CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2017-XXXX

WASTE DISCHARGE REQUIREMENTS
FOR
SIERRA COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
LOYALTON LANDFILL, CLASS III LANDFILL
OPERATION, CLOSURE, POST-CLOSURE MAINTENANCE, AND CORRECTIVE ACTION
SIERRA COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Central Valley Water Board) finds that:

1. Sierra County Department of Transportation and Public Works (hereinafter Discharger) owns and operates the Loyalton Landfill (facility) about 1.25 miles east-southeast of the Loyalton in the SW 1/4 of Section 17, T21N, R16E, MDB&M, as shown in Attachment A. The geographic coordinates of the site are Latitude 39.6698° north, Longitude -120.2219° west. The facility is a municipal solid waste (MSW) landfill regulated under authority given in Water Code section 13000 et seq.; California Code of Regulations, title 27 (Title 27), section 20005 et seq.; and 40 Code of Federal Regulations section 258 (a.k.a, Subtitle D) in accordance with State Water Resources Control Board (State Water Board) Resolution 93-62.

2. The following documents are attached to this Order and hereby incorporated into and made a part of this Order by reference:

   a. Attachment A – Site Location Map
   b. Attachment B – Site Plan
   c. Attachment C – Existing Monitoring Network
   d. Attachment D1 – Landfill Final Grading and Drainage Plan
   e. Attachment D2 – Southern Borrow Area Final Grading Plan
   f. Information Sheet
   g. Standard Provisions and Reporting Requirements (SPRRs) dated December 2015

3. Landfill operations are limited to the northern 28-acre portion of a 76 acre parcel off of Garbage Pit Road in Loyalton. The southern 48-acre portion consists of the south borrow area and open space, while 2.5 acres is used for access along Garbage Pit Road. The existing unlined landfill LF-1 occupies approximately 10.5 acres of the facility and is nearing final capacity. Additional waste was placed in two small areas (0.4 and 0.02 acres) south of LF-1 in an area that was previously planned for landfill development. Because the fill areas south of LF-1 are small and not contiguous with LF-1, LF-1's current developable footprint is considered to be limited to the 10.5 acres. No future landfill expansion is proposed. The County recently acquired 49 acres of land northward and eastward of the original landfill property from the City of Santa Clara to provide a buffer from adjacent lands and to allow for the expansion of the facility's permit

boundary. The waste disposal areas (i.e. LF-1 and two small southern areas) and property acquisition areas are shown in Attachment B. The facility is comprised of Assessor's Parcel Numbers (APN) 016-090-038.

4. On 27 May 2016, the Discharger submitted a Final Closure and Post-Closure Maintenance Plan for the landfill that was prepared on 15 March 2016. The information in the Final Closure and Post-Closure Maintenance Plan has been used in revising these waste discharge requirements (WDRs). The Final Closure and Post-Closure Maintenance Plan and supporting documents contain information related to this revision of the WDRs including:

   a. Closure of the landfill including installing a final cover consisting of an Evapotranspiration (ET) Cover

   b. Installing a landfill gas monitoring system

   c. Revising the monitoring system for the post-closure period

5. On 30 March 2012, the Central Valley Water Board issued WDR Order R5-2012-0026 in which the landfill waste management unit at the facility was classified as a Class III unit for the discharge of inert waste, non-hazardous waste, and municipal solid waste. This Order continues to classify the landfill unit as a Class III unit in accordance with Title 27 and specifies that after closure the discharge of waste at the Class III landfill unit is prohibited.

6. The existing and future landfill units authorized by this Order are described as follows:

Unit	Area	Liner/LCRS[1] Components	Unit Classification & Status
LF-1	10.5 acres	Unlined/No LCRS	Class III, ready for closure

[1] LCRS – Leachate collection and removal system

7. On-site facilities at the Loyalton Landfill include: a gate house, public disposal area, recyclable material storage building, recycling separation area, waste oil and oil filter storage facilities, hazardous materials storage locker, landfill disposal area, and two borrow areas. Water operations include material screening, recyclable separation and solid waste disposal.

8. On 9 October 1991, the United States Environmental Protection Agency (USEPA) promulgated federal MSW regulations under the Resource Conservation and Recovery Act (RCRA), Subtitle D. These regulations are under 40 Code of Federal Regulations section 258, and are hereafter referred to as either "Subtitle D" in reference to the RCRA federal law that required the regulations or 40 C.F.R. section 258. These regulations apply to all California Class II and Class III landfills that accept MSW. State Water Board Resolution 93-62 requires the Central Valley Water Board to implement in WDRs for

MSW landfills the applicable provisions of the federal MSW regulations that are necessary to protect water quality, and in particular the containment provisions and the provisions that are either more stringent or that do not exist in Title 27.

9. Subtitle D regulations apply to all California landfills that have ever accepted MSW as long as they accepted any wastes (MSW or non-MSW) on or after 9 October 1991 with some exemptions. Small rural landfills were exempt from meeting Subtitle D requirements if they have not impacted groundwater. LF-1 had been operating under the Subtitle D liner exemption for small rural landfills, but lost this exemption upon confirmation of certain groundwater impacts at the site in March 2003. Since then, the Discharger has limited landfill development to vertical expansion over the 2003 footprint so as to avoid the costs of placing a Subtitle D composite liner and leachate collection and removal system (LCRS), which would be required for any lateral expansion of the unit.

10. This Order implements the applicable regulations for discharges of solid waste to land through Prohibitions, Specifications, Provisions, and monitoring and reporting requirements. Prohibitions, Specifications, and Provisions are listed in Sections A through H of these WDRs below, and in the Standard Provisions and Reporting Requirements (SPRRs) dated December 2015 which are part of this Order. Monitoring and reporting requirements are included in the Monitoring and Reporting Program (MRP) R5-2017-XXXX and in the SPRRs. In general, requirements that are either in regulation or otherwise apply to all MSW landfills are considered to be “standard” and are therefore in the SPRRs. Any site-specific changes to a requirement in the SPRRs are included in the applicable section (A through H) of these WDRs, and the requirement in the WDRs supersedes the requirement in the SPRRs.

11. Title 27 contains regulatory standards for discharges of solid waste promulgated by the State Water Board and the California Department of Resources Recovery and Recycling (CalRecycle). In certain instances, this Order cites CalRecycle regulatory sections. Title 27, section 20012 allows the Central Valley Water Board to cite CalRecycle regulations from Title 27 where necessary to protect water quality provided it does not duplicate or conflict with actions taken by the Local Enforcement Agency in charge of implementing CalRecycle’s regulations.

