

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2015-XXXX

WASTE DISCHARGE REQUIREMENTS
FOR
RECOLOGY YUBA-SUTTER AND FEATHER RIVER ORGANICS
RECOLOGY YUBA-SUTTER LANDFILL
CLASS III LANDFILL AND COMPOSTING FACILITY
OPERATION, POST-CLOSURE MAINTENANCE, AND CORRECTIVE ACTION
YUBA COUNTY

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

1. These Waste Discharge Requirements (WDRs) are issued jointly to Recology Yuba-Sutter (RYS) and Feather River Organics (FRO) for the Class III landfill facility and composting facility. RYS is the operator of the closed municipal solid waste Class III landfill, a material recycling facility (MRF), an administration office, and an equipment maintenance area. FRO is the operator of the composting facility which is being conducted on top of the closure cover of RYS unlined landfill waste management unit Landfill 1 (LF -1).
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 – Landfill Monitoring Points
 - d. Attachment D – Storm Water Flow Direction
 - e. Attachment E – Compost Area Monitoring Points
 - f. Attachment F – Compost Area Wastewater Collection
 - g. Attachment G – Requirements for Monitoring Well Installation Workplans and Installation Reports
3. Recology Yuba-Sutter is the landowner of the facility upon which past and current operations occur. The facility is a 160-acre property on Assessor's Parcel Numbers (APN) 018-120-021, 018-130-001, 018-130-015, 018-130-016, and 018-120-018. The Recology Yuba-Sutter Landfill (landfill facility) and the Feather River Organics composting facility (composting facility) hereafter referred to jointly as "facility" are located at 3001 North Levee Road about 2 miles northeast of the City of Marysville, in Sections 4, 5, and 8, T15N, R4E, MDB&M, as shown in Attachment A, Site Location Map. RYS and FRO are hereinafter referred to jointly as the "Discharger" as defined in California Code of Regulations, Title 27 ("Title 27"), section 20164 and are jointly responsible for compliance with these WDRs.

4. The Recology Yuba-Sutter landfill ceased the acceptance of waste in November 1996. Prior to closure, the average waste disposal rate at the facility was 500 tons/day. The site was permitted to receive a maximum of 160 tons/day of sewage sludge. Refuse was compacted in two-foot thick layers, and refuse slopes did not exceed 3:1 (horizontal: vertical). Waste was covered with at least six inches of daily cover.
5. The landfill facility is a municipal solid waste (MSW) landfill regulated under authority given in Water Code section 13000 et seq.; Title 27 section 20005 et seq.; and 40 Code of Federal Regulations section 258 (aka Subtitle D) in accordance with State Water Resources Control Board (State Water Board) Resolution 93-62. Water Code section 13263 provides the Central Valley Water Board with regulatory authority over the composting facility since it discharges and/or has the potential to discharge nonhazardous solid waste in the form of compostable materials as defined in Title 27 section 20220 to a closure cover on an unlined Class III landfill waste management unit (WMU). The existing facility is shown in Attachment B, Site Plan.
6. The landfill facility is currently regulated under Central Valley Water Board waste discharge requirements (WDRs) Order R5-2003-0093 issued on 6 June 2003 in which the landfill WMUs at the facility were classified as Class III WMUs for the discharge of non-hazardous solid waste and "inert waste". This Order continues to classify the landfill units as Class III units in accordance with Title 27. Further information on waste classification can be found in the Waste Classification and Unit Classification Section.
7. The facility is also regulated under Cleanup and Abatement Order (CAO) R5-2013-0704-01 which addresses a confirmed release to the unsaturated zone and groundwater, the failure to maintain the cover of LF-1, and the composting operations. In addition, Monitoring and Reporting Program (MRP) R5-2014-0830 was issued on 5 December 2014 to monitor the discharges of waste from the compost area. These revised WDRs rescind the CAO and MRP through incorporation of their regulatory requirements.
8. The composting facility was regulated under Resolution No. 96-031 *Conditional Waiver of Waste Discharge Requirements for Composting Operations* (hereafter "Waiver"). However, in 1999, passage of Senate Bill 390 modified Water Code Sections 13269 and 13350 to sunset all existing waivers of WDRs as of 1 January 2003. Consequently, after 1 January 2003 the Discharger operated the compost facility under the expired Waiver. Due to concerns regarding the water quality impacts of the composting facility, Central Valley Water Board staff in a letter dated 4 May 2012 requested the Discharger to submit an amended Report of Waste Discharge (ROWD) that included information regarding the composting facility operations. The information provided in the amended ROWD would be used to revise current WDRs to include the composting facility operations occurring over an unlined Class III WMU.
9. On 29 June 2012 the Discharger submitted an amended ROWD for the landfill and composting facility. The information in the ROWD and pertinent supporting reports and documents submitted under the CAO were used in revising these WDRs. The ROWD

and subsequent reports and documents contain information related to amongst other things the following major revisions of the current WDRs:

