

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER R5-2016-XXXX

WASTE DISCHARGE REQUIREMENTS  
FOR  
CITY OF CLOVIS  
CITY OF CLOVIS MUNICIPAL SOLID WASTE LANDFILL  
CLASS III LANDFILL  
CONSTRUCTION, OPERATION,  
AND CORRECTIVE ACTION  
FRESNO COUNTY

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

1. The City of Clovis (hereinafter Discharger) owns and operates the City of Clovis Municipal Solid Waste Landfill (facility) about eight miles north of the City of Clovis, in Section 28 and 29, T11S, R21E, MDB&M, as shown in Attachment A, which is incorporated herein and made part of this Order by reference. 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 facility is on a 210-acre (including buffer areas) property at 15679 Auberry Road, Clovis. The existing and future landfill area is approximately 76.3 acres of which 38.62 acres have been constructed. The existing and future permitted landfill area is shown in Attachment B, which is incorporated herein and made part of this Order by reference. The facility is comprised of Assessor's Parcel Numbers (APN) 300-080-79, 300-080-77, 300-080-06, 300-080-005, 300-080-83(North), 300-080-83(South)
3. Waste Discharge Requirements are being revised to provide for corrective action as required by Title 27, Section 20430(c).
4. On 10 June 2011, the Central Valley Water Board adopted Order No. R5-2011-0050 in which the landfill waste management units at the facility were classified as Class III units for the discharge of non-hazardous waste and municipal solid waste. This Order continues to classify the landfill units as Class III units in accordance with Title 27.
5. The existing and future landfill units authorized by this Order are described as follows:

<b><u>Unit</u></b>	<b><u>Area</u></b>	<b><u>Liner/LCRS<sup>1</sup> Components<sup>2</sup></u></b>	<b><u>Unit Classification &amp; Status</u></b>
Phase I	4.27 acres	Compacted Clay Liner (Per former Subchapter 15 regulations): One-foot thick clay liner with hydraulic conductivity of $1 \times 10E-6$ cm/sec, overlain with one foot of imported aggregate base gravel for use as a leachate collection blanket.	Class III, Inactive
Phase II	2.84 acres	Same as Phase I	Class III, Inactive
Cell 1	5.02 acres	Composite Liner System: prepared subgrade; geosynthetic clay liner; 60-mil HDPE geomembrane. Double-sided geocomposite drainage layer installed as the blanket leachate collection system. Southern side-slope constructed with a single layer of textured 80-mil HDPE geomembrane, as allowed under the provisions of Water Board Resolution 93-62.	Class III, Inactive
Cell 2	4.15 acres	Same as Cell 1, but the Northern side-slope constructed with a single layer of textured 80-mil HDPE geomembrane, as allowed under the provisions of Water Board Resolution 93-62.	Class III, Inactive
Cell 4	6.76 acres	Composite Liner System: prepared subgrade; geosynthetic clay liner; 60-mil HDPE geomembrane; double-sided geocomposite drainage layer as the blanket leachate collection system. Side-slopes lined with a single layer of textured 80-mil HDPE geomembrane.	Class III, Inactive
Cell 5	5.29 acres	Same as Cell 4	Class III, Inactive
Stage I	10.92 acres	Composite Liner System: prepared subgrade; geosynthetic clay liner; single-sided textured 60-mil HDPE geomembrane; double-sided geocomposite drainage net, 18-inch operations layer and working surface. Side-slopes lined 60-mil double-sided textured HDPE geomembrane.	Class III, Active

<u>Unit</u>	<u>Area</u>	<u>Liner/LCRS<sup>1</sup> Components<sup>2</sup></u>	<u>Unit Classification &amp; Status</u>
Stage II	27.72 Tot. acres	Proposed same as Stage I.	Class III, Future (includes Cells 1W-5W)
Cell 1W	3.77 acres	“ “	
Cell 2W	4.33 acres	“ “	
Cell 3W	9.61 acres	“ “	
Cell 4W	5.26 acres	“ “	
Cell 5W	4.75 acres	“ “	
		Note: Pending Executive Officer approval of liner performance demonstrations for Stages II and III.  (See Finding 48)	
Stage III	9.34 acres	Proposed same as Stage II.	Class III, Future

<sup>1</sup> LCRS – Leachate collection and removal system

<sup>2</sup> All liner systems are composite liner systems unless otherwise noted

6. On-site facilities at the City of Clovis MSW Landfill include: an active landfill gas extraction system, a landfill gas flare, two water supply wells, storm water lined pond, scale house and office. In addition, other activities to the on-site facilities include rock crushing and screening of materials operations. The soil will be stockpiled and used for daily cover, and some rock will be used for miscellaneous projects around the landfill.
7. 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.XX”. 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.
8. 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 I 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) R5-2016-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.

