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CENTRAL VALLEY REGION

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**[TENTATIVE] WASTE DISCHARGE REQUIREMENTS ORDER
R5-2020-XXXX**



ORDER INFORMATION

| | |
|-------------------------|---|
| Order Type(s): | Waste Discharge Requirements (WDRs) |
| Status: | TENTATIVE |
| Program: | Title 27 Discharges to Land |
| Region 5 Office: | Rancho Cordova |
| Discharger(s): | County of Placer |
| Facility: | Loomis Landfill |
| Address: | Ong Place, near the intersection of King and Penryn Roads |
| County: | Placer County |
| Parcel Nos.: | 043-080-029 |
| WDID: | 5A310303001 |
| Prior Order(s): | 72-118, 90-053, 94-079, R5-2004-0041 |

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GLOSSARY

| | |
|-------------------------------------|---|
| ADC | Alternative Daily Cover |
| Antidegradation Policy | Statement of Policy with Respect to Maintaining High Quality Waters in California, State Water Board Resolution 68-16 |
| Basin Plan | <i>Water Quality Control Plan for the Sacramento and San Joaquin River Basins</i> |
| bgs | Below Ground Surface |
| BOD | Biological Oxygen Demand |
| 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 |
| CPMP | Closure and Post-Closure Maintenance Plan |
| CQA | Construction Quality Assurance |

| | |
|-------------------------------|---|
| Designated Waste | (a) Hazardous Waste subject to variance from management requirements per Health and Safety Code section 25143; and (b) Nonhazardous Waste containing pollutants that, under ambient conditions, could be released in concentrations exceeding applicable WQOs, or that could reasonably be expected to affect beneficial uses of water. (Wat. Code, § 13173.) |
| DMP | Detection Monitoring Program |
| DTSC | California Department of Toxic Substances Control |
| 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 |
| FEMA | Federal Emergency Management Agency |
| GCL | Geosynthetic Clay Liner |
| Hazardous Waste | Wastes which, pursuant to Title 22, section 66261.3 et seq., are required to be managed in accordance with Division 4.5 of Title 22. (Title 27, § 20164; Title 23, § 2521(a).) |
| HDPE | High-Density Polyethylene |
| JTD | Joint Technical Document |
| LCRS | Leachate Collection and Removal System |
| LEA | Local Enforcement Agency |

| | |
|-------------------------|--|
| Leachate | Liquid formed by the drainage of liquids from waste or by the percolation or flow of liquid through waste. Leachate includes any constituents extracted from the waste and dissolved or suspended in the fluid. (Title 27, § 20164.) |
| LFG | Landfill Gas |
| 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 regulated under 40 C.F.R. part 258 |
| MSWLF | Municipal Solid Waste Landfill |
| MW | Monitoring Well |
| mg/L | Milligrams per Liter |
| SCAP | Sample Collection and Analysis Plan |
| Subtitle D | USEPA-promulgated MSW regulations under RCRA (see 40 C.F.R. part 258) |
| RCRA | Resource Conservation and Recovery Act |
| ROWD | Report of Waste Discharge |
| 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
VOCsVolatile Organic Compounds
WDRs.....Waste Discharge Requirements
WMUWaste Management Unit
WQOsWater Quality Objectives
WQPSWater Quality Protection Standard

FINDINGS

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

Introduction

1. The County of Placer (Discharger) owns and operates the Loomis Landfill (Facility), which is located approximately 1.5 miles east of the Town of Loomis in Placer County, Section 10, Township 11 North, Range 7 East, Mount Diablo Base and Meridian (MDB&M). The Facility's location is depicted on the Site Location Map in **Attachment A**.
2. The Facility is situated on a 29.5-acre property comprised of Assessor's Parcel Numbers (APNs) 043-080-029. The Facility is located on Ong Place, near the intersection of King and Penryn Roads.
3. As the Facility's owner and operator, the Discharger is responsible for compliance with this Order, which prescribes Waste Discharge Requirements (WDRs) regulating corrective action, monitoring, and post-closure maintenance of the Waste Management Units (WMUs) listed in **Table 1**.

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

| Unit | Type | Class | Size | Status |
|-------------|----------|-----------|----------|--------|
| Unlined WMU | Landfill | Class III | 20 acres | Closed |

See Glossary for definitions of terms and abbreviations in table.

Materials Accompanying Order

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

Attachment A—SITE LOCATION MAP

Attachment B—FACILITY MAP

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

Information Sheet for Waste Discharge Requirements Order R5-2020-####
(Information Sheet)

11. The Facility includes the following onsite features, systems, and structures:
 - a. French drain and leachate collection sump.
 - b. LFG collection system (pending upgrade to free venting system) and flare (pending decommissioning).
 - c. LFG probes and groundwater monitoring wells.

Waste Classification & Permitting

12. The Facility ceased accepting MSW before 27 November 1984 and, therefore, is not subject to federal 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).
13. On 19 March 2004, the Central Valley Water Board adopted R5-2004-0041, classifying the Facility's WMU as an "existing, inactive reclassified Class III" WMU. This Order continues such classifications, which are set forth above in **Table 1**.
14. On 11 February 2020, the Discharger submitted an updated Report of Waste Discharge (ROWD) as part of its Joint Technical Document (JTD) for the Facility. Information in the JTD was used in the development of this Order. The information contained in the ROWD and other supporting documents have been used in updating the WDRs. This Order updates the WDRs as part of an administrative policy of periodic review, to incorporate revisions to regulations and policies adopted thereunder, to update corrective action requirements, and for continued post-closure maintenance.