WASTE CLASSIFICATION AND UNIT CLASSIFICATION

12. The Discharger proposes to continue to discharge inert and nonhazardous solid waste, including municipal solid waste to unlined Class III LF-1 landfill unit to reach final grades. These classified wastes may be discharged only in accordance with Title 27, Resolution 93-62, and Subtitle D as required by this Order.

13. Active unlined landfill units at the facility are “existing units” under Title 27 that were permitted before 27 November 1984. The Existing Footprint for the active unlined areas of the landfill is shown on Attachment B.

14. The unlined unit does not have a LCRS to collect leachate from LF-1.

SITE DESCRIPTION

15. The site is located on the southeastern edge of the Sierra Valley in the eastern Sierra Nevada Mountains. The local topography generally consists of gently sloping foothill terrain. The landfill was sited in the eroded trough of an intermittent stream that flowed west across the site prior to landfill development. The existing site generally slopes from east to west from approximately 5,070 feet MSL) to (5,010 feet MSL).

16. Land surrounding the facility is generally open range scrubland vegetated with low-lying sage brush. Surrounding land uses are generally limited to agricultural and agricultural community expansion.

17. A 2011 Department of Water Resources (DWR) well survey conducted by the Discharger's consultant identified a total of 9 active domestic supply wells within a one mile radius of the site. One industrial supply well (also used as a landfill monitoring well) that services the County's maintenance yard was also identified adjacent to the landfill facility. Of the 10 supply wells identified in the survey, only the onsite supply well is within 1,000 yards of the facility. The City of Loyalton obtains its drinking water from two municipal supply wells and one spring source in the Loyalton area. The closest of these sources is approximately 1.3 miles west of the facility.

18. The Sierra Valley is a Pleistocene age lake basin shaped over geologic time by extensive faulting and glacial action. The site lies on broad alluvial fan deposits of the Bald Mountain Range in the southeastern part of the valley. Soil and rock types in the area generally consist of Quaternary sediments (i.e., debris flows, stream alluvium, glacial till and lake deposits) to about 200 feet bgs. Underlying this upper layer are Tertiary volcanic deposits (e.g., tuffs) and then metavolcanic Jurassic and Cretaceous-age basement rock (e.g., granite).

19. A 1975 United States Department of Agriculture soil survey classified most of the surface soils at the site as Badenaugh series. Such soil consists of medium to high permeability cobbly and sandy loams1.

20. Soil borings at the site indicate that the site is underlain by interbedded layers of sands, gravels, silts, and clays. Testing of two undisturbed, fine-grained (silty sand) samples indicated laboratory permeabilities of 1 x 10–6 cm/sec and 2 x 10–8 cm/sec, respectively.

21. Based on a site-specific seismic analysis using probabilistic assessment methods, the controlling maximum probable earthquake (MPE) for the site is a moment of magnitude

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1 See report Soil Survey of *Sierra Valley Area, California, Parts of Sierra, Plumas and Lassen Counties*, U.S. Department of Agriculture, Soil Conservation and Forest Service, October 1975.

6.2 event at a rupture distance of 31.4 kilometers from the site. It is estimated that a MPE event would produce a peak ground acceleration of 0.20 g at the site with a return period of 100 years. It is also estimated that an event with 475 year return period will produce a peak ground acceleration of 0.32 g at the site.

22. The facility receives an average of 18.8 inches of precipitation per year as calculated using a 30-year normal mean precipitation for 1981-2010 estimated by the Parameter-elevation Relationships on Independent Slopes Model (PRISM) from the data measured at the Loyalton Station (1948-1972). The estimated pan evaporation is estimated to range between 58 and 68 inches per year, based on the evaporation data from the Fleming Fish and Game Station and the Vinton Station. The mean evapotranspiration is 53.3 inches per year for the Loyalton Landfill based on the Desert Research Institute, Western Regional Climate Center records.

23. The 100-year, 24-hour precipitation event for the facility is estimated to be 5.8 inches, based on the National Oceanic and Atmospheric Administration (NOAA) Point Precipitation Frequency Estimates for Loyalton, CA dated 16 October 2015.

24. The waste management facility is not within a 100-year floodplain based on the Federal Emergency Management Agency's Flood Insurance Rate Map, Community Panel Number 06091C0236C, dated February 2, 2012.

SURFACE WATER CONDITIONS AND MONITORING

25. The Water Quality Control Plan for Sacramento and San Joaquin River Basins, Fourth Edition (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.

26. An earthen dam (constructed on the upstream side of the site prior to landfill startup in 1977) diverts an intermittent stream around the landfill via an earthen channel to the southern side of the site. The earthen channel discharges to the intermittent stream south of the site that drains the area.

27. Currently, surface water runoff from the landfill is collected in a network of drainage swales and culverts that direct surface water westward across the site to an intermittent stream south of the property. Following closure, additional drainage controls are proposed including installation of culverts to collect surface water runoff from the top deck and installation of a sedimentation basin to intercept flow from the landfill and former borrow area south of the landfill. See Attachments D1 and D2 for the final closure surface water drainage.

28. The site drains to one of several intermittent streams originating in the mountains east of the site. This intermittent stream flows to Smithneck Creek (approximately one mile to the SW); then to the Middle Fork of the Feather River (west of Little Last Chance Creek); the Feather River (including Lake Oroville); and thence to the Sacramento River.

29. The designated beneficial uses of Middle Fork of the Feather River (between Little Last Chance Creek and Lake Oroville) are municipal and domestic supply; water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; spawning, reproduction and/or early development; and wildlife habitat.

30. The existing surface monitoring network for the landfill units consists of background monitoring points S-1 and S-4 and downstream monitoring points S-2, S-3, S-5, and S-6 as shown on Attachment C.

UNSATURATED ZONE CONDITIONS AND MONITORING

31. The minimum separation of waste from the highest measured groundwater is estimated to be about 22 feet.

32. As part of a 1989 Solid Waste Assessment Test (SWAT) investigation, two lysimeters (LYS-2 and LYS-3) were installed west of the landfill footprint near wells MW-2 and MW-3. Subsequent sampling of the lysimeters showed the following results for volatile organic compounds (VOCs) in soil pore liquid:

1989 Lysimeter Monitoring Results

Constituent	*Concentration*	
	LYS-2[1,2]	LYS-3[3]
VOCs, µg/L		
Ethyl benzene	----	ND -1.3
Xylenes, total	----	ND - 1.3
Methylene chloride	ND	21 - 290
1,1,1-Trichloroethane	ND	ND -1.5

1. "----" means constituent not included in sample analysis.
2. Based on one sampling event conducted in July 1989.
3. Based on two sampling events conducted in May 1989.