- a. Inclusion of waste discharge requirements and monitoring and reporting requirements for operation of a composting facility above a closed unlined waste management unit.
- b. Update of waste discharge requirements and monitoring and reporting requirements for operations above a closed unlined waste management unit.
- c. Corrective action for landfill leachate and gas releases to underlying groundwater.
- d. Corrective action for groundwater detection monitoring system that currently does not comply with Title 27 regulations.
- e. Update of operations and maintenance requirements for the closure covers over the waste management units during the postclosure period such that the goal as stated in Title 27 section 20950(a)(2)(A)(1) for closure covers is satisfied. The goal of the closure cover is to serve as the principal waste containment feature for the minimization of infiltration of water into the underlying waste, "*thereby minimizing the production of leachate and gas.*"
- f. Rescission of CAO R5-2013-0704-01 and MRP R5-2014-0830 through incorporation of the regulatory requirements of the CAO and MRP into these WDRs.

COMPOSTING FACILITY

10. WDRs Order R5-2003-0093 did not include provisions for operation of a composting facility at the landfill facility and after 1 January 2003 when the conditional waiver for composting facilities expired, the Discharger began operating the compost facility under the expired Waiver.
11. The Discharger prepared a *Report of Composting Site Information* in January 2008 detailing the FRO compost facility and operations for the acceptance of green material.
12. On 18 April 2012, the City of Marysville forwarded a request from the Discharger that included an Initial Study/Mitigated Negative Declaration (IS/MND) to the City of Marysville Department of City Services, Planning Division requesting a modification to the existing Use Permit UP07-06 to allow the acceptance of food material as a permanent feedstock to the FRO compost facility. In a letter dated 4 May 2012, Central Valley Water Board staff provided comments to the IS/MND indicating that revised WDRs are required for composting operations and the addition of food material should not be initiated until the revised WDRs are adopted.
13. As presented above, Central Valley Water Board staff requested an updated ROWD on 17 May 2012 to revise the WDRs to accurately reflect current operations at the site. The letter requested the Discharger provide detailed information on the composting facility

and its potential impacts to surface water and groundwater. The Discharger submitted an amended ROWD on 29 June 2012.

14. In a letter dated 10 September 2012, the Yuba County Local Enforcement Agency submitted a request to CalRecycle to revise the existing FRO composting facility Solid Waste Facility Permit to include food material as a permitted feedstock. On 22 October 2012, CalRecycle approved the revised FRO composting facility Solid Waste Facility Permit to include food waste as a feed stock.
15. In a letter dated 26 September 2012, Central Valley Water Board staff requested additional information to what the Discharger provided in its amended ROWD to further describe the composting operation. Central Valley Water Board staff requested the Discharger to address the composting operation and the use of Best Practicable Treatment or Control (BPTC) that will meet the requirements of Title 27, Sections 20950 and 21090, and State Water Board Resolution No. 68-16.
16. In preparation of revising the WDRs, Central Valley Water Board staff conducted an inspection of the facility on 30 November 2012. During this inspection, multiple water quality issues were identified as a result of ongoing operations on top of the final cover of WMU LF-1, including the composting operation. Central Valley Water Board staff observed ponding of storm water on the earthen cover of LF-1, ponding of storm water on paved surfaces in the vicinity of the MRF, sediment laden runoff from the composting area discharging to the Big Pond, tire marks and ruts in the compost on the compost pad, and leachate formation in the compost area. Central Valley Water Board staff collected samples of storm water which had contacted compost material (hereafter also referred to as "process wastewater", "contaminated non-process wastewater", "leachate" or "compost wastewater") discharging from the composting operation and determined through laboratory analysis that these discharges could affect beneficial uses of surface water and groundwater.

The following table presents a summary of analytical results for a compost pile leachate sample collected on 30 November 2012.