Site Conditions

15. The Loomis Landfill is in the Sierra Foothills in an area known as the Loomis Basin. The topography in the area surrounding the site is low rolling foothill terrain with elevations ranging from about 370 to 470 feet mean sea level (MSL). Surface drainage from the site is by natural swales that drain to Secret Ravine, approximately two hundred feet northwest of the Facility.
16. The Facility is located in the Sierra Nevada geomorphic province and is underlain by quartz diorite bedrock (Penryn Diorite), unconsolidated terrace deposits, and recent alluvium. Surficial soils consist primarily of sandy loam, silty sand, and sandy gravel.

17. Land uses within one mile of the Facility include professional office; general, central, tourist/destination commercial; limited and light industrial; public/institutional; estate, rural, agricultural, single family and medium density residential.
18. Surface water from the Facility drains to Secret Ravine, which flows southwest into Antelope Creek, tributary to Dry Creek, thence to the Natomas East Main Drain, and then to the Sacramento River. According to the Central Valley Water Board's *Water Quality Control Plan for the Sacramento and San Joaquin River Basins* (Basin Plan), the beneficial uses of Antelope Creek include: municipal and domestic use (MUN); agricultural supply (AGR); water contact recreation (REC-1); non-water contact recreation (REC-2); cold freshwater habitat (COLD); wildlife habitat (WILD); migration of aquatic organisms (MIGR); and spawning, reproduction and/or early development (SPAWN). There is also an intermittent creek located to the southwest of the Facility.
19. Based on data submitted in the 2nd semiannual 2019 self-monitoring report, groundwater underneath the Facility is first encountered between approximately 9 and 14 feet below ground surface (bgs). Groundwater elevations range between 359 and 407 feet mean sea level (MSL).
20. The maximum known depth of waste is approximately 16 feet bgs. Therefore, both historical and current groundwater elevations are such that a separation between the base of wastes and groundwater are not always maintained at the Facility.
21. The uppermost aquifer occurs in the weathered bedrock beneath the Facility. From mid-2006 to present, the average gradient has ranged from approximately 0.015 feet per foot (ft/ft) to 0.026 ft/ft. The results of drawdown testing of well MW-7A along the northwestern perimeter of the Facility reportedly indicate that the shallow aquifer has a hydraulic conductivity of approximately 1.3×10^{-3} centimeters per second. The direction of ground water flow is influenced by the topography, fractures, and variations in the degree of weathering of the underlying bedrock. Groundwater flow is generally westerly but is diverted to the northwest and southwest around low permeability bedrock in the area of MW-9.
22. The nearest known fault is approximately six miles east of the Facility in the Bear Mountain/Melones fault zone. No determination of maximum probable earthquake has been made.
23. According to the Basin Plan, the designated beneficial uses of groundwater at the Facility are municipal and beneficial use (MUN), agricultural supply (AGR) and industrial process supply (PRO).

Table 2—Groundwater Monitoring Well Network

| Well | Program | Point of Compliance |
|-------------|------------------------------|----------------------------|
| MW-1A | Corrective Action | No |
| MW-2A | Detection, Corrective Action | Yes |
| MW-3A | Detection, Corrective Action | Yes |
| MW-4A | Detection, Corrective Action | Yes |
| MW-5A | Background | No |
| MW-6A | Background | No |
| MW-8A | Detection, Corrective Action | Yes |
| MW-9A | Detection, Corrective Action | Yes |
| MW-10B | Corrective Action | No |
| MW-11C | Background | No |
| MW-12C | Proposed | No |
| OW-1 | Evaluation | No |
| OW-2 | Corrective Action | No |

See Glossary for definitions of terms and abbreviations in table.

29. As of the date of this Order, the Facility's **surface water** monitoring network consists of the existing monitoring points listed in **Table 3**. However, there is a surface water drainage channel located southwest of the Facility. The surface water monitoring network needs to be expanded to include sampling of this channel.

Table 3—Surface Water Monitoring Network

| Monitoring Point | Device Type | Program | Status |
|------------------|---------------|------------------------|-------------|
| SR-A | Secret Ravine | Background (Upstream) | Operational |
| SR-B | Secret Ravine | Detection (Downstream) | Operational |

See Glossary for definitions of terms and abbreviations in table.

30. Unsaturated zone monitoring is not feasible since the Facility overlies bedrock. However, the Discharger conducts landfill gas monitoring as part of its CAMP. As of the date of this Order, the **landfill gas corrective action** monitoring network consists of the existing and proposed monitoring points listed in **Table 4**.

Table 4— Landfill Gas Corrective Action Monitoring Network

| Monitoring Point | Location | Program | Status |
|------------------|-----------|-------------------|-------------|
| GP-4 | Gas Probe | Corrective Action | Operational |
| GP-7 | Gas Probe | Corrective Action | Operational |
| P-4 | Gas Probe | Corrective Action | Operational |

See Glossary for definitions of terms and abbreviations in table.

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

Water Quality Protection Standard

32. A Water Quality Protection Standard (WQPS) is the analytical framework through which WMUs are individually monitored for releases and impacts to water quality. (Title 27, § 20390, subd. (a).) Under Title 27, a WQPS is separately established for each WMU in WDRs. (*Id.*)
33. In accordance with Title 27, this Order, by virtue of its incorporation of **Monitoring & Reporting Program R5-2020-#### (MRP)** and subsequent revisions thereto, establishes a WQPS for each WMU at the Facility.

REQUIREMENTS

IT IS HEREBY ORDERED, pursuant to Water Code sections 13263 and 13267, that WDRs Order R5-2004-0041 is rescinded, except for enforcement purposes; and that the Discharger shall comply with the following requirements.

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

1. The discharge of any additional waste at the Facility is prohibited.

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

1. The Discharger shall promptly remove and relocate all waste discharged at the Facility in violation of this Order.

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

Post-Closure Maintenance Specifications—Except as otherwise directed below, the Discharger shall comply with all applicable Standard Closure and Post-Closure Specifications (SPRRs, § G).