No lysimeter monitoring has been conducted at the site since completion of the SWAT investigation and the lysimeters installed as part of the SWAT have since been destroyed or are no longer operable.

33. In 1991, as part of an air quality SWAT required by the California Air Resources Board, the Discharger installed four perimeter gas probes (GPs-1 to 4) at the landfill. Each probe was installed within about 29 feet of the landfill waste boundary and screened from 2 to 14 feet bgs. An additional gas monitoring well (GP-5) and a temporary gas probe (later abandoned) were also installed in waste within the landfill unit. TO-14 analysis of the in-situ well and probe showed relatively low concentrations of several VOCs in landfill gas, including, but not limited to, tetrachloroethylene (PCE) at 353 ppbv and trichloroethylene (TCE) at 495 ppbv. PCE was also detected in two of the perimeter probes at much lower concentrations (< 30 ppbv). No other VOCs were detected in the perimeter wells. Gas well GP-4 was subsequently destroyed in landfill operations.

34. In June 2011, CalRecycle staff installed three soil gas vapor probes (SGVPs-1 to 3) to a depth of approximately 10 feet along the landfill unit property boundary at that time. Subsequent monitoring of the gas wells and probes indicated methane in excess of 5% by volume in probes GP-2 and SGVP-3. In response to these violations, the LEA required Sierra County to implement landfill gas remediation. The Discharger acquired 49 acres of land north and east of the landfill to expand the landfill's compliance boundary. Compliance with CalRecycle regulations is now measured at the new property boundary. Sierra County installed additional gas probes to monitor LFG.

35. The existing LFG monitoring probes at the landfill consist of GP-1 to GP-3, GP-5, SGVP-1 to SGVP-3, P-1 to P-19, MW-4, MW-8 to MW-10, HLA-5, and PW-1 to PW-5 as shown on Attachment C. GP-1 and GP-5 are landfill gas probes within the waste mass; however, GP-5 was recently buried with waste and is no longer accessible.

GROUNDWATER CONDITIONS AND MONITORING

36. The designated beneficial uses of the groundwater, as specified in the Basin Plan, are domestic and municipal water supply, agricultural supply, industrial service supply, and industrial process supply.

37. The first encountered groundwater ranges from about 30 to 80 feet below the native ground surface. The upper water-bearing zone at the site occurs in sand and gravel lenses interbedded with low permeability silts and clays. Due to the limited connectivity and the presence of fine-grained strata, the upper water-bearing zone is believed to be confined or semi-confined in some locations.

38. Monitoring data from the 2016 Semi-Annual Report indicate background groundwater quality for first encountered groundwater has electrical conductivity (EC) ranging between 120 and 270 micromhos/cm, with total dissolved solids (TDS) ranging between 120 and 230 milligrams per liter (mg/L).

39. The direction of groundwater flow is generally toward the northwest. Based on the 2016 Semi-Annual Monitoring Report, the estimated average groundwater gradient is approximately 0.0049 feet per foot. The estimated average groundwater velocity is from about 0.1 to 5 ft/yr, based on permeability ranging from 1 x 10–6 cm/sec to 1 x 10–4 cm/sec and porosity ranging from 10% to 25%.

40. The existing groundwater monitoring network for the landfill units consists of background monitoring well MW-6, and detection monitoring wells MW-2, MW-3, MW-5, MW-7, MW-8, MW-9, MW-10, and Maintenance Yard (MW-MY) as shown on Attachment C. All wells, except MW-MY, are screened in the upper portion of the upper water bearing zone. MW-MY, an active maintenance yard water supply well, is screened in the middle portion of the upper water bearing zone. Another well historically screened in the middle

portion of the upper water bearing zone, MW-5 (old), was abandoned in October 2009 [2] after damage to the well was discovered. The replacement well, MW-5, was screened in the upper portion of the upper water bearing zone. Two other monitoring wells, MWs-1 and 4 were screened too high (i.e., above the upper water bearing zone in the unsaturated zone) and have been historically dry. One of these wells, MW-4, is now used for soil gas monitoring.

41. At the time this Order was adopted, the Discharger's detection monitoring program for groundwater at the landfill satisfied the requirements contained in Title 27.

42. Volatile organic compounds (VOCs) are often detected in a release from a MSW landfill and are often associated with releases of landfill gas rather than leachate. Since volatile organic compounds are not naturally occurring and thus have no background value, they are not amenable to the statistical analysis procedures contained in Title 27 for the determination of a release of wastes from a landfill unit. Title 27, sections 20415(e)(8) and (9) allows the use of a non-statistical evaluation of monitoring data that will provide the best assurance of the earliest possible detection of a release from a landfill unit in accordance with Title 27, sections 20415(b)(1)(B). However, Title 27 does not specify a specific method for non-statistical evaluation of monitoring data.

43. The Central Valley Water Board may specify a non-statistical data analysis method pursuant to Title 27, section 20080(a)(1). Water Code section 13360(a)(1) allows the Central Valley Water Board to specify requirements to protect groundwater or surface waters from leakage from a solid waste site, which includes a method to provide the best assurance of determining the earliest possible detection of a release.

44. In order to provide the best assurance of the earliest possible detection of a release of non-naturally occurring waste constituents from a landfill unit, the SPRRs specify a non-statistical method for the evaluation of monitoring data for non-naturally occurring compounds. The specified non-statistical method for evaluation of monitoring data provides two criteria (or triggers) for making the determination that there has been a release of non-naturally occurring waste constituents from a landfill unit. The presence of two non-naturally occurring waste constituents above their respective method detection limit (MDL), or one non-naturally occurring waste constituent detected above its practical quantitation limit (PQL) [a.k.a, laboratory reporting limit (RL)], indicates that a release of waste from a Unit has occurred. Following an indication of a release, verification testing must be conducted to determine whether there has been a release from the landfill unit or the detection was a false detection. The detection of two non-naturally occurring waste constituents above the MDL as a trigger is appropriate due to the higher risk of false-positive analytical results and the corresponding increase in sampling and analytical expenses from the use of one non-naturally occurring waste constituent above its MDL as a trigger.

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[2] See April 2010 report *Monitoring Well MW-5 Replacement Work*, prepared by Avalex Inc.