9. 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**

10. The Discharger proposes to continue to discharge nonhazardous solid waste, including municipal solid waste and dewatered sewage sludge and water treatment screenings to lined Class III landfill units, with a leachate collection and removal system at the facility. These classified wastes may be discharged only in accordance with Title 27, Resolution 93-62, and Subtitle D as required by this Order.
11. Title 27, section 20690 allows the use of alternative daily cover (ADC) at MSW landfills upon approval by the Local Enforcement Agency (LEA) and concurrence from CalRecycle. Title 27, section 20705 provides the Water Board’s regulations for all daily and intermediate cover including that it shall minimize the percolation of liquids through waste and that the cover shall consist of materials that meet the landfill unit classification (Class II or Class III). The regulations also require that for non-composite lined portions of the landfill, that any contaminants in the daily or intermediate cover are mobilized only at concentrations that would not adversely affect beneficial uses of waters of the state in the event of a release. For composite-lined portions of the landfill, the regulations require that constituents and breakdown products in the cover material are listed in the water quality protection standard.
12. The Discharger uses tarps for ADC.
13. Landfills propose new ADC materials regularly in order to preserve landfill air space and to beneficially reuse waste materials. Title 27, section 20686 includes regulations for beneficial reuse, including use of ADC. Approval of ADC is primarily handled by the LEA and CalRecycle under Title 27, section 20690. This Order allows any ADC proposed for use at the facility after the adoption of this Order to be approved by Central Valley Water Board staff provided the Discharger has demonstrated it meets the requirements in Title 27, section 20705. The approved ADC materials should then be listed in the facility’s

WDRs during the next regular update or revision with information about the Discharger's demonstration. This Order also includes a requirement that ADC only be used in internal areas of the landfill unless the Discharger demonstrates that runoff from the particular ADC is not a threat to surface water quality. The demonstration can take sedimentation basins into account.

14. The Discharger proposes to return leachate and landfill gas condensate to the composite-lined landfill units from which they came. Title 27, section 20340(g) requires that leachate be returned to the unit from which it came or be discharged in a manner approved by the regional board. This section of Title 27 also references State Water Board Resolution 93-62 regarding liquids restrictions in 40 C.F.R. section 258.28 for MSW landfills. 40 C.F.R. section 258.28 states that liquid waste may not be placed in MSW landfill units unless the waste is leachate or gas condensate derived from the landfill unit and it is designed with a composite liner and an LCRS. Therefore, leachate and landfill gas condensate from composite lined units with an LCRS may be returned to the unit from which they came. This Order includes requirements for returning leachate and landfill gas condensate back to composite-lined units such that the liquid waste is not exposed to surface water runoff, will not cause instability of the landfill, and will not seep from the edges of the units.

## **SITE DESCRIPTION**

15. The waste management facility is in a topographically hummocky region of the Sierra Nevada foothills. The native ground surface elevation ranges between approximately 380 feet above mean sea level at the southern boundary of the facility and 490 feet above mean sea level at the northern facility boundary. The Friant-Kern Canal borders along the north and east, and Little Dry Creek along the south facility boundary.
16. Land uses within 1,000 feet of the facility include pasture land for cattle grazing and a public shooting range.
17. There is one industrial supply well within one mile of the site. A few seasonal surface springs were observed during excavation for the composite-lined waste management unit expansion, which subsequently dried up prior to construction of the liner system.
18. The waste management facility is primarily on the cobbly-clay deposits of the Centerville series and the sandy-loam deposits of the Cometa series. The soils underlying the facility are alluvial soils, consisting of interbedded silty-clay, silty-clayey-sand, and gravelly-cobbly-sand. The soils overlie fractured bedrock at depths ranging from ten to 100 feet below ground surface.
19. The measured hydraulic conductivity of the native soils underlying the landfill units ranges between  $3.0 \times 10^{-4}$  and  $1 \times 10^{-3}$  centimeters per second (cm/s).

20. Based on a site-specific seismic analysis, the controlling maximum probable earthquake (MPE) for the site is a moment of magnitude 7.25 event along the Coast Range Sierran Block fault at a closest rupture distance of 60 miles from the site. It is estimated that a MPE event would produce a peak ground acceleration of 0.07 g at the site.
21. The facility receives an average of 14.23 inches of precipitation per year as measured at the Friant Government Station. The average pan evaporation from 1948 to 2005 was 79.95 inches as measured at the same Station.
22. The 100-year, 24-hour precipitation event for the facility is estimated to be 3.76 inches, based on the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, Office of Hydrology, NOAA Atlas 14, Volume 6 Version 2.
23. The waste management facility is not within a 100-year flood plain based on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map, Community-Panel Number 065029-0585-B.
24. A storm water retention basin is located west of the landfill as shown on Attachment B. The basin retains storm water during the rainy season and is normally dry during the summer months.

