.....COCs Monitored Every Five Years

GP.....Gas Probe

LCRS.....Leachate Collection and Removal System

MDL.....Method Detection Limit

µg/L.....Micrograms per Liter

µmhos/cm.....Micromhos per Centimeter

mg/L.....Milligrams per Liter

MRP.....Monitoring and Reporting Program

MSW.....Municipal Solid Waste

MW.....Monitoring Well

ND.....Non-Detect (i.e., < RL)

ND.....Non-Detect (i.e., < RL)

NTU.....Nephelometric Turbidity Unit

PQL.....Practical Quantitation Limit

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

RL.....Laboratory Reporting Limit

SAP.....Sample Collection and Analysis Plan

GLOSSARY

SMR .....Semiannual Monitoring Report

SPRRs .....Standard Provisions and Reporting Requirements, December 2015 Edition

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

TDS.....Total Dissolved Solids

USEPA.....United States Environmental Protection Agency

VOCs .....Volatile Organic Compounds

WDRs Order.....Waste Discharge Requirements Order

WMU .....Waste Management Unit

WQPS .....Water Quality Protection Standard

MRP ATTACHMENT A—VOLATILE ORGANIC COMPOUNDS, SHORT LIST

Volatile Organic Compounds—Short List USEPA Method 8260B	**GeoTracker Code**
Acetone	ACE
Acrylonitrile	ACRAMD
Benzene	BZ
Bromochloromethane	BRCLME
Bromodichloromethane	BDCME
Bromoform (Tribromomethane)	TBME
Carbon disulfide	CDS
Carbon tetrachloride	CTCL
Chlorobenzene	CLBZ
Chloroethane (Ethyl chloride)	CLEA
Chloroform (Trichloromethane)	TCLME
Dibromochloromethane (Chlorodibromomethane)	DBCME
1,2-Dibromo-3-chloropropane (DBCP)	DBCP
1,2-Dibromoethane (Ethylene dibromide; EDB)	EDB
o-Dichlorobenzene (1,2-Dichlorobenzene)	DCBZ12
m-Dichlorobenzene (1,3-Dichlorobenzene)	DCBZ13
p-Dichlorobenzene (1,4-Dichlorobenzene)	DCBZ14
trans- l ,4-Dichloro-2-butene	DCBE14T
Dichlorodifluoromethane (CFC-12)	FC12
1,1-Dichloroethane (Ethylidene chloride)	DCA11

MRP ATTACHMENT A—ADDITIONAL PARAMETERS FOR ALL DETECTION MONITORING PROGRAMS

Volatile Organic Compounds—Short List USEPA Method 8260B	**GeoTracker Code**
1,2-Dichloroethane (Ethylene dichloride)	DCA12
1,1 -Dichloroethylene (1,1 -Dichloroethene; Vinylidene chloride)	DCE11
cis- 1,2-Dichloroethylene (cis- 1,2-Dichloroethene)	DCE12C
trans-1,2-Dichloroethylene (trans-1,2-Dichloroethene)	DCE12T
1,2-Dichloropropane (Propylene dichloride)	DCPA12
cis- 1,3-Dichloropropene	DCP13C
trans- 1,3-Dichloropropene	DCP13T
Di-isopropylether (DIPE)	DIPE
Ethanol	ETHANOL
Ethyltertiary butyl ether	ETBE
Ethylbenzene	EBZ
2-Hexanone (Methyl butyl ketone)	HXO2
Hexachlorobutadiene	HCBU
Methyl bromide (Bromomethene)	BRME
Methyl chloride (Chloromethane)	CLME
Methylene bromide (Dibromomethane)	DBMA
Methylene chloride (Dichloromethane)	DCMA
Methyl ethyl ketone (MEK: 2-Butanone)	MEK
Methyl iodide (Iodomethane)	IME
Methyl t-butyl ether	MTBE

MRP ATTACHMENT A—ADDITIONAL PARAMETERS FOR ALL DETECTION MONITORING PROGRAMS

Volatile Organic Compounds—Short List USEPA Method 8260B	**GeoTracker Code**
4-Methyl-2-pentanone (Methyl isobutylketone)	MIBK
Naphthalene	NAPH
Styrene	STY
Tertiary amyl methyl ether	TAME
Tertiary butyl alcohol	TBA
1,1,1,2-Tetrachloroethane	TC1112
1,1.2,2-Tetrachloroethane	PCA
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene)	PCE
Toluene	BZME
1,2,4-Trichlorobenzene	TCB124
1,1,1-Trichloroethane (Methylchloroform)	TCA111
1,1,2-Trichloroethane	TCA112
Trichloroethylene (Trichloroethene)	TCE
Trichlorofluoromethane (CFC- 11)	FC11
1,2,3-Trichloropropane	TCPR123
Vinyl acetate	VA
Vinyl chloride	VC
Xylenes	XYLENES