45. For a naturally occurring constituent of concern, the Title 27 requires concentration limits for each constituent of concern be determined as follows:

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

    b. By an alternate statistical method meeting the requirements of Title 27, section 20415(e)(8)(E).

46. The Discharger submitted a 3 March 2015 Water Quality Protection Standard (WQPS) report and a 28 December 2016 Update to the WQPS report proposing statistical data analysis methods to calculate concentration limits for each monitored constituent in accordance with Title 27. The WQPS report proposed to use Interwell and Intrawell data analysis to calculate tolerance limits or prediction limits for the monitored constituents. Interwell comparisons are proposed for Total Dissolved Solids, Total Hardness, Calcium, Chloride, Electrical Conductivity, Chemical Oxygen Demand, Alkalinity, Magnesium, Manganese, Barium, Arsenic, and Nickel. Intrawell analysis are proposed for constituents which exhibit significant spatial variability including pH, Vanadium, Nitrate, Sulfate, Dissolved Oxygen, Sodium, and Potassium.

47. For the Loyalton Landfill site that had waste in place prior to the start of monitoring, staff conclude that Interwell analysis is necessary to evaluate compliance. This is consistent with other Title 27 landfill sites where waste was in place before "background" data was assembled. Therefore, this Order identifies Interwell analysis as the approved WQPS method. The WQPS report and concentration limits are included in MRP R5-2017-XXXX.

GROUNDWATER CORRECTIVE ACTION

48. Low concentrations of VOCs have been detected in groundwater at the site since 1999. The range of historical VOC concentrations within the last year is summarized as follows:

	April 2015 to April 2016 VOC Concentration Range (µg/L)[2]		
	Down Gradient		*Side Gradient*
Constituent	MW-8	MW-MY	MW-5 (New)
Dichlorodifluoromethane (Freon 12)	0.97 – 1.4	ND – 0.8	ND – 0.71
Chloroethane	ND – 0.6[3]	ND	ND
Cis-1,2-Dichloroethene	ND – 0.89[3]	ND	ND

1. ND = non-detect
2. µg/L = micrograms per liter
3. Constituent detected in this well once during three sampling events between April 2015 and April 2016.

49. In additional to trace VOCs, landfill gas probe MW-8 show detections of methane as high as 55%. The Discharger submitted an Evaluation and Monitoring Program Report to evaluate the source of the VOCs and attributed the primary source of VOCs to the partitioning of constituents within landfill gases beneath the site from the vapor phase to aqueous phase. Subsequently, the Discharger submitted an Engineering Feasibility Study for corrective action and recommended installation of a passive landfill gas system. On 7 December 2015, Water Board staff issued a Water Code Section 13267 Order for Technical Report requiring the Discharger to submit a work plan, install a LFG vent and monitoring system, and submit a report evaluating the effectiveness by 1 September 2017. The Discharger installed a pilot passive landfill gas control system in late 2016 and is evaluating the effectiveness of the passive landfill gas control system. The 13267 Order requires the Discharger to continue operating and monitoring the pilot passive landfill gas control system, and if VOCs or other waste constituents continue to be detected outside the waste management unit, then by 1 September 2017, submit a proposal and schedule to expand the vent/well system.

50. The current pilot passive landfill gas control system consists of five passive gas vents (PGV-1 to PGV-5) and four landfill gas monitoring probes (LGP-1 to LGP-4). Each landfill gas monitoring probe was constructed with a shallow, intermediate, and deep monitoring points.

CONSTRUCTION

51. The existing landfill was not constructed with a liner system and LCRS. All landfill drainage facilities, including overside drains, perimeter ditches, pipelines, culverts, and outfall were designed to handle a 100-year, 24-hour storm event.

52. The landfill qualified for the small rural landfill liner exemption under Subtitle D until 2003. In a 13 March 2003 letter, Board staff notified the Discharger that the landfill unit no longer qualified for the Subtitle D liner exemption, based on evidence of volatile organic compounds in groundwater at the site. The letter indicated that any expansion of the landfill beyond existing waste boundaries would require a Subtitle D containment system and requested a Title 27 performance demonstration for any proposed liner system.

53. There are no plans for future expansion of the landfill. The Discharger estimates that the landfill will reach capacity in October 2017. This Order includes requirements for closure of the existing landfill unit, and prohibits the construction of new landfill units.

54. The Discharger proposes a liner system which will be designed, constructed, and operated in accordance with the criteria set forth in Title 27, and the provisions in State Water Board Resolution 93-62 for municipal solid wastes.

LANDFILL CLOSURE

55. On 17 June 1993, the State Water Board adopted Resolution 93-62 implementing a State Policy for the construction, monitoring, and operation of municipal solid waste landfills that is consistent with the federal municipal solid waste regulations promulgated under Title 40, Code of Federal Regulations section 258 (a.k.a, Subtitle D). Resolution 93-62 requires the construction of a specified composite liner system at new municipal solid waste landfills, or expansion areas of existing municipal solid waste landfills, that receive wastes after 9 October 1993. Resolution 93-62 also allows the Central Valley Water Board to consider the approval of engineered alternatives to the prescriptive standard. Section III.A.b. of Resolution 93-62 requires that the engineered alternative liner systems be of a composite design similar to the prescriptive standard.

56. Title 27, section 20080(b) allows the Central Valley Water Board to consider the approval of an engineered alternative to the prescriptive standard. In order to approve an engineered alternative in accordance with Title 27, sections 20080(c)(1) or (2), the Discharger must demonstrate that the prescriptive design is unreasonably and unnecessarily burdensome and will cost substantially more than an alternative which will meet the criteria contained in Title 27, section 20080(b), or would be impractical and would not promote attainment of applicable performance standards. The Discharger must also demonstrate that the proposed engineered alternative liner system is consistent with the performance goal addressed by the particular prescriptive standard, and provides protection against water quality impairment equivalent to the prescriptive standard in accordance with Title 27, section 20080(b)(2).

57. Water Code section 13360(a)(1) allows the Central Valley Water Board to specify the design, type of construction, and/or particular manner in which compliance must be met in waste discharge requirements or orders for the discharge of waste at solid waste disposal facilities.

58. Title 27, section 21090 provides the minimum prescriptive final cover components for unlined landfills consisting of, in ascending order, the following layers:

    a. Two-foot soil foundation layer.
    b. One-foot soil low flow-hydraulic conductivity layer, less than $1x10^{-6}$ cm/s or equal to the hydraulic conductivity of any bottom liner system.
    c. One-foot soil erosion resistant/vegetative layer.