### **SURFACE WATER AND GROUNDWATER CONDITIONS**

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. Surface water drainage from the site is toward Little Dry Creek in the Berenda Creek Hydrologic Area, 545.60 of the San Joaquin River Basin.
27. Little Dry Creek is a tributary to the San Joaquin River between Friant Dam and Mendota Pool. The designated beneficial uses of this stretch of the San Joaquin River and its tributaries, as specified in the Basin Plan, are municipal and domestic supply, agricultural irrigation and stock watering supply, industrial process supply, contact and non-contact water recreation, warm and cold fresh water habitat, warm and cold fresh water migration, warm and cold fresh water spawning, wildlife habitat, and groundwater recharge.
28. The depth to first encountered groundwater ranges from about 40 feet below the native ground surface in the southwestern portion of the landfill to greater than 80 feet below the native ground surface in the northern portion. Groundwater elevations range from about 350 feet MSL to 370 feet MSL.
29. Drilling records indicate that three geologic units have been encountered beneath the facility. Those units include: a) an upper unconsolidated sequence of silty-clay, silty-clayey-sand, and gravelly-cobbly-sand, varying in thickness from zero to 90 feet; b) a

middle unit of highly fractured metamorphic phyllites with an estimated minimum thickness of 50 feet; and c) underlying granitic basement rock.

30. The first encountered groundwater is unconfined within the upper geologic unit. The direction of groundwater flow is generally toward the south beneath the facility. The average groundwater gradient is approximately 0.015 feet per foot. The average groundwater velocity is 18 to 55 feet per year.
31. Monitoring data indicate background groundwater quality for first encountered groundwater has electrical conductivity (EC) ranging between 300 and 1,000 micromhos/cm, with total dissolved solids (TDS) ranging between 150 and 800 milligrams per liter (mg/L).
32. Groundwater flow directions across the landfill converge toward the south end of the landfill and flow southwesterly within the Little Dry Creek flood plain. Groundwater gradients are typically 0.005 within the Little Dry Creek floodplain, 0.018 in the eastern portion of the landfill, and 0.024 in the western portion of the landfill.
33. The facility is in the Kings Basin Hydrologic Unit, Detailed Analysis Unit (DAU) 234. The designated beneficial uses of the groundwater, as specified in the Basin Plan for DAU 234, are municipal and domestic supply, agricultural supply, and industrial service supply.

#### **GROUNDWATER AND UNSATURATED ZONE MONITORING**

34. The existing groundwater monitoring network for the landfill units consists of background monitoring wells GMMW-02, GMMW-23, GMMW-24 and GMMW-205. Detection monitoring wells include GMMW-02, GMMW-03, GMMW-05, GMMW-06, GMMW-07, GMMW-14, GMMW-18, GMMW-21, and GMMW-205. Evaluation monitoring wells include: GMMW-01, GMMW-10, GMMW-11, GMMW-12, GMMW-13, GMMW-15, GMMW-16, GMMW-17, GMMW-19 as shown on Attachment B.
35. The surface water detection monitoring system consists of one upstream and one downstream sampling point in Little Dry Creek, as shown in Attachment B.
36. 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.
37. The facility contains five sumps: Phase II, Sump #1, Sump #2, Sump #3, and Sump #4, that are used for monitoring leachate generated in the lined waste disposal cells. Four of the locations, Phase II, Sump #1, Sump #2, and Sump #4, also contain pan lysimeters that are used to monitor the vadose zone.
38. 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)2.-4. However, Title 27 does not specify a specific method for non-statistical evaluation of monitoring data.

39. 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.
40. 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.
41. 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).
42. The Discharger submitted a Water Quality Protection Standard (WQPS) report with the Evaluation Monitoring Program Report dated March 2012 and revised April 2016 titled Monitoring Program Sampling and Water Quality Protection Standards Analysis Plan. The Report is currently under review. Once approved by Central Valley Water Board Staff, the Discharger shall comply with the approved WQPS or any subsequent approved revisions thereto.