Monitoring Requirements1. —Except as otherwise directed below, the Discharger shall comply with all applicable Standard Monitoring Specifications (SPRRs, § I) and Standard Response to Release Specifications (SPRRs, § J), as well as the following:

1. The Discharger shall comply with all provisions of the separately issued Monitoring and Reporting Program R5-2020-#### and any subsequent revisions thereto (operative MRP).
2. The Discharger shall submit an updated Water Quality Protection Standard (WQPS) for review and approval by **1 March 2021**.
3. The Discharger shall submit a Sampling Collection and Analysis Plan, which shall include new surface water sampling points for the creek located southwest of the Facility, for review and approval by **1 April 2021**.
4. There is documented root intrusion and damage to the casing of background monitoring well MW-6A. The Discharger shall either repair or replace MW-6A by **30 April 2021**.

5. The Discharger shall implement a groundwater and surface water detection monitoring program (DMP) in accordance with Title 27, sections 20385, 20415 and 20420.
6. The Discharger shall implement a corrective action monitoring program (CAMP) in accordance with Title 27, sections 20385, 20415 and 20430, and Section I of the SPRRs.

Corrective Action—The Discharger shall comply with all corrective action requirements set forth in their previously approved Corrective Action Plan(s), as well as the following:

1. The Discharger shall continue to operate and maintain the French drain and leachate collection sump to help minimize the infiltration of leachate to groundwater.
2. The Discharger shall take appropriate measures to adequately maintain the final cover system to help minimize infiltration.
3. The Discharger shall continue to operate its LFG system to help minimize any potential LFG impact to groundwater.
4. If the Discharger or Central Valley Water Board determines that the corrective action program is not adequate (i.e. does not satisfy the provisions of section 20430), the Discharger shall, within 90 days of making the determination, or of receiving written notification from the Central Valley Regional Board of such determination, submit an amended ROWD to make appropriate changes to the program. The amended ROWD shall include the following:
 - a. A discussion as to why existing corrective action measures have been ineffective or insufficient.
 - b. A revised monitoring plan, if necessary, to further assess the nature and extent of the release.
 - c. A discussion of corrective action needs and options.
 - d. Proposed additional corrective action measures, as necessary, for:
 - 1) Source control,
 - 2) Adequate separation from groundwater,
 - 3) Groundwater cleanup, and/or

4) Landfill gas control.

- e. A plan to monitor the progress of corrective action measures consistent with the MRP.
- f. Cost estimates for implementing additional corrective action, including monitoring.
- g. An implementation schedule.

Reporting Requirements—In addition to those Standard Provisions pertaining to notification and reporting obligations (see, e.g., §§ K.1-2, K.6, K.8-10), the Discharger shall comply with the following provisions.

1. The Discharger shall comply with all MRP provisions pertaining to the submittal and formatting of reports and data.
2. Reports shall be submitted electronically via the State Water Board's [GeoTracker Database](https://geotracker.waterboards.ca.gov) (<https://geotracker.waterboards.ca.gov>). After uploading, the Discharger shall notify Central Valley Water Board staff via email at CentralValleySacramento@Waterboards.ca.gov. The following information shall be included in the body of the email:

| | |
|------------------------------|--|
| Attention: | Title 27 Compliance & Enforcement Unit |
| Report Title: | [Title] |
| GeoTracker Upload ID: | [number] |
| Facility: | Loomis Landfill |
| County: | Placer County |
| WDID Number: | 5A310303001 |

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

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

Table 5—Time Schedule

| Category | Task | Deadline |
|-----------------|---|----------------------|
| Monitoring | Submit an updated WQPS. | 1 March 2021 |
| Monitoring | Submit an updated SCAP, which includes proposed monitoring points for the intermittent creek located southwest of the Facility. | 1 April 2021 |
| Monitoring | Repair or replace monitoring well MW-6A. | 30 April 2021 |

I. Other Provisions

1. The Discharger shall maintain copies of this Order (including all attachments), the operative Monitoring & Reporting Program (i.e., MRP R5-2020-#### and any revisions thereto), and the SPRRs at its office. These materials shall be made available to all operating personnel, who shall be familiar with the contents of such materials.
2. The Discharger shall comply with all applicable provisions of Title 27 (including those provisions not specifically referenced herein).

LIST OF ATTACHMENTS

Attachment A—SITE LOCATION MAP

Attachment B—FACILITY MAP

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

Information Sheet

Monitoring and Reporting Program R5-2020-#### (separate document)