Analyte	Sample (Compost Pile Leachate) Result	Receiving Water Quality Objective (WQO) ³	
Electrical Conductivity (Field Measured)	2540 uS/cm	700 uS/cm	Ag WQG
Aluminum, Total Recoverable	16.1 mg/L	0.087 mg/L	NRWQC-Fresh-Aquatic
Copper, Total Recoverable ¹	0.136 mg/L	0.0048 mg/L	CTR-Fresh-Aquatic
Iron, Total Recoverable	20.1 mg/L	0.3 mg/L	DHS-(2nd MCL)
Lead, Total Recoverable ¹	0.044 mg/L	0.015 mg/L	DHS-(1st MCL)
Zinc, Total Recoverable ¹	0.379 mg/L	0.046 mg/L	CTR-Fresh-Aquatic
Ammonia ²	22.8 mg/L	10 mg/L	DHS-(1st MCL)
Biochemical Oxygen Demand (BOD)	570 mg/L	30/45 mg/L	USEPA TBEL (30/7 day)
Chemical Oxygen Demand (COD)	1360 mg/L	120 mg/L	NPDES Industrial Storm Water Benchmark
Specific Conductance (SC)	1340 uS/cm	700 uS/cm	Ag WQG
Phosphate, Total as P	14 mg/L	0.1 mg/L	USEPA Gold Book, 1986
Phosphorus	32.5 mg/L	2.0 mg/L	NPDES Industrial Storm Water Benchmark
Total Kjeldahl Nitrogen (TKN)	124 mg/L	-	-
Total Organic Carbon (TOC)	734 mg/L	2.5 mg/L	CDPH draft Groundwater Recharge Reuse Regulation
Total Suspended Solids (TSS)	1980 mg/L	30/45 mg/l	USEPA TBEL (30/7 day)

¹ Using total hardness of 32 (mg/L as CaCO₃)

² Assuming all ammonia converted to nitrates for groundwater protection

³ USEPA: US Environmental Protection Agency; NRWQC: USEPA National Recommended Water Quality Criteria; CTR Fresh-Aquatic: California Toxics Rule freshwater aquatic life protection; DHS: Department of Health Services; MCL: Maximum Contaminant Level; TBEL: Technologically Based Effluent Limit; NPDES: National Pollutant Discharge Elimination System; Ag WQG: United Nations Food and Agriculture Water Quality Goal; CDPH: California Department of Public Health;

17. The Assistant Executive Officer of the Central Valley Water Board issued Cleanup and Abatement Order (CAO) R5-2013-0704 on 29 August 2013 to address the post closure maintenance deficiencies that led to storm water benchmark exceedances, landfill gas (LFG) generation, migration of LFG into the groundwater, and groundwater impacts. Among other items the CAO required a series of reports associated with the FRO compost facility including:

- a. Order #5 - Compost Area Work Plan describing how the green waste (chip/grind) and composting activities will be modified and/or designed, constructed, operated,

and maintained to protect the cover of LF-1. The Work Plan was due by 1 October 2013, and construction was to be completed by 1 October 2014. On 7 May 2014 Central Valley Water Board staff approved the Compost Area Work Plan.

- b. Order #9 - Compost Area Leachate Collection Work Plan describing how contact storm water (leachate or compost wastewater) generated at the compost (chip/grind) and green waste areas will be managed and the design for a leachate collection system that would hold leachate generated by storms up to and including a 1,000-year 24-hour storm event. On 13 January 2015 the Assistant Executive Officer issued CAO R5-2013-0704-01 to amend CAO R5-2013-0704 Order # 9. The amendment specified that the Compost Area Leachate Collection Work Plan shall include the type of leachate containment system to contain all leachate generated during rainfall events up to and including the 25-year, 24-hour design storm event. Under both the original and amended CAO, construction was to be completed by 1 October 2014.
 - c. Order # 13 - Compost Area Improvement Report describing the work completed per the Compost Area and Compost Area Leachate Collection Work Plans. The report was due by 1 December 2014.
18. On 30 October 2013, the Discharger submitted a Compost Area Work Plan as required by CAO R5-2013-0704 Order # 5. The Work Plan detailed the improvements to the Compost Pads that included amongst other things adding low-permeability aggregate material to the existing pad to increase the thickness to a minimum of 6 inches and a hydraulic conductivity of less than 1×10^{-6} cm/sec. The Central Valley Water Board staff approved the Compost Area Work Plan on 17 May 2014.
 19. On 31 January 2014, the Discharger submitted a Compost Area Leachate Collection Work Plan as required by CAO R5-2013-0704 Order # 9. Central Valley Water Board staff provided comments to the Compost Area Leachate Collection Work Plan on 7 May 2014 and a Notice of Violation on 14 May 2014 listing deficiencies of the Compost Area Leachate Collection Work Plan. On 30 July 2014, the Discharger submitted an amended Compost Area Leachate Collection Work Plan to address the comments and Notice of Violation. Central Valley Water Board staff continued to express concerns about the water balance and never formally approved it.
 20. On 1 December 2014, the Discharger submitted a Compost Area Improvement Report as required by CAO R5-2013-0704 Order # 13. This report described the improvements to the compost pad that included placing a low-permeability aggregate material comparable to Caltrans Class 2 or Class 3 aggregate base with a minimum of 15% fines on the existing compost pad at 90% percent relative compaction (ASTM D1557) with the additional pad thickness to be a minimum of 6-inches at all times and graded to a minimum of 3% to promote drainage. Additionally, improvements to the leachate collection system included installing storage tanks, a suction lysimeter below each group of storage tanks, and additional pumps and piping.