## **GROUNDWATER DEGRADATION AND CORRECTIVE ACTION**

43. The vertical and lateral extent of a release of volatile organic compounds (VOCs) was determined in an August 1996 Evaluation Monitoring Program (EMP). A recent determination has been made that inorganic constituents are believed to reside within the same VOC delineated area. The 1996 EMP established the presence of VOCs in soil-pore liquid and soil gas at the southern boundary of the previously existing inactive unlined unit that was removed (see Finding 44). In general, low concentrations of some VOCs had been detected in groundwater monitoring wells constructed along the southern boundary of the previously inactive area, and in monitoring wells between the waste disposal area and Little Dry Creek. VOC concentrations detected above the MCL's were limited to: 1,2-dichloroethane; cis-1,2-dichloroethene; and 1,4-dichlorobenzene.
44. In an effort to remove the source of contamination, the City of Clovis moved forward in June of 2000 by excavating an unlined inactive 27-acre waste management unit in order to remediate environmental impacts related to the unit and reclaim daily cover soils. The project was completed in November of 2010 and involved the excavation of the inactive area waste materials (soil and waste) beginning at the western end and proceeding easterly through the unlined area. The excavated materials were sorted to separate the refuse from the soil, and refuse relocated to existing lined units while extracted soil was stockpiled for use as daily cover.
45. In addition to source removal as a corrective action alternative, the City of Clovis implemented additional measures to address landfill gas migration. Those measures included: installation of an active landfill gas collection and control system; installation of five compliance methane monitoring wells, MMW-128 through MMW-132, along the southern property line (along Auberry Road); removal of six methane monitoring wells from the list of compliance wells located along the former southern boundary line (along the permitted disposal area perimeter); and removal of waste adjacent to the sole non-compliant northern perimeter methane monitoring well in 2007.
46. As a result of the removal of the unlined waste management unit and implementation of landfill gas control system measures, the most recent groundwater monitoring event (Second Semi-Annual and Annual 2015) indicates that concentrations of VOCs in groundwater have decreased and are now only sporadically detected at low to trace levels in various groundwater monitoring wells. Concentrations of inorganic constituents are similar to historical.

## **LINER PERFORMANCE DEMONSTRATION**

47. On 15 September 2000 the Central Valley Water Board adopted Resolution No. 5-00-213 *Request For The State Water Resources Control Board To Review The Adequacy Of The Prescriptive Design Requirements For Landfill Waste Containment Systems To Meet The Performance Standards Of Title 27*. The State Water Board responded, in part, that "a single composite liner system continues to be an adequate minimum standard" however,

the Central Valley Water Board “should require a more stringent design in a case where it determines that the minimum design will not provide adequate protection to a given body of groundwater.”

In a letter dated 17 April 2001, the Executive Officer notified Owners and Operators of Solid Waste Landfills that “the Board will require a demonstration that any proposed landfill liner system to be constructed after 1 January 2002 will comply with Title 27 performance standards. A thorough evaluation of site-specific factors and cost/benefit analysis of single, double, and triple composite liners will likely be necessary.”

48. Central Valley Water Board reviewed the *Groundwater and Contaminant Transport Model of the Landfill Expansion Liner Performance Evaluation Report, dated January 2011*, the performance demonstration covered only a 12-acre portion delineated as the Stage I expansion area along the western side of the intended 28-acre eastern expansion area. Implementation and approval of the performance demonstration warranted the issuance of waste discharge requirements for construction of a waste management unit expansion that incorporates the modeled area only. A new liner performance demonstration for the Stage II Area, and each subsequent proposed future area is required to be submitted and approved by Central Valley Water Board prior to submittal of the construction documents for Stage II or Stage III (See Finding 62).

### **CONSTRUCTION AND ENGINEERED ALTERNATIVE**

49. 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 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.
50. 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).

51. 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.
52. The Discharger shall propose 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.
53. In January 2011, the Discharger submitted a Report of Waste Discharge in the form of a *Groundwater and Contaminant Transport Model of the Landfill Expansion Liner Performance Evaluation Report*, requesting approval of an engineered alternative to the prescriptive standard for liner requirements for Stage I at the facility. The engineered alternative liner that was approved for the bottom liner of Stage I consists of, in ascending order: engineered subgrade; geosynthetic clay liner (GCL); 60-mil HDPE geomembrane; and a double sided geocomposite drainage net. The components for the side slope liner of Stage I consists of, in ascending order: prepared subgrade overlain by an 60-mil thick HDPE geomembrane.
54. The Discharger adequately demonstrated that construction of a Subtitle D prescriptive standard liner for Stage I would be unreasonably and unnecessarily burdensome when compared to the proposed engineered alternative design. The Discharger demonstrated that the proposed engineered alternative is consistent with the performance goals of the prescriptive standard and affords at least equivalent protection against water quality impairment.
55. The LCRS for Phases I and II allow for the free drainage of leachate into temporary subsurface holding tanks for subsequent removal and treatment. As part of the Cell 4 and 5 reconstruction project, this holding tank was removed and replaced with an internal leachate collection sump and underlying pan lysimeter. Cells 1, 2, 4 and 5 LCRS incorporates a blanket drainage layer networked to an isolated sump with a dedicated extraction pump. Cells 1 & 2 and Stage I each have their own sump; whereas, Cells 4 & 5 drain unto one sump located at the south end of Cell 4. The LCRS sump for Stage I was sized to accommodate additional flow from future Stage III Expansion.
56. The December 2011 revised November 2012 (JTD) included a stability analysis for Stage I pursuant to Title 27, section 21750(f)(5). The Discharger's stability analysis included 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. The stability analysis demonstrated that the structural components of Stage I would withstand the