MRP ATTACHMENT B—DISSOLVED INORGANICS (FIVE-YEAR COCs)

Constituent	GeoTracker Code	USEPA Method
Aluminum	AL	6010
Antimony	SB	7041
Barium	BA	6010
Beryllium	BE	6010
Cadmium	CD	7131A
Chromium	CR	6010
Cobalt	CO	6010
Copper	CU	6010
Silver	AG	6010
Tin	SN	6010
Vanadium	V	6010
Zinc	ZN	6010
Iron	FE	6010
Manganese	MN	6010
Arsenic	AS	7062
Lead	PB	7421
Mercury	HG	7470A
Nickel	NI	7521
Selenium	SE	7742
Thallium	TL	7841
Cyanide	CN	9010C
Sulfide	S	9030B

MRP ATTACHMENT C—VOLATILE ORGANIC COMPOUNDS, EXTENDED LIST (FIVE-YEAR COCs)

Volatile Organic Compounds USEPA Method 8260B, Extended List	**GeoTracker Code**
Acetone	ACE
Acetonitrile (Methyl cyanide)	ACCN
Acrolein	ACRL
Acrylonitrile	ACRAMD
Allyl chloride (3-Chloropropene)	CLPE3
Benzene	BZ
Bromochloromethane (Chlorobromomethane)	BRCLME
Bromodichloromethane (Dibromochloromethane)	DBCME
Bromoform (Tribromomethane)	TBME
Carbon disulfide	CDS
Carbon tetrachloride	CTCL
Chlorobenzene	CLBZ
Chloroethane (Ethyl chloride)	CLEA
Chloroform (Trichloromethane)	TCLME
Chloroprene	CHLOROPRENE
Dibromochloromethane (Chlorodibromomethane)	DBCME
1,2-Dibromo-3-chloropropane (DBCP)	DBCP
1,2-Dibromoethane (Ethylene dibromide; EDB)	EDB
o-Dichlorobenzene (1,2-Dichlorobenzene)	DCBZ12
m-Dichlorobenzene(1,3-Dichlorobenzene)	DCBZ13
p-Dichlorobenzene (1,4-Dichlorobenzene)	DCBZ14
trans- 1,4-Dichloro-2-butene	DCBE14T
Dichlorodifluoromethane (CFC 12)	FC12
1,1 -Dichloroethane (Ethylidene chloride)	DCA11
1,2-Dichloroethane (Ethylene dichloride)	DCA12

MRP ATTACHMENT C—VOLATILE ORGANIC COMPOUNDS, EXTENDED LIST (5-YEAR COCS)

Volatile Organic Compounds USEPA Method 8260B, Extended List	**GeoTracker Code**
1,1 -Dichloroethylene (1, l-Dichloroethene; Vinylidene chloride)	DCE11
cis- l ,2-Dichloroethylene (cis- 1,2-Dichloroethene)	DCE12C
trans- l ,2-Dichloroethylene (trans- 1,2-Dichloroethene)	DCE12T
1,2-Dichloropropane (Propylene dichloride)	DCPA12
1,3-Dichloropropane (Trimethylene dichloride)	DCPA13
2,2-Dichloropropane (Isopropylidene chloride)	DCPA22
1,1 -Dichloropropene	DCP11
cis- 1,3-Dichloropropene	DCP13C
trans- l ,3-Dichloropropene	DCP13T
Di-isopropylether (DIPE)	DIPE
Ethanol	ETHANOL
Ethyltertiary butyl ether	ETBE
Ethylbenzene	EBZ
Ethyl methacrylate	EMETHACRY
Hexachlorobutadiene	HCBU
2-Hexanone (Methyl butyl ketone)	HXO2
Isobutyl alcohol	ISOBTOH
Methacrylonitrile	METHACRN
Methyl bromide (Bromomethane)	BRME
Methyl chloride (Chloromethane)	CLME
Methyl ethyl ketone (MEK; 2-Butanone)	MEK
Methyl iodide (Iodomethane)	IME
Methyl t-butyl ether	MTBE
Methyl methacrylate	MMTHACRY
4-Methyl-2-pentanone (Methyl isobutyl ketone)	MIBK
Methylene bromide (Dibromomethane)	DBMA