59. Title 27 allows engineered alternative final covers provided the alternative design will provide a correspondingly low flow-through rate throughout the post-closure maintenance period.

60. The Discharger submitted a 15 March 2016 Final Closure and Post-Closure Maintenance Plan for closure and post-closure maintenance of the unlined landfill unit at the facility. Based on the existing waste stream, the Discharger expects to reach

capacity in October 2017 and begin construction of the final cover in April 2018. Closure dates may vary some depending on the actual waste stream received at the landfill, and the landfill may close prior to October 2017.

61. The Discharger proposes a water balance or evapotranspiration (ET) final cover for closure of the landfill LF-1 and the two small, southern waste disposal areas. The proposed final cover consists of 5.5 feet of soil.

62. The Discharger submitted an Alternative Cover Design Report for the proposed final cover as part of the 15 March 2016 Final Closure and Post-Closure Maintenance Plan includes an analysis of the proposed engineered alternative final cover. The proposed cover consists of, in ascending order, the following layers:

    a. One-foot soil foundation layer.
    b. 3.5-feet soil bulk layer – the bulk layer provides water storage capacity.
    c. One-foot soil erosion resistant/vegetative layer.

63. An ET cover prevents infiltration by storing water during the wet months of the year and releasing water during the dry months of the year through evapotranspiration. The Discharger designed the cover by collecting soil samples from the borrow area and analyzed the samples to estimate the soil water storage capacity. The associated modeling showed that a 3.5-feet thick soil bulk layer has enough storage capacity to limit infiltration during the wet months of the year. The design also includes a variety of native plant species for the revegetation mix, as shown in the table below.

Final Cover Revegetation Mix

Botanical Name	Common Name/Variety	Pounds Per Acre
Achnatherum occidentale	Western needlegrass	1.0
Aesclepias speciosa	Showy milkweed	0.5
Artemisia tridentata ssp vaseyana	Mtn sagebrush	0.5
Agropyron cristatum	Crested wheatgrass	2.0
Chrysothmnus nauseosus	Rabbitbrush (mid August)	0.5
Elymus elymoides	Squirreltail	2.0
Elymus trachycaulus	Slender wheatgrass, ‘pryor’	3.0
Eriogonum umbellatum	Sulphur buckwheat	1.0
Lolium multflorum	Annual ryegrass	5.0
Lupinus argenteus	Silvery lupine	3.0
Purshia tridentata	Bitterbrush (small animals)	1.0

64. The Discharger compared the ET cover to a prescriptive cover by presenting results from previous studies comparing different cover systems and modeling the infiltration through a prescriptive cover. The previous investigations and the model both showed that an evapotranspiration cover allowed the least amount of liquid to infiltrate through the cover. Furthermore, site conditions such as deep frost penetration and plant root

penetration accelerate desiccation a prescriptive compacted clay layer. The Discharger has demonstrated that the engineered alternative final cover meets the performance goals of Title 27 and that it is equivalent to the prescriptive standard. This Order requires the Discharger to install monitoring devices at two locations to monitor the evapotranspiration cover effectiveness.

65. Side slopes for the closed landfill will be sloped at 4H:1V. No benches are proposed along the side slopes because the landfill height is less than 50 vertical feet.

66. The top deck is proposed to be graded at four percent to the southwest. The landfill's grades have been designed to minimize erosion and reduce storm water runoff velocities, and to accommodate differential settlement. Drainage control features including diversion berms, ditches, and culverts are designed to accommodate flows from 100-year, 24-hour storm events.

67. The 15 March 2016 Final Closure and Post-Closure Maintenance Plan includes a stability analysis for the LF-1 proposed final cover pursuant to Title 27, section 21750(f)(5). The static factor of safety is 4.9 and the dynamic factor of safety is 2.6 for the Maximum Probable Earthquake (MPE). The Discharger's static and dynamic stability analysis demonstrates that the side slopes of the final cover will be stable in accordance with the requirements of Title 27.

68. Based on the remaining airspace, the Discharger expects to reach final capacity of the landfill in October 2017. The Discharger proposes to begin closure activities in November 2017 which include field surveying and grade staking. Since the weather conditions during the winter months limit construction activities, construction activities will cease during the winter. Construction of the final cover will commence in April 2018 when the weather is typically suitable for construction.

69. Pursuant to Title 27, section 21090(e)(1), this Order requires a survey of the final cover following closure activities for later comparison with iso-settlement surveys required to be conducted every five years.

70. This Order approves the proposed final cover and requires that an updated final closure and post-closure maintenance plan, design documents, and CQA plan be submitted for review and approval at least 90 days prior to commencing construction of the final cover.

LANDFILL POST-CLOSURE MAINTENANCE

71. The 15 March 2016 Final Closure and Post-Closure Maintenance Plan addresses closure and post-closure maintenance of LF-1. The plan includes inspection, maintenance, and monitoring of the landfill during the post-closure maintenance period, and includes a post-closure maintenance cost estimate for the entire facility. Inspection and maintenance will include the condition of the final cover, drainage features, groundwater monitoring wells, unsaturated zone monitoring points, access roads,

groundwater corrective action system, and site security. The plan will be implemented for a minimum period of 30 years or until the waste no longer poses a threat to water quality, whichever is greater.

72. 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(e)(2), this Order requires iso-settlement maps to be prepared and submitted every five years.

73. The completed final cover will be periodically inspected for damage. Damage will be repaired and tested for adequacy based on the closure CQA Plan.

FINANCIAL ASSURANCES

74. Title 27, sections 21820 and 22206 require a cost estimate for landfill closure. The cost estimate must be equal to the cost of closing the landfill at the point in its active life when the extent and manner of operation would make closure the most expensive. When closing units in phases, the estimate may account for closing only the maximum area or unit of a landfill open at any time. The Discharger's 15 March 2016 Final Closure and Post-Closure Maintenance Plan includes a cost estimate for landfill closure. The lump sum estimate is for the cost to close largest future area needing closure at any one time. The total amount of the closure cost estimate in 2016 dollars is $1,930,000. This Order requires that the Discharger maintain financial assurance with the California Department of Resources Recycling and Recovery (CalRecycle) in at least the amount of the closure cost estimate. As of 28 February 2017, the balance of the closure fund is $1,939,648.