forces of the Maximum Probable Earthquake (MPE) without failure of the containment systems or environmental controls

57. The existing Stage I and proposed future waste containment systems (Stages II and III) consists of, from the bottom up:

- a. Prepared subgrade for both bottom and side slopes;
- b. Geosynthetic clay liner over subgrade;
- c. Single-sided textured 60-mil high density polyethylene (HDPE) geomembrane;
- d. Double-sided geocomposite drainage net; and
- e. 18-inch operations layer and working surface.

Side slopes will be constructed the same, except with double-sided textured 60-mil HDPE geomembrane.

Proposed future Stages II and III require the Discharger to submit a new liner performance demonstration for approval by the Executive Officer.

58. The LCRS consists of a geocomposite drainage media on the floor of the cell. The leachate collection and recovery system of the Stage I construction flows to a double-lined internal sump at the low point of the cell.

59. Pan lysimeters beneath the leachate collection sumps in Phases I & II, Cells 1, 2, and 4, and Stage I have been installed to monitor the unsaturated zone and are expected to remain operative at closure and throughout the post-closure period. Additional lysimeters will be installed in the subgrade of the future expansion units below each proposed leachate collection sump.

60. The pan lysimeters are lined with 60-mil HDPE geomembrane and contain a 6-inch diameter perforated sampling access riser. The gravel layer and pipe are wrapped with an 8-oz-per-square yard non-woven filter geotextile.

61. The Discharger demonstrated that the liner system for Stage I meets the performance goal contained in Section 20310 of Title 27. The demonstration utilized a three-dimensional flow model, and a three-dimensional multi-species transport model to predict the performance of the proposed liner design and the fate and transport of a release of waste constituents. The results of the model show that the proposed liner design will be protective of water quality.

62. This Order includes the liner design for the most recently constructed waste management unit, Stage I, as described in Finding 5 and requires the Discharger to submit design plans

and construction quality assurance (CQA) plans for each new module or modules for review and approval at least 90 days prior to construction (Stage II and Stage III).

### **LANDFILL CLOSURE**

63. Title 27, section 21090 provides the minimum prescriptive final cover components for 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  $1 \times 10^{-6}$  cm/s or equal to the hydraulic conductivity of any bottom liner system.
  - c. Geomembrane layer (this layer is required for composite-lined landfills for equivalency to bottom liner).
  - d. One-foot soil erosion resistant/vegetative layer.
64. 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.
65. The Discharger submitted a December 2011, and revised November 2012 *Preliminary Closure and Postclosure Maintenance Plan* for closure and post-closure maintenance along with the Joint Technical Document (JTD) of all lined and composite-lined landfill units at the facility. Central Valley Water Board Staff approved the documents in a letter dated 6 February 2013.
66. The Discharger proposes a engineered alternative final cover for composite-lined landfill units Cells 1, 2, 4, 5 and future expansions to the west and east (Stages I,II, and III) consisting of, in ascending, the following layers:
- a. One foot of interim cover.
  - b. One-foot thick foundation layer.
  - c. A 60-mil LLDPE geomembrane (this layer is needed to comply with Title 27 requirement for equivalency to bottom liner).
  - d. Six inches of drainage gravel or a geosynthetic equivalent, and;
  - e. One and one half-feet soil erosion resistant soil layer, with vegetation.
67. The Discharger proposes the following final cover for Phases I and II consisting of, in ascending order:
- a. One-foot intermediate cover
  - b. One-foot foundation layer;
  - c. One-foot clay soil layer with hydraulic permeability of  $10^{-6}$  cm/s or less;
  - d. One-foot of top soil as a vegetation and erosion control layer.

68. The final slopes around the landfill will be graded at a maximum slope of 4H:1V, with 25-foot wide benches spaces at approximately every 40 vertical feet. The eastern interim slope was graded at a maximum of 3H:1V, with 35-foot wide benches spaced at approximately every 40 vertical feet.
69. The Discharger performed a slope stability analysis for the proposed final cover. 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.
70. 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.