MRP ATTACHMENT C—VOLATILE ORGANIC COMPOUNDS, EXTENDED LIST (5-YEAR COCS)

Volatile Organic Compounds USEPA Method 8260B, Extended List	**GeoTracker Code**
Methylene chloride (Dichloromethane)	DCMA
Naphthalene	NAPH
Propionitrile (Ethyl cyanide)	PACN
Styrene	STY
Tertiary amyl methyl ether	TAME
Tertiary butyl alcohol	TBA
1,1,1,2-Tetrachloroethane	TC1112
1,1,2,2-Tetrachloroethane	PCA
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene; PCE)	PCE
Toluene	BZME
1,2,4-Trichlorobenzene	TCB124
1,1,1 -Trichloroethane (Methylchloroform)	TCA111
1,1,2-Trichloroethane	TCA112
Trichloroethylene (Trichloroethene; TCE)	TCE
Trichlorofluoromethane (CFC-11)	FC11
1,2,3-Trichloropropane	TCPR123
Vinyl acetate	VA
Vinyl chloride (Chloroethene)	VC
Xylene (total)	XYLENES

COUNTY OF PLUMAS, CHESTER MUNICIPAL SOLID WASTE CLASS III LANDFILL
PLUMAS COUNTY

MRP ATTACHMENT D—SEMI-VOLATILE ORGANIC COMPOUNDS (FIVE-YEAR COCs)

Semi-Volatile Organic Compounds USEPA Methods 8270C or 8270D (Base, Neutral & Acid Extractables)	**GeoTracker Code**
Acenaphthene	ACNP
Acenaphthylene	ACNPY
Acetophenone	ACPHN
2-Acetylaminofluorene (2-AAF)	ACAMFL2
Aldrin	ALDRIN
4-Aminobiphenyl	AMINOBPH4
Anthracene	ANTH
Benzo[a]anthracene (Benzanthracene)	BZAA
Benzo[b]fluoranthene	BZBF
Benzo[k]fluoranthene	BZKF
Benzo[g,h,i]perylene	BZGHIP
Benzo[a]pyrene	BZAP
Benzyl alcohol	BZLAL
Bis(2-ethylhexyl) phthalate	BIS2EHP
alpha-BHC	BHCALPHA
beta-BHC	BHCBETA
delta-BHC	BHCDELTA
gamma-BHC (Lindane)	BHCGAMMA
Bis(2-chloroethoxy) methane	BECEM
Bis(2-chloroethyl) ether (Dichloroethyl ether)	BIS2CEE
Bis(2-chloro-1-methyethyl) ether (Bis(2-chloroisopropyl) ether; DCIP)	BIS2CIE
4-Bromophenyl phenyl ether	BPPE4
Butyl benzyl phthalate (Benzyl butyl phthalate)	BBP
Chlordane	CHLORDANE

MRP ATTACHMENT D—SEMI-VOLATILE ORGANIC COMPOUNDS (FIVE-YEAR COCs)

Semi-Volatile Organic Compounds USEPA Methods 8270C or 8270D (Base, Neutral & Acid Extractables)	**GeoTracker Code**
p-Chloroaniline	CLANIL4
Chlorobenzilate	CLBZLATE
p-Chloro-m-cresol (4-Chloro-3-methylphenol)	C4M3PH
2-Chloronaphthalene	CNPH2
2-Chlorophenol	CLPH2
4-Chlorophenyl phenyl ether	CPPE4
Chrysene	CHRYSENE
o-Cresol (2-methylphenol)	MEPH2
m-Cresol (3-methylphenol)	MEPH3
p-Cresol (4-methylphenol)	MEPH4
4,4'-DDD	DDD44
4,4'-DDE	DDE44
4,4'-DDT	DDT44
Diallate	DIALLATE
Dibenz[a,h]anthracene	DBAHA
Dibenzofuran	DBF
Di-n-butyl phthalate	DNBP
3,3'-Dichlorobenzidine	DBZD33
2,4-Dichlorophenol	DCP24
2,6-Dichlorophenol	DCP26
Dieldrin	DIELDRIN
Diethyl phthalate	DEPH
p-(Dimethylamino) azobenzene	PDMAABZ
7,12-Dimethylbenz[a]anthracene	DMBZA712
3,3'-Dimethylbenzidine	DMBZD33
2,4-Dimehtylphenol (m-Xylenol)	DMP24
Dimethyl phthalate	DMPH