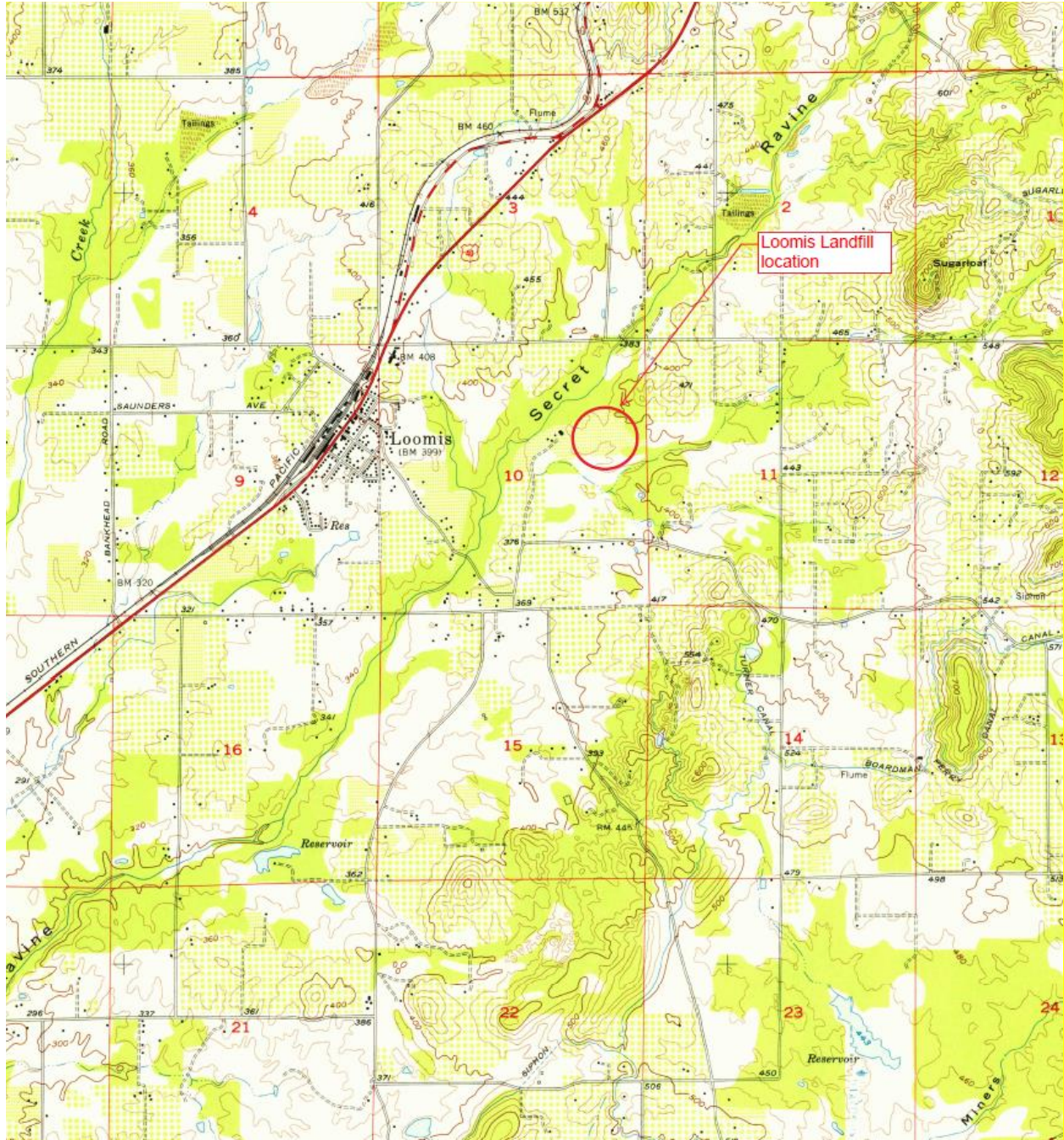
ENFORCEMENT

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

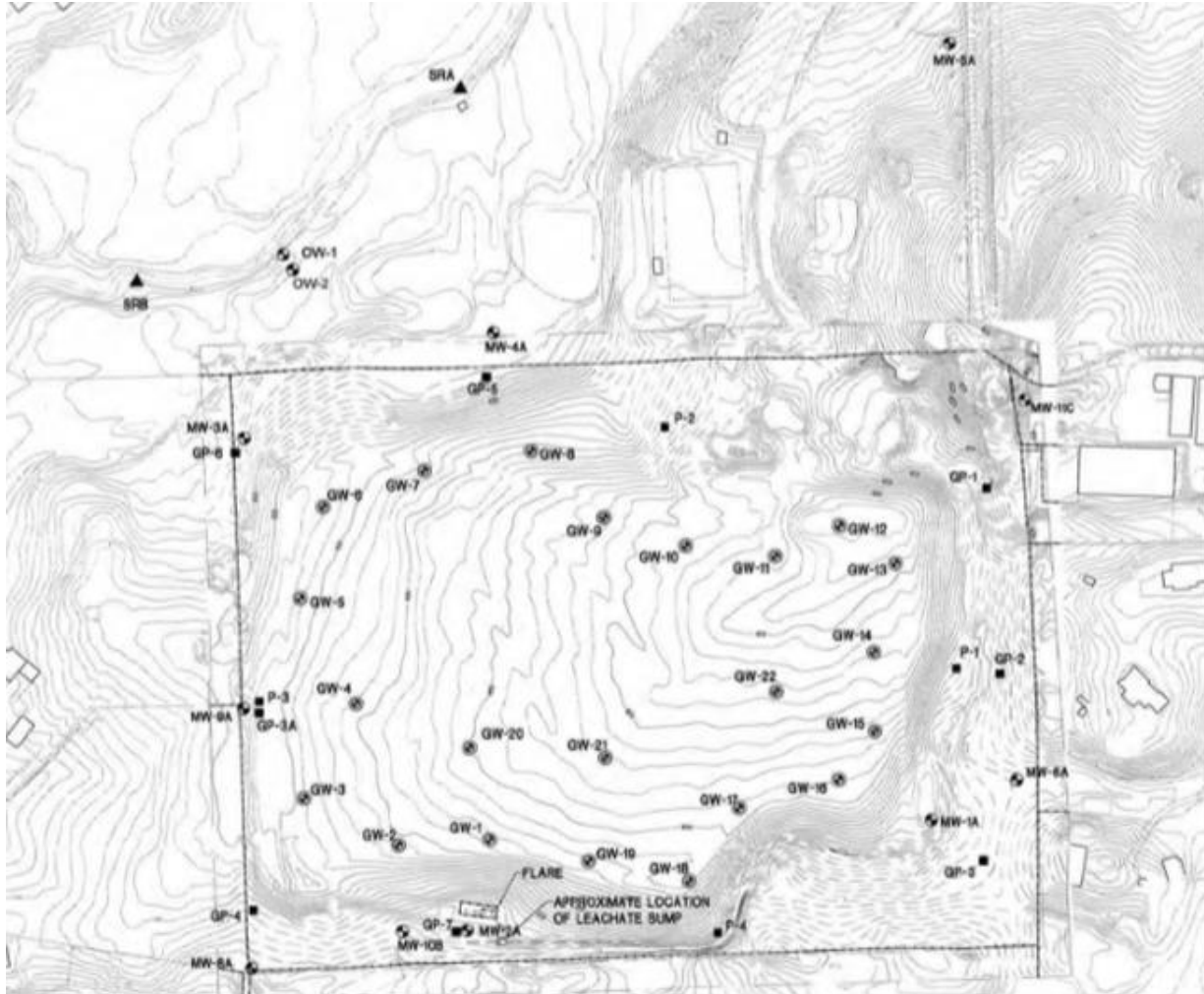
ADMINISTRATIVE REVIEW

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

ATTACHMENT A—SITE LOCATION MAP



ATTACHMENT B—FACILITY MAP



LEGEND

- SYMBOL LEGEND**
- MW-1A GROUNDWATER MONITORING WELL
 - GW-12 GAS EXTRACTION WELL
 - GP-1 GAS PROBES
 - P-1 GAS PROBES
 - SFB SURFACE WATER MONITORING LOCATION
 - APPROXIMATE LEACHATE SUMP + FRENCH DRAIN LINE



STANDARD PROVISIONS & REPORTING REQUIREMENTS

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

A. Applicability

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

STANDARD PROVISIONS & REPORTING REQUIREMENTS

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

B. Terms and Conditions

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

STANDARD PROVISIONS & REPORTING REQUIREMENTS

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

C. Standard Prohibitions

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

STANDARD PROVISIONS & REPORTING REQUIREMENTS

5. Materials used in containment structures shall have appropriate chemical and physical properties to ensure that such structures do not fail to contain waste because of pressure gradients, physical contact with waste or leachate, chemical reactions with soil or rock, climatic conditions, the stress of installation, or because of the stress of daily operations [Title 27, § 20320(a)].
6. Waste management units and their respective containment structures shall be designed and constructed to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping [Title 27, § 20365(a)].
7. The Discharger shall design storm water conveyance systems for Class III units for a 100-year, 24-hour storm event, and shall design storm water conveyance systems for Class II units for a 1,000-year, 24-hour storm event [Title 27, § 21750(e)(3)].
8. All Class III landfill units shall be designed to withstand the maximum probable earthquake and Class II waste management units shall be designed to withstand maximum credible earthquake without damage to the foundation or to the structures that control leachate, or surface drainage, or erosion, or gas [Title 27, § 20370(a)].
9. The Discharger shall perform stability analyses that include components to demonstrate the integrity of the landfill foundation, final slopes, and containment systems under both static and dynamic conditions throughout the landfill's life including the closure period and post-closure maintenance period [Title 27, § 21750(f)(5)].
10. New waste management units and expansions of existing units shall not be located on a known Holocene fault [Title 27, § 20260(d)].
11. Liners shall be designed and constructed to contain the fluid, including landfill gas, waste, and leachate [Title 27, § 20330(a)].