### **LANDFILL POST-CLOSURE MAINTENANCE**

71. The Discharger submitted a December 2011, and revised November 2012 *Preliminary Closure and Postclosure Maintenance Plan* for closure and post-closure maintenance of Phases I and II, and Cells 1, 2, 4, 5, and Stage I. 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, LCRS, groundwater monitoring wells, unsaturated zone monitoring points, access roads, landfill gas system, 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 environmental quality, whichever is greater. Central Valley Water Board Staff approved the documents in a letter dated 6 February 2013.
72. Once every five years during the post-closure maintenance period, the closed landfill area will be evaluated for 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 tested for damage or defects by monitoring surface emissions pursuant to California Code of Regulations, title 17, section 95471(c) and Title 27, section 21090(a)(4)(A). Defects 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 *Preliminary 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. 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 2015, the balance of the closure fund was \$10.8 million.

75. Title 27, sections 21840 and 22211 requires a cost estimate for landfill post-closure maintenance. The Discharger's *Preliminary Closure and Post Closure Maintenance Plan* includes a cost estimate for landfill post-closure maintenance. 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. As of 2015, the balance of the post-closure maintenance fund was \$6.6 million.

76. Title 27, section 22221 requires a cost estimate for corrective action of all known or reasonably foreseeable releases. 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. As of 2015, the balance of the corrective action fund was \$1 million.

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 ground 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.

### **CEQA AND OTHER CONSIDERATIONS**

78. 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.

79. 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 40 C.F.R. section 258 "Subtitle D" federal regulations as required by State Water Board Resolution 93-62.
80. Based on the threat and complexity of the discharge, the facility is determined to be classified 1-B as defined below:
- a. Category 1 threat to water quality, defined as, "Those discharges of waste that could cause the long-term loss of a designated beneficial use of the receiving water. Examples of long-term loss of a beneficial use include the loss of drinking water supply, the closure of an area used for water contact recreation, or the posting of an area used for spawning or growth of aquatic resources, including shellfish and migratory fish."
  - 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."
81. State Water Board Resolution 68-16, the *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (Anti-Degradation Policy) generally prohibits the Central Valley Water Board from authorizing activities that will result in the degradation of high-quality waters unless it has been shown that:
- a. The degradation will not result in water quality less than the prescribed in state and regional policies, including violation of one or more water quality objectives;
  - b. The degradation will not reasonably affect present and anticipated future beneficial uses;
  - c. The discharger will employ Best Practicable Treatment or Control (BPTC) to minimize degradation; and
  - d. The degradation is consistent with the maximum benefit to the people of the state.

Due to the actions taken and the controls installed by the Discharger, including removal and relocation of refuse from unlined to lined units, augmenting the landfill gas extraction system and drainage controls, no detectable discharge to surface water or groundwater is expected. Furthermore, the Monitoring and Reporting Program adopted to ensure

compliance with this Order will be sufficient to verify that such discharges do not occur. Therefore the Anti-Degradation Policy does not apply to these WDRs. The requirements of this Order represent "best efforts" to control the discharge of waste to waters of the State.

82. 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."
83. The technical reports required by this Order and the attached "Monitoring and Reporting Program R5-2016-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**

84. 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.
85. 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.
86. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to California Water Code sections 13263 and 13267, that Order No. R5-2011-0050 is rescinded, and that the City of Clovis, its 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 Discharger shall comply with all Standard Prohibitions listed in Section C of the Standard Provisions and Reporting Requirements for Waste Discharge Requirements for Nonhazardous Solid Waste Discharges Regulated by Subtitle D and/or Title 27 (40 CFR Section 258 and Title 27, Section 20005 et seq.) (SPRRs) dated December 2015 which are attached hereto and made part of this Order by this reference.

## **B. DISCHARGE SPECIFICATIONS**

1. The Discharger shall only discharge the wastes listed or allowed under the Waste Classification and Unit Classification section in the Findings of this Order.
2. The Discharger may not use any material as alternative daily cover (ADC) that is not listed as approved ADC in the Findings of these WDRs unless and until the Discharger has demonstrated it meets the requirements in Title 27, section 20705, and the Discharger has received approval that it may begin using the material as ADC.
3. 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. This demonstration may take removal of sediment or suspended solids into account for landfills where surface water drains to a sedimentation basin.
4. 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.
5. Leachate and/or landfill gas condensate may be returned only to Cells 1, 2, 4, 5, Stage I, and future composite lined modules listed in Finding 5 of this Order in accordance with Standard Discharge Specifications D.2 through D.4 of the SPRRs.
6. The Discharger shall comply with all Standard Discharge Specifications listed in Section D of the SPRRs.