MRP ATTACHMENT D—SEMI-VOLATILE ORGANIC COMPOUNDS (FIVE-YEAR COCs)

Semi-Volatile Organic Compounds USEPA Methods 8270C or 8270D (Base, Neutral & Acid Extractables)	**GeoTracker Code**
m-Dinitrobenzene	DNB13
4,6-Dinitro-o-cresol (4,6-Dinitro-2-methylphenol)	DN46M
2,4-Dinitrophenol	DNP24
2,4-Dinitrotoluene	DNT24
2,6-Dinitrotoluene	DNT26
Di-n-octyl phthalate	DNOP
Diphenylamine	DPA
Endosulfan I	ENDOSULFANA
Endosulfan II	ENDOSULFANB
Endosulfan sulfate	ENDOSULFANS
Endrin	ENDRIN
Endrin aldehyde	ENDRINALD
Ethyl methanesulfonate	EMSULFN
Famphur	FAMPHUR
Fluoranthene	FLA
Fluorene	FL
Heptachlor	HEPTACHLOR
Heptachlor epoxide	HEPT-EPOX
Hexachlorobenzene	HCLBZ
Hexachlorocyclopentadiene	HCCP
Hexachloroethane	HCLEA
Hexachloropropene	HCPR
Indeno(1,2,3-c,d) pyrene	INP123
Isodrin	ISODRIN
Isophorone	ISOP
Isosafrole	ISOSAFR
Kepone	KEP

MRP ATTACHMENT D—SEMI-VOLATILE ORGANIC COMPOUNDS (FIVE-YEAR COCs)

Semi-Volatile Organic Compounds USEPA Methods 8270C or 8270D (Base, Neutral & Acid Extractables)	**GeoTracker Code**
Methapyrilene	MTPYRLN
Methoxychlor	MTXYCL
3-Methylcholanthrene	MECHLAN3
Methyl methanesulfonate	MMSULFN
2-Methylnaphthalene	MTNPH2
1,4-Naphthoquinone	NAPHQ14
1-Naphthylamine	AMINONAPH1
2-Naphthylamine	AMINONAPH2
o-Nitroaniline (2-Nitroaniline)	NO2ANIL2
m-Nitroaniline (3-Nitroaniline)	NO2ANIL3
p-Nitroaniline (4-Nitroaniline)	NO2ANIL4
Nitrobenzene	NO2BZ
o-Nitrophenol (2-Nitrophenol)	NTPH2
p-Nitrophenol (4-Nitrophenol)	NTPH4
N-Nitrosodi-n-butylamine (Di-n-butylnitrosamine)	NNSBU
N-Nitrosodiethylamine (Diethylnitrosamine)	NNSE
N-Nitrosodimethylamine (Dimethylnitrosamine)	NNSM
N-Nitrosodiphenylamine (Diphenylnitrosamine)	NNSPH
N-Nitrosodipropylamine (N-Nitroso-N-dipropylamine; Di-n-propylnitrosamine)	NNSPR
N-Nitrosomethylethylamine (Methylethylnitrosamine)	NNSME
N-Nitrosopiperidine	NNSPPRD
N-Nitrosospyrrolidine	NNSPYRL
5-Nitro-o-toluidine	TLDNONT5
Pentachlorobenzene	PECLBZ
Pentachloronitrobenzene (PCNB)	PECLNO2BZ
Pentachlorophenol	PCP

MRP ATTACHMENT D—SEMI-VOLATILE ORGANIC COMPOUNDS (FIVE-YEAR COCs)

Semi-Volatile Organic Compounds USEPA Methods 8270C or 8270D (Base, Neutral & Acid Extractables)	**GeoTracker Code**
Phenacetin	PHNACTN
Phenanthrene	PHAN
Phenol	PHENOL
p-Phenylenediamine	ANLNAM4
Polychlorinated biphenyls (PCBs; Aroclors)	PCBS
Pronamide	PRONAMD
Pyrene	PYR
Safrole	SAFROLE
1,2,4,5-Tetrachlorobenzene	C4BZ1245
2,3,4,6-Tetrachlorophenol	TCP2346
o-Toluidine	TLDNO
Toxaphene	TOXAP
2,4,5-Trichlorophenol	TCP245
0,0,0-Triethyl phosphorothioate	TEPTH
sym-Trinitrobenzene	TNB135