12. Hydraulic conductivities shall be determined primarily by appropriate field test methods in accordance with accepted civil engineering practice. The results of laboratory tests with both water and leachate, and field tests with water, shall be compared to evaluate how the field permeabilities will be affected by leachate. It is acceptable for the Discharger to use appropriate compaction tests in conjunction with laboratory hydraulic conductivity tests to determine field permeabilities as long as a reasonable number of field hydraulic conductivity tests are also conducted [Title 27, § 20320(c)].

STANDARD PROVISIONS & REPORTING REQUIREMENTS

13. Hydraulic conductivities specified for containment structures other than the final cover shall be relative to the fluids (leachate) to be contained. Hydraulic conductivities for the final cover shall be relative to water [Title 27, § 20320(b)].
14. A test pad for each barrier layer and final cover shall be constructed in a manner duplicating the field construction. Test pad construction methods, with the designated equipment, shall be used to determine if the specified density/moisture-content/hydraulic conductivity relationships determined in the laboratory can be achieved in the field with the compaction equipment to be used and at the specified lift thickness [Title 27, § 20324(g)(1)(A)].
15. Performance requirements for geosynthetic membranes shall include, but are not limited to, a need to limit infiltration of water, to the greatest extent possible; a need to control landfill gas emissions; mechanical compatibility with stresses caused by equipment traffic, and for final covers the result of differential settlement over time and durability throughout the post-closure maintenance period [Title 27, § 20324(i)(1)].
16. The Discharger shall ensure proper preparation of the subgrade for any liner system that includes a GCL so as to provide a smooth surface that is free from rocks, sticks, or other debris that could damage or otherwise limit the performance of the GCL.
17. The Discharger shall propose an electronic leak location survey of the top liner for any new landfill module in the construction quality assurance plan unless the Discharger demonstrates that a leak location survey is not needed.
18. Leachate collection and removal systems are required for Class II landfills and surface impoundments, MSW landfills, and for Class III landfills which have a liner or which accept sewage or water treatment sludge [Title 27, § 20340(a)].
19. All new landfill units or lateral expansions of existing units that require a LCRS shall have a blanket-type LCRS that covers the bottom of the unit and extends as far up the sides as possible. The LCRS shall be of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and by any equipment used at the unit [Title 27, § 20340(e)].
20. The LCRS shall be designed, constructed, maintained, and operated to collect and remove twice the maximum anticipated daily volume of leachate from the waste management unit [Title 27, § 20340(b)].