21. Central Valley Water Board staff issued a Notice of Violation (NOV) on 18 December 2014 and again on 5 January 2015 for the illegal discharge of compost leachate that occurred during the 3 December 2014 and 11 December 2014 storm events, respectively. Central Valley Water Board staff also issued a California Water Code 13267 Order to submit technical reports on 9 December 2014 requiring the Discharger to provide an explanation for the 3 December 2014 illegal discharge, an updated water balance model for the leachate collection system, a discharge plan that accounts for consecutive days¹ of a 25-year, 24-hour precipitation event, and additional site historical data related to the leachate collection system.
22. The Discharger submitted technical reports on 16 December 2014 and 18 December 2014 providing the information required by the California Water Code 13267 Order to submit technical reports. The Central Valley Water Board staff issued a NOV on 22 December 2014 for incomplete technical reports. The Discharger updated the compost area water balance model on 15 January 2015 to include leachate containment for consecutive days of a 25-year 24-hour precipitation event. The updated compost area water balance was based on a firm oral agreement with the City of Marysville and the Discharger for disposal of 200,000 gallons of compost wastewater per day to the City's sewer treatment plant with a maximum disposal of 750,000 gallons per week. On 27 January 2015, the Discharger received a permit from the City of Marysville which memorialized the firm oral agreement to discharge compost leachate to the city's collection system, subject to certain conditions. A copy of the permit from the City of Marysville was provided to Central Valley Water Board staff which indicated that the permit expires on 31 December 2015.
23. On 16 April 2015, Central Valley Water Board adopted Administrative Civil Liability (ACL) Order R5-2015-0019 in the amount of \$440,440 for failing to comply with the CAO R5-2013-0704-01 which required a compost leachate collection system designed to collect compost wastewater from all storms up to and including a 25-year 24-hour storm event to be installed by 1 October 2014. These WDRs in Provisions H.7 require the Discharger to submit a Compost Wastewater Management Plan that prevents the discharge of compost wastewater under specified storm events and wet season parameters.
24. The revision of these WDRs incorporates corrective action measures completed by the Discharger to address deficiencies in operation and maintenance of the composting facility over a closed unlined Class III landfill as well as requires the Discharger to continue corrective action measures specified in CAO R5-2013-0704-01 as part of these WDRs that have not been completed or have not been effective in mitigating deficiencies associated with operation and/or maintenance of the composting facility above WMU LF-1.

¹ "Consecutive days" means "up to and including"