MRP ATTACHMENT E—CHLOROPHENOXY HERBICIDES AND ORGANOPHOSPHORUS COMPOUNDS (FIVE-YEAR COCs)

Chlorophenoxy Herbicides USEPA Method 8151A	**GeoTracker Code**
2,4 D (2,4 Dichlorophenoxyacetic acid)	24D
Dinoseb (DNBP; 2 sec Butyl 4,6 dinitrophenol)	DINOSEB
Silvex (2,4,5 Trichlorophenoxypropionic acid; 2,4,5 TP)	SILVEX
2,4,5 T (2,4,5 Trichlorophenoxyacetic acid)	245T

Organophosphorus Compounds USEPA Method 8141B	**GeoTracker Code**
Atrazine	ATRAZINE
Chlorpyrifos	CLPYRIFOS
0,0-Diethyl 0-2-pyrazinyl phosphorothioate (Thionazin)	ZINOPHOS
Diazinon	DIAZ
Dimethoate	DIMETHAT
Disulfoton	DISUL
Methyl parathion (Parathion methyl)	PARAM
Parathion	PARAE
Phorate	PHORATE
Simazine	SIMAZINE

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2019-0072

WASTE DISCHARGER REQUIREMENTS
FOR
COUNTY OF PLUMAS
CHESTER MUNICIPAL SOLID WASTE CLASS III LANDFILL
PLUMAS COUNTY

AND

MONITORING AND REPORTING PROGRAM

INFORMATION SHEET

The Chester Municipal Solid Waste Class III Landfill (Facility) is a Class Ill solid waste landfill located approximately five miles east of the town of Chester in Plumas County. The County of Plumas (Discharger) owns and operates the Facility. On 6 June 2003, Roseburg Resources Co., the former landowner of the Facility, sold the property to the County of Plumas, which had previously functioned solely as the Facility operator. The Facility is on a 40-acre property, with approximately 28 acres dedicated to the single waste management unit (WMU) and a transfer station. The WMU is unlined as it predates the requirements set forth under California Code of Regulations, title 27 (Title 27), section 20080(d) established in 1984.

The Facility began accepting waste in 1972 and functioned as a trench and fill operation. The landfill serves the Lake Almanor Basin, City of Chester, and nearby portions of Plumas County. In January 1995, the Facility stopped accepting municipal solid waste (MSW). The Facility's transfer station operates year-round and receives MSW five days a week. After being compacted, waste is pushed into bins which currently are taken from the transfer station to Lockwood Landfill in Nevada. The WMU still accepts green waste year-round and accepts inert construction and demolition waste during the dry season, from April through October. The transfer station also accepts recyclable goods, scrap metal, and electronic waste. MSW may be accepted by the WMU on an emergency basis when transfer to another landfill is not possible. No hazardous wastes, radioactive wastes, or volatile and/or flammable wastes have been accepted. Onsite facilities include: groundwater monitoring wells, a perimeter gas monitoring network and a green waste storage area. The Facility has no leachate collection and removal system (LCRS).

Land use within one mile of the Facility consists of privately-owned timberland in all directions. There are no municipal, domestic, industrial, or agricultural groundwater supply wells within one mile of the site. The Facility receives 32 inches of precipitation per year on average, with much of it in the form of snowfall. Storm water from the WMU

cover is directed by a combination of perimeter and roadside ditches. The ditches are equipped with check dams to reduce flow velocities and decrease downstream sediment transport. Runoff flow leaves the Facility from two discharge points: D-1 and D-2. D-1 is approximately 150 feet southwest of the perimeter of the WMU and drains the western third of the WMU cover. Discharge has not been observed from point D-1. D-2 is approximately 700 feet south of the WMU, along the west side of the Facility access road, and drains storm water from the remainder of the Facility. In 2017, a small detention pond was installed immediately upstream of D-2 to reduce sediment discharge from the Facility. Discharge from D-2 ultimately flows into Bailey Creek, a tributary to Lake Almanor.