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21. Leachate collection and removal systems shall be designed and operated to function without clogging through the scheduled closure of the landfill unit and during the post-closure maintenance period.
22. The LCRS shall be designed to maintain the depth of fluid over any portion of the LCRS of no greater than 30 cm [40 C.F.R. § 258.40(a)(2)], excluding the leachate sump. The leachate sump, leachate removal pump, and pump controls shall be designed and set to maintain a fluid depth no greater than the minimum needed for efficient pump operation [Title 27, § 20340(c)].
23. All construction of liner systems and final cover systems shall be performed in accordance with a Construction Quality Assurance Plan certified by a registered civil engineer or a certified engineering geologist [Title 27, § 20323].
24. The Construction Quality Assurance program shall be supervised by a registered civil engineer or a certified engineering geologist who shall be designated the CQA officer [Title 27, § 20324(b)(2)].
25. The Discharger shall ensure that a third party independent of both the Discharger and the construction contractor performs all of the construction quality assurance monitoring and testing during the construction of a liner system.
26. The Discharger shall notify Central Valley Water Board staff at least **14 days** prior to commencing field construction activities including construction of a new lined cell or module, construction of a final cover, or any other construction that requires Central Valley Water Board staff approval under this Order.
27. The Discharger shall submit for review and approval at least **60 days** prior to proposed discharge, final documentation required in Title 27 Section 20324(d)(1)(C) following the completion of construction of a new lined landfill module. The report shall be certified by a registered civil engineer or a certified engineering geologist and include a statement that the liner system was constructed in accordance with the approved design plans and specifications, the CQA Plan, the requirements of the WDRs, and that it meets the performance goals of Title 27. The report shall contain sufficient information and test results to verify that construction was in accordance with the design plans and specifications, the construction quality assurance plan, and the performance goals of Title 27.

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13. The Discharger shall close the landfill with minimum 15-foot wide benches every 50 vertical feet [Title 27, § 21090(a)].
14. Final cover slopes shall not be steeper than a horizontal to vertical ratio of one and three quarters to one and designs having any slopes steeper than a horizontal to vertical ratio of three to one, or having a geosynthetic component, shall have these aspects of their design specifically supported in the slope stability report required in Title 27, section 21750(f)(5) [Title 27, § 21090(a)].
15. For any portions of the final cover installed after July 18, 1997, for which the Central Valley Water Board has not approved a slope and foundation stability report on or before that date, the Discharger shall meet the requirements of Title 27, section 21750(f)(5) [Title 27, § 21090(a)(6)].
16. Areas with slopes greater than ten percent, surface drainage courses, and areas subject to erosion by wind or water shall be designed and constructed to prevent such erosion [Title 27, § 21090(b)(2)].
17. The Discharger shall design storm water conveyance systems for closed Class III units for a 100-year, 24-hour storm event, and shall design storm water conveyance systems for closed Class II units for a 1,000-year, 24-hour storm event [Title 27, § 21750(e)(3)].
18. Closed landfill units shall be provided with at least two permanent surveying monuments, installed by a licensed land surveyor or by a registered civil engineer, from which the location and elevation of all wastes, containment structures, and monitoring facilities can be determined throughout the post-closure maintenance period [Title 27, § 20950(d)].
19. Following closure of any MSW landfill units, the Discharger shall notify the Executive Officer that the deed to the landfill facility property, or some other instrument that is normally examined during a title search, has been recorded and a copy placed in the operating record. The notation on the deed shall in perpetuity notify any potential purchaser of the property that the land has been used as a landfill facility and that use of the land is restricted to the planned use described in the post-closure maintenance plan [Title 27, § 20515(a)(4) and §21170, and 40 C.F.R. § 258.60(i)]
20. Construction or repair of the final cover system's low-hydraulic conductivity layer is to be carried out in accordance with an approved construction quality assurance plan [Title 27, § 21090(b)(1)(E)]

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21. The Discharger shall incorporate into the closure and post-closure maintenance plan a cover-integrity monitoring and maintenance program which includes at least the following: a periodic leak search, periodic identification of other problem areas, prompt cover repair, and vegetation maintenance [Title 27, § 21090(a)(4)].
22. The Discharger shall complete a final cover survey upon completion of closure activities for that portion of the landfill. The final cover surveys shall include an initial survey and map [Title 27, § 21090(e)(1). **Every five years**, the Discharger shall conduct a survey of the closed landfill cover and submit an iso-settlement map accurately depicting the estimated total change in elevation of each portion of the final cover's low-hydraulic-conductivity layer [Title 27, § 21090(e)(2)].
23. Within **30 days** of completion of all closure activities, the Discharger shall certify that all closure activities were performed in accordance with the most recently approved final closure plan and CQA Plan, and in accordance with all applicable regulations. The Discharger shall also certify that closed landfill units shall be maintained in accordance with and approved post-closure maintenance plan [Title 27, § 21710(c)(6)].
24. Within **180 days** of completion of closure construction activities, the Discharger shall submit final documentation of closure, including the Certification of Closure. The closure documents shall include a final construction quality assurance report and any other documents necessary to support the certification [Title 27, § 21880].
25. The post-closure maintenance period shall continue until the Central Valley Water Board determines that wastes remaining in the landfill unit(s) no longer pose a threat to water quality [Title 27, § 20950(a)(1)].
26. The Discharger shall conduct a periodic leak search to monitor of the integrity of the final cover in accordance with the schedule in the approved final post- closure maintenance plan [Title 27, § 21090(a)(4)(A)].
27. The Discharger shall periodically inspect and identify problems with the final cover including areas that require replanting, erosion, areas lacking free drainage, areas damaged by equipment operations, and localized areas identified in the required five-year iso-settlement survey [Title 27, § 21090(a)(4)(B)].
28. The Discharger shall repair the cover promptly in accordance with a cover repair plan to be included in the final post-closure maintenance plan [Title 27, § 21090(a)(4)(C)].

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29. Throughout the post-closure maintenance period, the Discharger shall maintain the structural integrity and effectiveness of all containment structures, maintain the final cover as necessary to correct the effects of settlement and other adverse factors, continue to operate the LCRS as long as leachate is generated and detected, maintain the monitoring systems, prevent erosion and related damage of the final cover due to drainage, and protect and maintain surveyed monuments [Title 27, § 21090(c)].
30. Post-closure maintenance shall be conducted for a minimum period of 30 years or until the waste no longer poses a threat to environmental quality, whichever is greater [Title 27, § 21180(a) and Title 27, § 21900(a)].