75. Title 27, sections 21840 and 22211 requires a cost estimate for landfill post-closure maintenance. The Discharger's 15 March 2016 Final Closure and Post-Closure Maintenance Plan includes a cost estimate for landfill post-closure maintenance. The amount of the cost estimate for post-closure maintenance in 2016 dollars is $2,841,000 for 30 years and $94,700 annually. This Order requires that the Discharger maintain financial assurance with CalRecycle in at least the amount of the post-closure maintenance cost estimate adjusted annually for inflation. The Discharger funds the post-closure maintenance costs with a Pledge of Revenue for the annual cost of $94,700.

76. Title 27, section 22221 requires a cost estimate for corrective action of all known or reasonably foreseeable releases. The Discharger submitted a 31 October 2012 cost estimate of $389,266 with a maximum annual cost of $65,400 for corrective action of all known or reasonably foreseeable releases. As of 28 February 2017, the Discharger maintains a corrective action fund with a balance of $60,833 and proposes to rely upon a Pledge of Revenue commitment to meet the financial assurances associated with corrective action. This Order requires that the Discharger maintain financial assurance with the CalRecycle in at least the amount of the cost estimate adjusted annually for

inflation. The annual pledge of revenue certification dated 3 June 2016 identifies that the Discharger funds the corrective action costs with a Pledge of Revenue for the maximum annual cost of $69,275.

77. Title 27 section 22100(b) requires owners and operators of disposal facilities that are required to be permitted as solid waste landfills to provide cost estimates for initiating and completing corrective action for known or reasonably foreseeable releases of waste. Title 27 section 22101 requires submittal of a Water Release Corrective Action Estimate and a Non-Water Release Corrective Action Cost Estimate. The Water Release Corrective Action Estimate is for scenarios where there is statistically significant evidence of a release of waste to groundwater or surface water when comparing point-of-compliance analyte concentrations to background concentrations. The Non-Water Release Corrective Action Cost Estimate is for complete replacement of the landfill final cover system, however a site-specific corrective action plan pursuant to Title 27 section 22101(b)(2) may be provided in lieu of the final cover replacement cost estimate. Title 27 section 22221 requires establishment of financial assurances in the amount of an approved Water Release Corrective Action Estimate or an approved Non-Water Release Corrective Action Cost Estimate, whichever is greater.

78. The corrective action costs detailed above is for the Water Release Corrective Action Estimate, which exceeds the Non-Water Release Corrective Action Cost Estimate.

CEQA AND OTHER CONSIDERATIONS

79. A final EIR for landfill development (Final Environmental Impact Report for Loyalton Sanitary Landfill, prepared by Harding Lawson Associates) was completed in 1973 and subsequently certified by the Sierra County Board of Supervisors.

80. The action to revise waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resource Code section 21000, et seq., and the CEQA guidelines, in accordance with Title 14, section 15301.

81. This order implements:

    a. *The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition*;

    b. The prescriptive standards and performance goals of California Code of Regulations, title 27, section 20005 et seq., effective 18 July 1997, and subsequent revisions;

    c. State Water Board Resolution 93-62, *Policy for Regulation of Discharges of Municipal Solid Waste*, adopted 17 June 1993, and revised on 21 July 2005.

    d. The applicable provisions of Title 40 C.F.R. section 258 “Subtitle D” federal regulations as required by State Water Board Resolution 93-62.

82. Based on the threat and complexity of the discharge, the facility is determined to be classified 2-B as defined below:

    a. Category 2 threat to water quality, defined as, “Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance.”

    b. Category B complexity, defined as, “Any discharger not included in Category A that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal), or any Class 2 or Class 3 waste management units.”

83. The *Statement of Policy With Respect to Maintaining High Quality of Waters in California*, SWRCB Order WQ 68-16 (hereinafter "Anti-Degradation Policy") was adopted by the State Water Board in October 1968. Anti-Degradation Policy limits the Board’s discretion to authorize the degradation of "high-quality waters." This policy has been incorporated into the Board’s Basin Plans. "High-quality waters" are defined as those waters where water quality is more than sufficient to support beneficial uses designated in the Board’s Basin Plan. Whether or not a water is a high-quality water is established on a constituent-by-constituent basis, which means that an aquifer can be considered a high-quality water with respect to one constituent, but not for others. (SWRCB Order No. WQ 91-10.)

84. Anti-Degradation Policy applies when an activity discharges to high quality waters and will result in some degradation of such high quality waters. When it applies, the Policy requires that WDRs reflect best practicable treatment or control (BPTC) of wastes and that any degradation of high quality waters (a) will be consistent with the maximum benefit to the people of the State, and (b) will not result in an exceedance of water quality objectives. If the activity will not result in the degradation of high quality waters, Anti-Degradation Policy does not apply, and the Discharger need only demonstrate that it will use "best efforts" to control the discharge of waste.

85. Anti-Degradation Policy does not apply to the discharge of waste to Loyalton Landfill. 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.

86. Water Code section 13267(b) provides that: "In conducting an investigation specified in subdivision (a), the Regional Board may require that any person who has discharged, discharges, or is suspected of having discharge or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden,

including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.

87. The technical reports required by this Order and the attached "Monitoring and Reporting Program R5-2017-XXXX" are necessary to assure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.

PROCEDURAL REQUIREMENTS

88. All local agencies with jurisdiction to regulate land use, solid waste disposal, air pollution, and to protect public health have approved the use of this site for the discharges of waste to land stated herein.

89. The Central Valley Water Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

90. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.

91. Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final 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 may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

IT IS HEREBY ORDERED, pursuant to California Water Code sections 13263 and 13267, that Order R5-2012-0026 is rescinded except for purposes of enforcement, and that Sierra County Department of Transportation and Public Works, their agents, successors, and assigns, in order to meet the provisions of Division 7 of the California Water Code and the regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS

1. The discharge of 'hazardous waste' or 'designated waste' is prohibited. For the purposes of this Order, the term 'hazardous waste' is as defined in California Code of Regulations, Title 23, section 2510 et seq., and 'designated waste' is as defined in Title 27.

2. The discharge treated wood waste is prohibited.

3. The discharge of asbestos waste is prohibited.

4. The recirculation or discharge of liquids including leachate or landfill gas condensate is prohibited.

5. Expansion of the landfill is prohibited.

6. The discharge of wastes outside of a landfill unit, or portions thereof specifically designed for their containment, is prohibited.

7. The cessation of any corrective action measure (e.g. landfill gas extraction) including the pilot passive landfill gas control system is prohibited without written Executive Officer approval. If routine maintenance or a breakdown results in cessation of corrective action for greater than 24 hours, the Discharger shall notify Board staff.