The Facility is underlain by a surficial fluvial sedimentary unit overlying volcanic deposits of Cenozoic and pre-Cenozoic basement rock. Sedimentary deposits include unconsolidated Quaternary-age gravel, sand, silt, ash and diatomaceous earth, and consolidated Pleistocene-age conglomerates, bedded sandstones, shales and ash. These sedimentary deposits are interbedded with the Cenozoic volcanics. The first encountered groundwater ranges from about ten feet to 28 feet below the native ground surface and is intermittently present in the shallow perched aquifer. Known groundwater bearing zones beneath the Facility are restricted to this shallow perched zone within shallow soils overlying the volcanic bedrock (lava flows). The sedimentary deposits grade to a silty clay 15 feet below ground surface (bgs). At 30 feet bgs, the silty clay contacts a vesicular porphrytic basalt that is moderately fractured and highly weathered in its upper five feet. At a depth of approximately 40 feet, a silty clay paleosol separates the vesicular basalt unit from a massive basalt unit and continues to a depth of 55 feet bgs where it overlies another silty clay paleosol. Beneath this paleosol lies a second fractured vesicular basalt. The sequence of vesicular basalt flows separated by paleosols continues to a depth of 125 feet, with no additional groundwater bearing zones detected. Beneath this sequence lies a ten foot-thick clay layer which overlies a fine-grained volcanoclastic deposit of basaltic ash. Groundwater elevations in the shallow perched unit range from about 5,140 feet mean sea level (MSL) to 5,122 feet MSL. The direction of groundwater flow is toward the southwest, with an average gradient of 0.04 feet per foot and an estimated average groundwater velocity of 0.6 feet per year.

Seven monitoring wells are incorporated into monitoring and reporting for the Facility as specified in the Monitoring and Reporting Program R5-2019-0072.

A Water Quality Protection Standard Report, dated 12 June 2001, suggested a release had occurred at the Facility sometime between 1991 and 2000. Downgradient monitoring wells CL-2 and CL-5 contained detectable concentrations of volatile organic compounds (VOCs) including dichlorodifluoromethane, trichlorofluoromethane, dichloroethane and trichloroethane. Additionally, downgradient monitoring wells CL-1, CL-2 and CL-5 showed increasing trends for bicarbonate, calcium, magnesium and

sodium concentrations. As a result, the Central Valley Water Board directed the Discharger to implement corrective actions, including adding cover material to non-operating areas of the Facility, re-grading the cap to improve surface runoff, and improving the perimeter ditches. Additionally, three more downgradient monitoring wells were installed in May 2002. These wells have failed to consistently produce water.

Following implementation of the corrective action measures, analysis of monitoring data for the Facility generally indicated stable to decreasing concentrations of general mineral constituents. VOCs have not been detected in any monitoring wells except downgradient monitoring well CL-2, which contained 1,4-dichlorobenzene and cis-1,2-dichloroethene in 2017, and downgradient monitoring well CL-5 which contained di-isopropyl ether in 2012 through 2014. No VOCs were detected in 2018. Additionally, downgradient monitoring well CL-2 recently exceeded intrawell concentration limits for chloride, sulfate and potassium; this well has increasing trends for TDS, chloride, bicarbonate, sulfate, calcium and magnesium concentrations, indicating that the corrective actions implemented in 2001-2003 may be inadequate in addressing groundwater impacts associated with the Facility. The green waste ash disposal trench, near the southeastern most corner of the WMU's footprint, may function as a storm water infiltration point, as water ponds within the trench and the trench has no low-permeability soil cover. Waste Discharge Requirements (WDRs) Order R5-2019-0072 requires submittal of a revised Corrective Action Plan to address these groundwater impacts.

In November 2008, CalRecycle directed the Discharger to conduct landfill gas monitoring, with the Plumas County Department of Environmental Health, acting as Local Enforcement Agency (LEA), sampling three existing perimeter gas probes and additional bar punch holes in October 2009. No detectable concentrations of methane, carbon monoxide, or hydrogen sulfide were found around the perimeter of the landfill. Following discussions with CalRecycle, the Discharger submitted an amended Landfill Gas Monitoring and Control Plan in June 2010. Four new landfill gas monitoring probes, GP-1 through GP-4, were installed around the perimeter of the landfill in October 2010. These have been sampled on a quarterly basis by the LEA and the Discharger's staff. Total landfill gas concentrations have remained below 0.1 percent.