H. Standard Financial Assurance Provisions

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

I. Standard Monitoring Specifications

1. The water quality monitoring program shall include appropriate and consistent sampling and analytical procedures and methods designed to ensure that monitoring results provide a reliable indication of water quality at all monitoring points and background monitoring points [Title 27, § 20415(e)(4) and 40 C.F.R. § 258.53(b)].
2. All monitoring systems shall be designed and certified by a registered geologist or a registered civil engineer [Title 27, § 20415(e)(1)].
3. All monitoring wells shall be cased and constructed in a manner that maintains the integrity of the monitoring well bore hole and prevents the bore hole from acting as a conduit for contaminant transport [Title 27, § 20415(b)(4)(A)].
4. All sample chemical analyses of any material shall be performed by a laboratory certified by the California Department of Health Services [Wat. Code, § 13176(a)].

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28. The groundwater monitoring system shall include a sufficient number of monitoring points, installed at appropriate locations, to yield groundwater samples from the uppermost aquifer that represent the quality of groundwater that has not been affected by a release from the waste management unit [Title 27, § 20415(b)(1)(A)].
29. The Detection Monitoring Program shall include a sufficient number of monitoring points, installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer that represent the quality of groundwater passing the point of compliance to allow the detection of a release from the waste management unit [Title 27, § 20415(b)(1)(B)1.].
30. Additional monitoring points shall be added as necessary to provide the best assurance of the **earliest possible detection** of a release from the waste management unit [Title 27, § 20415(b)(1)(B)2.].
31. The Detection Monitoring Program shall also include a sufficient number of monitoring points installed at appropriate depths and locations to yield groundwater samples from other aquifers or perched zones not already monitored to provide the earliest possible detection of a release from the waste management unit [Title 27, § 20415(b)(1)(B)3. and 4., and §20420(b)].
32. A surface water monitoring system shall be established to monitor each surface water body that could be affected by a release from the waste management unit [Title 27, § 20415(c)].
33. An unsaturated zone monitoring system shall be established for each waste management unit [Title 27, § 20415(d)].
34. The Discharger shall notify Central Valley Water Board staff within **seven days** if fluid is detected in a previously dry LCRS, unsaturated zone monitoring system, or if a progressive increase is detected in the volume of fluid in a LCRS [Title 27, § 21710(c)(3)].
35. Driller's logs for all monitoring wells shall to be submitted to the Central Valley Water Board and the Department of Water Resources [Wat. Code, § 13751 and Title 27, § 20415(b)(3)].
36. Groundwater elevation, temperature, electrical conductivity, turbidity, and pH are to be accurately measured at each well each time groundwater is sampled [Title 27, § 21415(e)(13)].

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- d. A duly authorized representative of a person designated in a, b or c above if:
 - i. The authorization is made in writing by a person described in a, b, or c of this provision;
 - ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a Unit, superintendent, or position of equivalent responsibility (a duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - iii. The written authorization is submitted to the Central Valley Water Board.
- e. Any person signing a document under this Section shall make the following certification:

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

- 3. The Discharger shall take all reasonable steps to minimize any adverse impact to the waters of the State resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature, extent, and impact of the noncompliance.
- 4. The owner of the waste management facility shall have the continuing responsibility to assure protection of waters of the state from discharged wastes and from gases and leachate generated by discharged waste during the active life, closure, and post-closure maintenance period of the waste management units and during subsequent use of the property for other purposes.

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5. The fact that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order shall not be regarded as a defense for the Discharger's violations of this Order.
6. The Discharger shall notify the Central Valley Water Board of a material change in; the types, quantity, or concentrations of wastes discharged; site operations and features; or proposed closure procedures, including changes in cost estimates. This notification shall be given a reasonable time before the changes are made or become effective. No changes shall be made without Central Valley Water Board approval following authorization for closure pursuant to the site Notification of Closure [Title 27, § 21710(a)(4)].
7. The Discharger shall maintain legible records of the volume and type of each waste discharged at each waste management unit or portion of a unit, and the manner and location of discharge. Such records shall be maintained by the Discharger until the beginning of the post-closure maintenance period. These records shall be on forms approved by the State Water Board or Central Valley Water Board and shall be maintained at the waste management facility until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the State Water Board or Central Valley Water Board at any time during normal business hours. At the beginning of the post-closure maintenance period, copies of these records shall be sent to the Central Valley Water Board [Title 27, § 21720(f)].
8. In the event of any change in landowner or the operator of the waste management facility, the Discharger shall notify the succeeding owner or operator in writing of the existence of this Order. A copy of that notification shall be sent to the Central Valley Water Board.
9. In the event of any change of ownership or responsibility for construction, operation, closure, or post-closure maintenance of the waste discharge facilities described in this Order, the Discharger shall notify the Central Valley Water Board prior to the effective date of the change and shall include a statement by the new Discharger that construction, operation, closure, or post-closure maintenance will be in compliance with this Order and any revisions thereof [Title 27, § 21710(c)(1)].
10. To assume ownership or operation under this Order, the succeeding owner or operator must apply in writing to the Central Valley Water Board requesting transfer of the Order within **14 days** of assuming ownership or operation of this facility. The request must contain the requesting entity's

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full legal name, the State of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory requirements contained in General Provision K.2 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. Transfer of this Order shall be approved or disapproved by the Central Valley Water Board.