8. Following receipt of the last load of waste, or by 31 October 2017, the discharge of any waste to the landfill is prohibited.

9. The Discharger shall comply with all Standard Prohibitions listed in Section C of the Standard Provisions and Reporting Requirements (SPRRs) dated December 2015 which are attached hereto and made part of this Order by reference.

B. DISCHARGE SPECIFICATIONS

1. The Discharger shall only discharge inert and non-hazardous waste including municipal solid waste.

2. By 15 November 2017, intermediate cover shall be placed on the three waste disposal areas.

3. The Discharger may not use any material as alternative daily cover (ADC) until the Discharger has demonstrated it meets the requirements in Title 27, section 20705, and the Discharger has received written approval from Board staff that it may begin using the material as ADC.

4. The Discharger shall use approved ADC only in internal areas of the landfill that do not drain outside of the limits of the contiguous landfill units unless the Discharger demonstrates that runoff from the particular ADC is not a threat to surface water quality and the demonstration has been approved in writing. This demonstration may take removal of sediment or suspended solids into account for landfills where surface water drains to a sedimentation basin.

5. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order. If the Discharger is unable to remove and relocate the waste, the Discharger shall submit a report to the Central Valley Water Board explaining how the discharge occurred, why the waste cannot be removed, and any updates to the waste acceptance program necessary to prevent re-occurrence. If the waste is a hazardous waste, the Discharger shall immediately notify the Department of Toxic Substances Control.

6. The Discharger shall comply with all Standard Discharge Specifications listed in Section D of the SPRRs dated December 2015 which are part of this Order.

C. FACILITY SPECIFICATIONS

1. The Discharger shall comply with all Standard Facility Specifications listed in Section E of the SPRRs dated December 2015 which are part of this Order.

D. CONSTRUCTION SPECIFICATIONS

1. This Order does not allow construction of additional landfill modules.

2. The Discharger shall comply with all Standard Construction Specifications listed in Section F of the SPRRs dated December 2015 which part of this Order.

3. The Discharger shall comply with all Storm Water Provisions listed in Section L of the SPRRs dated December 2015 which are part of this Order.

E. CLOSURE AND POST-CLOSURE MAINTENANCE SPECIFICATIONS

1. The Discharger prepared a *Final Closure and Post-Closure Maintenance Plan* on 15 March 2016 in anticipation of reaching the landfill final capacity in October 2017 and beginning closure.

2. Closure construction shall begin no later than April 2018 and shall be completed by 15 October 2018.

3. The Discharger shall close LF-1 and the two small southern waste areas with a final cover as proposed in the 15 March 2016 *Final Closure and Post-Closure Maintenance Plan* and as approved by this Order. The components of the approved evapotranspiration (ET) final cover as proposed in the *Final Closure and Post-Closure Maintenance Plan* and as listed in Finding 62, consist of:

   a. One-foot soil foundation layer.

   b. 3.5-feet soil bulk layer – the bulk layer provides water storage capacity.

   c. One-foot soil erosion resistant/vegetative layer.

4. The Discharger shall obtain revised WDRs prior to closure with any other final cover design than the design or designs approved in this Order, except when modifications are necessary for problematic areas of the final cover needing repair so long as the modifications are approved by Central Valley Water Board staff.

5. A minimum of two monitoring devices shall be installed during construction (e.g. pan lysimeters, transducers, or other sensors) to evaluate the effectiveness of the final cover during the post-closure period. One of these devices shall consist of a pan lysimeter that can be physically sounded to determine the presence or absence of water.

6. The Discharger shall close the landfill with side slopes at steepness of 4H:1V or less, and top deck areas shall be sloped at four percent or greater.

7. The Discharger shall install a landfill gas extraction system for the closed landfill unit during landfill closure, and landfill gas shall be vented /extracted from closed landfill units until such time that the landfill gas is no longer a threat to water quality as documented by the Discharger and approved by the Executive Officer.

8. As long as the Discharger can show that the passive vents are adequate to control LFG and bring the landfill back into compliance with the WDRs, the landfill gas extraction system may consist of passive landfill gas vents similar to those installed as part of the pilot passive landfill gas control system. However, if the passive vent system is inadequate to control landfill gas and bring the landfill back into compliance with the WDRs then, per the 7 December 2015 Water Code Section 13267 Order, the Discharger will be required to implement additional control measures including active gas extraction.

9. The Discharger shall test the critical interfaces of the final cover in a laboratory to ensure minimum design shear strengths are achieved and include the results in the final construction quality assurance documentation report.

10. The Discharger shall ensure that the vegetative/erosion resistant layer receives necessary seed, binder, and nutrients to establish the vegetation proposed in the final

closure plan. The Discharger shall install necessary erosion and sedimentation controls to prevent erosion and sediment in runoff from the closed landfill during the period the vegetation is being established.

11. The Discharger shall comply with all Standard Closure and Post-Closure Specifications listed in Section G and all Standard Construction Specifications that are applicable to closure in Section F of the SPRRs dated December 2015 which are part of this Order.

F. FINANCIAL ASSURANCE SPECIFICATIONS

1. The Discharger shall obtain and maintain assurances of financial responsibility with CalRecycle for closure and post-closure maintenance for the landfill in at least the amounts of $1,939,648 and $2,841,000 adjusted for inflation annually. A report regarding financial assurances for closure and post-closure maintenance shall be submitted to the Central Valley Water Board by **1 June of each year**. This may be the same report that is submitted to CalRecycle for this purpose. If CalRecycle determines that either the amount of coverage or the mechanism is inadequate, then within 90 days of notification, the Discharger shall submit an acceptable mechanism to CalRecycle and the Central Valley Water Board for at least the amount of the approved cost estimate.

2. The Discharger shall update the final closure and post-closure maintenance plan (PCPCMP) any time there is a change that will increase the amount of the closure and/or post-closure maintenance cost estimate. The updated FCPCMP shall be submitted to the Central Valley Water Board, the Local Enforcement Agency, and CalRecycle. The FCPCMP shall meet the requirements of Title 27, section 21769(b), and include a lump sum estimate of the cost of carrying out all actions necessary to close each Unit, to prepare detailed design specifications, to develop the final closure and post-closure maintenance plan, and to carry out the first thirty years of post-closure maintenance. Reports regarding financial assurance required in F.1 above shall reflect the updated cost estimate.