### 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.
2. Surface drainage within the waste management facility shall either be contained on-site or be discharged in accordance with applicable storm water regulations.
3. The Discharger shall maintain a Storm Water Pollution Prevention Plan and Monitoring Program and Reporting Requirements in accordance with State Water Resources Control Board Order No. 2014-0057-DWQ, or retain all storm water on-site until closure of the landfill is complete and approved.

### D. CONSTRUCTION SPECIFICATIONS

1. Prior to submitting Construction Plans for Stage II and III (future units), a Liner Performance Demonstration must be prepared and submitted for review and approval by the Executive Officer.
2. Contingent upon Executive Office approval of the Liner Performance Demonstrations for Stages II and III, the Discharger shall construct the base liner and side slope liner of new Class III landfill units as described in Finding 5 of this Order in accordance with the following approved engineered alternative liner design:
  - a. An engineered alternative composite **base liner and side slopes system** that is comprised, in ascending order, of the following:
    - 1) Prepared subgrade for both bottom and side slopes;
    - 2) Geosynthetic clay liner over subgrade;
    - 3) Single-sided textured 60-mil high density polyethylene (HDPE) geomembrane;
    - 4) Double-sided geocomposite drainage net; and
    - 5) 18-inch operations layer and working surface

Side slopes will be constructed the same, except with double-sided textured 60-mil HDPE geomembrane.

3. Construction and Design Plans must be submitted for review and approval after approval of the Liner Performance Demonstration at least 90 days prior to proposed construction (See Finding 62).

4. The Discharger shall not proceed with liner construction (other than earth moving and grading in preparation for liner construction) until the construction plans, specifications, and all applicable construction quality assurance plans have been approved.
5. The Discharger shall not proceed with construction plans or liner construction on the historical unlined inactive unit area that was removed until the Central Valley Water Board has reviewed and approved verification soil sampling results and a report demonstrating that the soils in the area are not contaminated.
6. The Discharger may propose changes to the liner system design prior to construction, provided that approved components are not eliminated, the engineering properties of the components are not substantially reduced, and the proposed liner system results in the protection of water quality equal to or greater than the design prescribed by Title 27 and this Order. The proposed changes may be made following approval by the Executive Officer. Substantive changes to the design require reevaluation as an engineered alternative and approval by the Central Valley Water Board in revised WDRs.
7. The Discharger shall comply with all Standard Construction Specifications listed in Section F of the SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.
8. The Discharger shall comply with all Storm Water Provisions listed in Section L of the SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.

#### **E. CLOSURE AND POST-CLOSURE MAINTENANCE SPECIFICATIONS**

1. The Discharger shall submit a final or partial final closure and post-closure maintenance plan at least two years prior to proposed closure of any portion of the landfill in accordance with requirements in Section G of the Standard Closure and Post-Closure Specifications in the SPRRs.
2. The Discharger shall close the landfill with side slopes at steepness of 3H:1V or less, and top deck areas shall be sloped at three percent or greater.
3. The Discharger shall install an active landfill gas extraction system for the closed landfill unit during the landfill closure, and landfill gas shall be 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.
4. 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.

5. 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 attached hereto and made part of this Order by reference.

## 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 described in Findings 74 and 75, 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 **30 September 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 preliminary 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 PCPCMP shall be submitted to the Central Valley Water Board, the Local Enforcement Agency, and CalRecycle. The PCPCMP 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 described in Finding 76. A report regarding financial assurances for corrective action shall be submitted to the Central Valley Water Board by **30 September 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 attached hereto and made part of this Order by reference.

## **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) R5-2016-XXXX, and the Standard Monitoring Specifications listed in Section I of the SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.
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 R5-2016-XXXX, and the Standard Monitoring Specifications listed in Section I of SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.
3. The Discharger shall comply with the Water Quality Protection Standard as specified in this Order, MRP R5-2016-XXXX, and the SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.
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 R5-2016-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 R5-2016-XXXX and the Standard Monitoring Specifications in Section I of the SPRRs dated December 2015 which are attached hereto and made part of this Order by reference.
6. As specified in MRP R5-2016-XXXX, the Discharger shall enter all 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. 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 attached hereto and made part of this Order by reference.

## **H. CORRECTIVE ACTION SPECIFICATIONS**

1. The Discharger has implemented corrective action measures including the excavation and relocation of refuse from the unlined unit and the augmentation of the landfill gas collection and control system, both of which are forms of source control (see Findings 44 and 45).