L. Storm Water Provisions

1. New and existing Class III landfills shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return period [Title 27, § 20260(c)].
2. New and existing Class II landfills shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return period [Title 27, § 20250(c)].
3. The Discharger shall design storm water conveyance systems for Class III units for a 100-year, 24-hour storm event, and shall design storm water conveyance systems for Class II units for a 1,000-year, 24-hour storm event [Title 27, § 21750(e)(3)].
4. MSW landfills located in a 100-year floodplain shall demonstrate that the landfill unit will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health or the environment [40 C.F.R. § 258.11(a)].
5. Waste management units and their respective containment structures shall be designed and constructed to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping under the precipitation conditions for the unit [Title 27, § 20365(a)].
6. Precipitation on landfills or waste piles which is not diverted by covers or drainage control systems shall be collected and managed through the LCRS, which shall be designed and constructed to accommodate the precipitation conditions for each class unit [Title 27, § 20365(b)].
7. Diversion and drainage facilities shall be designed, constructed, and maintained to [Title 27, § 20365(c)]:

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- a. Accommodate the anticipated volume of precipitation and peak flows from surface runoff and under the precipitation conditions for the waste management unit:
 - b. Effectively divert sheet flow runoff laterally, via the shortest distance, into the drainage and collection facilities;
 - c. Prevent surface erosion;
 - d. Control and intercept run-on, in order to isolate uncontaminated surface waters from water that might have come into contact with waste;
 - e. Take into account:
 - i. For closed waste management units and for closed portions of units, the expected final contours of the closed unit, including its planned drainage pattern;
 - ii. For operating portions of waste management units other than surface impoundments, the unit's drainage pattern at any given time;
 - iii. The possible effects of the waste management unit's drainage pattern on and by the regional watershed;
 - iv. The design capacity of drainage systems of downstream and adjacent properties by providing for the gradual release of retained water downstream in a manner which does not exceed the expected peak flow rate at the point of discharge if there were no waste management facility; and
 - f. Preserve the system's function. The Discharger shall periodically remove accumulated sediment from the sedimentation or detention basins as needed to preserve the design capacity of the system.
8. Collection and holding facilities associated with precipitation and drainage control systems shall be emptied immediately following each storm or otherwise managed to maintain the design capacity of the system [Title 27, § 20365(d)].
 9. Surface and subsurface drainage from outside of a waste management unit shall be diverted from the unit [Title 27, § 20365(e)].

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10. Cover materials shall be graded to divert precipitation from the waste management unit, to prevent ponding of surface water over wastes, and to resist erosion as a result of precipitation [Title 27, § 20365(f)].

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

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

[TENTATIVE] WASTE DISCHARGE REQUIREMENTS ORDER R5 2020 ####
FOR
COUNTY OF PLACER
LOOMIS LANDFILL
PLACER COUNTY

INFORMATION SHEET

The County of Placer owns and maintains the Loomis Landfill Site (Facility), which is located on Ong Place near the intersection of King and Penryn Roads, approximately 1.5 miles east of the Town of Loomis, in Placer County, in Section 10, T11N, R7E Mount Diablo Base and Meridian (MDB&M).

The Facility is on a 29.5-acre property, with one unlined waste management unit (WMU) covering approximately 20 acres. The Facility is currently regulated by WDRs Order R5-2004-0041, which prescribe requirements for post-closure maintenance and corrective action. The new WDRs update the corrective action requirements.

A 1989 Solid Waste Assessment Test (SWAT) investigation conducted after landfill closure revealed the presence of volatile organic compounds (VOCs) downgradient of the Facility. Elevated concentrations of inorganic constituents have also been detected in groundwater. The Discharger subsequently developed a Corrective Action Plan (CAP) to address groundwater impacts and reduce precipitation infiltration at the facility. This included the repair and augmentation of the existing cover and the installation of the landfill gas (LFG) control system. VOCs detected at the site during the 2019 second semi-annual monitoring event included trace detections of 1,4-Dichlorobenzene (MW-2A) and 1,1-Dichloroethane (MW-4A), as well as detection of Tert-butyl alcohol in MW-2A (152 µg/L) and MW-10B (373 µg/L). At the time this Order was adopted, there was no primary or secondary MCL for drinking water established for TBA.

To address ongoing volatile organic compound (VOC) and inorganic exceedances in groundwater, the Discharger was issued a Notice of Violation on 3 October 2014. The NOV directed the Discharger to define the extent of the facility's constituent plume downgradient of monitoring wells MW-2A and OW-2 and to enhance the facility's existing corrective action measures. To address this NOV, the Discharger made improvements to the existing LFG extraction system, installed monitoring well MW-10B, and resumed sampling of monitoring well OW-1. While no VOCs were detected in well OW-1, Tert-Butyl Alcohol (TBA) and select inorganics were detected in well MW-10B above established concentration limits.

The Discharger submitted the *Proposed Corrective Action Plan Update for Landfill Gas System Improvements* (dated 6 September 2020), *Proposed Corrective Action Plan for the Loomis Landfill Enhanced Groundwater Extraction Trench* (dated 31 January 2020), and the *Groundwater Cut-Off Trench Evaluation Workplan* (dated 1 April 2020) "to potentially install a groundwater extraction trench and an upgradient groundwater

diversion ditch to help minimize the impact to groundwater from landfill waste constituents. Implementation of these plans is not required at this time.

The uppermost aquifer occurs in the weathered bedrock beneath the Facility. From mid-2006 to present, the average gradient has ranged from approximately 0.015 feet per foot (ft/ft) to 0.026 ft/ft. The results of drawdown testing of well MW-7A along the northwestern perimeter of the Facility reportedly indicate that the shallow aquifer has a hydraulic conductivity of approximately 1.3×10^{-3} centimeters per second. The direction of ground water flow is influenced by the topography, fractures and variations in the degree of weathering of the underlying bedrock. Groundwater flow is generally westerly but is diverted to the northwest and southwest around low permeability bedrock in the area of MW-9.

This Order requires the Discharger to submit an updated Water Quality Protection Standard once eight groundwater samples have been collected from new background monitoring well MW-11C. This Order also requires that the Discharger submit an updated SCAP, which includes new sampling points for the intermittent creek located southwest of the Facility.