3. The Discharger shall obtain and maintain assurances of financial responsibility with CalRecycle for initiating and completing corrective action for all known or reasonably foreseeable releases from the landfill in at least the amount of the annual inflation-adjusted cost estimate of $389,266 with a maximum of $69,275 annually. A report regarding financial assurances for corrective action shall be submitted to the Central Valley Water Board by **1 June of each year**. This may be the same report that is submitted to CalRecycle for this purpose. If CalRecycle determines that either the amount of coverage or the mechanism is inadequate, then within 90 days of notification, the Discharger shall submit an acceptable mechanism to CalRecycle and the Central Valley Water Board for at least the amount of the approved cost estimate.

4. The Discharger shall comply with all Standard Financial Assurance Specifications listed in Section H of the SPRRs dated December 2015 which are art of this Order.

G. MONITORING SPECIFICATIONS

1. The Discharger shall comply with the detection monitoring program provisions of Title 27 for groundwater, surface water, and the unsaturated zone, and in accordance with Monitoring and Reporting Program (MRP) R5-2017-XXXX, and the Standard Monitoring Specifications listed in Section I of the SPRRs dated December 2015 which are part of this Order.

2. The Discharger shall, for any landfill unit in a corrective action monitoring program, comply with the corrective action monitoring program provisions of Title 27, MRP R5-2017-XXXX, and the Standard Monitoring Specifications listed in Section I of SPRRs dated December 2015 which are part of this Order.

3. The Discharger shall comply with the Water Quality Protection Standard as specified in this Order, MRP R5-2017-XXXX, and the SPRRs dated December 2015 which are part of this Order.

4. The concentrations of the constituents of concern in waters passing the Point of Compliance (defined pursuant to Title 27, section 20164 as a vertical surface located at the hydraulically downgradient limit of the landfill unit that extends through the uppermost aquifer underlying the unit) shall not exceed the concentration limits established pursuant to MRP R5-2017-XXXX.

5. For each monitoring event, the Discharger shall determine whether the landfill is in compliance with the Water Quality Protection Standard using procedures specified in MRP R5-2017-XXXX and the Standard Monitoring Specifications in Section I of the SPRRs dated December 2015 which are part of this Order.

6. As specified in MRP R5-2017-XXXX, the Discharger shall enter all reports and monitoring data and monitoring reports into the online Geotracker database as required by Division 3 of Title 27 and Chapter 30, Division 3 of Title 23.

7. As specified in MRP R5-2017-XXXX, the Discharger shall conduct corrective action monitoring and demonstrate effectiveness of the corrective action program in accordance with Title 27, Section 20430.

8. The Discharger shall comply with all Standard Monitoring Specifications and Response to a Release specifications listed in Sections I and J of the SPRRs dated December 2015 which are part of this Order.

H. PROVISIONS

1. The Discharger shall maintain a copy of this Order at the facility, including the MRP R5-2017-XXXX and the SPRRs dated December 2015 which are part of this Order, and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel.

2. The Discharger shall comply with all applicable provisions of Title 27 and Subtitle D that are not specifically referred to in this Order.

3. The Discharger shall comply with MRP R5-2017-XXXX, which is incorporated into and made part of this Order by reference.

4. The Discharger shall comply with the applicable portions of the Standard Provisions and Reporting Requirements for Waste Discharge Requirements for Nonhazardous Solid Waste Discharges Regulated by Subtitle D and/or Title 27, dated December 2015, which are part of this Order.

5. If there is any conflicting or contradictory language between the WDRs, the MRP, or the SPRRs, then language in the WDRs shall supersede either the MRP or the SPRRs, and language in the MRP shall supersede the SPRRs.

6. All reports required by this Order shall be submitted pursuant to Water Code section 13267.

7. The Discharger shall complete the tasks contained in these waste discharge requirements in accordance with the following time schedule, and shall be prepared by a California-registered Civil Engineer or Certified Engineering Geologist:

Task	Compliance Date
A. Passive Landfill Gas System Evaluation Report Submit an evaluation report summarizing the pilot landfill gas passive vent/well monitoring results and performance evaluation during the test period. If VOCs or other waste constituents are still being detected outside the waste management unit, as measured at the gas wells, the report shall include a proposal and time schedule to expand the landfill gas passive vent/well system across the landfill by **1 July 2018**. Additionally, the report shall include an estimated timeframe for concentration of waste constituents in groundwater to return to compliance with the WDRs.	**1 September 2017**

Task	Compliance Date
B. Sampling and Analysis Plan Submit an updated Sample Collection and Analysis Plan that complies with the requirements listed in MRP-2017-XXXX.	**1 October 2017**
C. Water Quality Protection Standard Submit a WQPS report that complies with MRP 2017-XXXX, Section C.	**1 October 2017**
D. Final Closure Plan Submit an updated final closure and post-closure maintenance plan, design plans, CQA plan, and schedule that meets the requirements of this Order for review and approval (see all Closure and Post-Closure Specifications in Section E above, and Section G of the SPRRs).	**1 February 2018**
E. Closure Construction Report Submit a closure construction quality assurance (CQA) report for review and approval upon completion demonstrating construction was completed in accordance with approved final closure plans and closed per WDRs requirements.	**30 November 2018**

8. The Discharger shall comply with all General Provisions listed in Section K of the SPRRs dated December 2015 which are part of this Order.

9. The Central Valley Water Board has converted to a paperless office system. All project correspondence and reports required under this Order shall therefore be submitted electronically rather than in paper form, as follows:

   All technical reports and monitoring reports required under this Order shall be converted to PDF and uploaded via internet to the State Water Board's GeoTracker database at http://geotracker.waterboards.ca.gov, as specified in California Code of Regulations, title 23, section 3892, subdivision (d) and section 3893. Project-associated analytical data shall be similarly uploaded to the GeoTracker database in an appropriate format specified under this Order under a site-specific global identification number. Information on the GeoTracker database is provided at: http://www.swrcb.ca.gov/ust/electronic_submittal/index.shtm

   Notification of the Geotracker upload shall be emailed to the Central Valley Water Board at: centralvalleysacramento@waterboards.ca.gov. To ensure that the submittal is routed to the appropriate staff as quickly as possible, the following information shall be included in the body of the email:

Attention:	Title 27 Compliance & Enforcement Unit
Report Title	
Geotracker Upload ID	
Discharger name:	Sierra County Department of Transportation and Public Works
Facility name:	Loyalton Landfill
County:	Sierra County
CIWQS place ID:	237579

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____.

_____
PAMELA C. CREEDON, Executive Officer

WMH