2. The Discharger shall operate and maintain a groundwater corrective-action monitoring system for the purpose of monitoring the nature and extent of the release and the progress of corrective action (see Findings 43 and 46). Sample collection and analysis shall coincide with Groundwater Detection Monitoring A.1 of MRP R5-2016-XXXX.
3. The Discharger shall submit with each Annual Groundwater Monitoring Report, an evaluation of the effectiveness of the corrective action program.
4. If either the Discharger or the Executive Officer determines that the corrective action program is not adequate (i.e. does not satisfy the provisions of Section 20430 of Title 27), the Discharger shall, within 90 days of making the determination, or of receiving written notification from the Central Valley Water Board of such determination, submit an amended Report of Waste Discharge (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 evaluation 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) Groundwater cleanup, and/or
    - 3) Landfill gas control.
  - e. A plan to monitor the progress of corrective action measures consistent with MRP R5-2016-XXXX.
  - f. Cost estimates for implementing additional corrective action, including monitoring.
  - g. An implementation schedule.
5. **Within one year** of Executive Officer approval of the amended ROWD to make appropriate modifications to the CAP or an alternative corrective action method, the Discharger shall implement the modified CAP or an alternative corrective action method to remediate VOCs.
6. Corrective action measures may be terminated when the Discharger demonstrates to the satisfaction of the RWQCB that the concentrations of all COCs are reduced to

levels below their respective concentration limits throughout the entire zone affected by the release.

7. After suspending the corrective action measures. The Discharger shall demonstrate that the concentration of each constituent in each sample from each monitoring point remained at or below its concentration limit for at least three consecutive years, beginning immediately after the suspension of corrective action measures.
8. Upon completion of corrective action, the Discharger shall certify, in writing, that corrective action has been completed in compliance with Title 27 and the WDRs. The certification shall be signed by a California Registered Civil Engineer or Professional Geologist.

## **I. PROVISIONS**

1. The Discharger shall maintain a copy of this Order at the facility, including the MRP R5-2016-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 R5-2016-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 attached hereto and made part of this Order by reference.
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:

<u>Task</u>	<u>Compliance Date</u>
<b>A. Liner Performance Demonstration Report</b>  Submit Liner Performance Demonstration Report for future units for review and EO approval prior to submitting construction and design plans (see Construction Specifications D.1)	<b>90 days prior to submittal of Construction and Design Plans</b>
<b>B. Construction Plans</b> Submit construction and design plans for review and approval. (see Construction Specification Section D.3, above and Section F of the SPRRs.)  Submit verification soil sampling results and demonstration report prior to submittal of any construction plans and/or liner construction. (see Construction Specification D.5)	<b>90 days prior to proposed construction</b>  <b>180 days prior to construction plans</b>
<b>C. Construction Report</b>  Submit a construction report for review and approval upon completion demonstrating construction was in accordance with approved construction plans (see Standard Construction Specification F.27 in the SPRRs).	<b>60 days prior to proposed discharge</b>
<b>D. Corrective Action</b>  1. Submit annually an evaluation of the effectiveness of the corrective action program with the annual groundwater monitoring report. (see Corrective Action Specifications H.3)  2. Submit an amended ROWD for Executive Officer approval, to make appropriate modifications to the CAP or propose alternative correction action methods to remediate VOCs, if at any time it is determined by either the Discharger or the Executive Officer, that corrective action is unsuccessful. (See Corrective Action Specification H.4)	<b>Annually</b>  <b>Within 90 days of making a determination or of receiving written notification from the Executive Officer of such a determination</b>

3. Implement the modified CAP or an alternative corrective action method to remediate VOCs in groundwater.  
(See Corrective Action Specification H.5)

**Within a year of Executive Officer approval of the amended ROWD to make appropriate modifications to the CAP or propose an alternative corrective action method**

4. Certify, in writing, that corrective action has been completed in compliance with Title 27 and the WDRs.  
(See Corrective Action Specification H.8)

**Upon completion of corrective action**

### **E. Final Closure Plans**

Submit a final or partial closure and post-closure Maintenance plan, design plans, and CQA Plan for review and approval (see all Closure and Post-Closure Specifications in Section E, above And Section G of the SPRRs)

**Two years prior to closure**

### **F. Financial Assurances**

1. Annual Review of Financial Assurance for initiating and completing corrective action  
(see Financial Assurance Specifications F.3.)
2. Annual Review of Financial Assurance for closure and post-closure maintenance  
(see Financial Assurance Specifications F.1 & 2)

**30 September each year**

**30 September each year**

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.

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

Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this 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](http://www.waterboards.ca.gov/public_notices/petitions/water_quality)

or will be provided upon request.

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 XX June 2016.

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PAMELA C. CREEDON, Executive Officer

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