OPERATIONS ABOVE WASTE MANAGEMENT UNIT LF-1

25. The Discharger currently operates a Material Recycling Facility (MRF), a vehicle maintenance facility, administrative offices, and composting over closed unlined WMU LF-1. The Discharger stated in a *Monitoring System Evaluation and Corrective Action Effectiveness Report* (Effectiveness Report) dated 29 July 2011 that rainfall percolating through the cover of WMU LF-1 could be affecting groundwater quality and suggested that cover improvements on WMU LF-1 should be considered.
26. In response to the Effectiveness Report, on 6 December 2011, Central Valley Water Board staff requested an updated *Engineering Feasibility Study* (EFS) and amended ROWD that provides detailed corrective action measures that could be taken to achieve background concentrations in groundwater monitoring wells for all constituents of concern. These corrective actions included evaluating additional cover improvements in the MRF area over LF-1.
27. The Discharger submitted an *Engineering Feasibility Study and Amended Report of Waste Discharge, South Area Landfill LF-1* dated 29 June 2012 (EFS 2012 Report) in which the Discharger reported methane concentrations of 47% and 19.7% at sample locations 3 and 4, respectively, within the MRF compound. The Discharger also reported methane gas levels in perimeter gas probe GP-14 at 15.7% in its shallow probe and 10.0% in its deep probe, both exceeding the CalRecycle limit of 5% by volume in air at the facility property boundary (Title 27 section 20921(a)(2)). The EFS 2012 Report concluded as recommended corrective actions the following:
 - a. Expand the active landfill gas extraction network into the southeastern side of LF-1 between the MRF and perimeter gas monitoring probe GP-14;
 - b. Evaluate the integrity of subsurface pipelines in LF-1
 - c. Evaluate the integrity of paved surfaces constructed on LF-1
 - d. Implement repairs based on proposed evaluations to provide the greatest potential to reduce infiltration into LF-1.
28. In addition to other items, CAO Order#3 required the Discharger to submit a report by 31 October 2013 documenting the completion of work that the Discharger recommended in the EFS 2012 Report as corrective actions. The Discharger submitted a letter dated 30 October 2013 stating that they completed installation of five landfill gas extraction wells on the western side of GP-14 along the south side of LF-1, performed repairs to subsurface storm water and sewer pipes and proposed a schedule for routine inspections and maintenance of the subsurface pipelines and storm water drains within WMU LF-1. Since installation and operation of the five landfill gas extraction wells targeting exceedances of methane in GP-14, methane has not been detected in GP-14 since November 2013.

29. The CAO Order#6 required the Discharger to submit a Southern Area Work Plan providing a defined schedule of operations and maintenance (O&M) to protect the cover of the Southern Area of LF-1. The Discharger submitted the Southern Area Work Plan on 31 January 2014 and Central Valley Water Board staff approved it on 29 April 2014. These WDRs require the Discharger to implement the Southern Area O&M Plan associated with the Southern Area Work Plan.
30. These revised WDRs in Section C "*WMU-1 Specifications*" incorporate the corrective actions proposed by the Discharger in response to the NOVs and CAO and require the Discharger to annually evaluate the operations conducted over LF-1 and make repairs/corrections to minimize infiltration of liquids into LF-1.
31. On 17 March 2015, Central Valley Water Board staff conducted a facility inspection and found several deficiencies related to potential discharges of liquids to underlying waste in WMU LF-1 such as (a) subsurface piping installed in the LF-1 closure cover to convey storm water from building rooftops that could potentially leak if not inspected and maintained routinely (b) a pressurized water supply system installed in the LF-1 closure cover that could potentially leak if not inspected and maintained routinely (c) building leveling systems installed in the LF-1 closure cover to compensate for LF-1 settling that could provide preferential pathways to underlying waste if not inspected and maintained routinely, and (d) Use of air conditioners and swamp coolers over the LF-1 closure cover that produce liquid condensate that if allowed to continually contact the LF-1 closure cover could infiltrate into underlying waste. These revised WDRs and MRP R5-2015-XXXX require the Discharger to manage these potential sources of liquid over LF-1 that if not routinely inspected and maintained could infiltrate into underlying waste and produce leachate within a closed WMU inconsistent with the performance standard of WMU closure.

CORRECTIVE ACTION FOR LEACHATE AND GAS RELEASE

32. Volatile Organic Compounds (VOCs) and elevated inorganic water quality parameters have been found in monitoring wells at the facility since monitoring began in 1987. The presence of VOCs which do not occur naturally in groundwater and the elevated inorganic water quality parameters indicate a release of waste to groundwater.
33. The Discharger conducted evaluation monitoring in response to the detection of VOCs and elevated concentrations of general water quality parameters in four of the landfill facility's groundwater monitoring wells (MW-1, MW-2, MW-3, and MW-10) in 1993. On 31 August 1993, the Discharger proposed a *Corrective Action Plan* consisting of a proposal to implement source control by closing LF-2 with a soil cover consisting of a two foot foundation layer, a one foot barrier layer of 1×10^{-6} cm/sec compacted clay, and a one foot vegetative layer. The cover was installed to provide a reduction in the percolation of precipitation and reduce the rate at which leachate is generated. Since LF-1 was closed prior to 1984, it did not receive a clay barrier layer. However, LF-1 is covered by asphalt, concrete, buildings, or aggregate and is graded to drain runoff. These WDRs require that the Discharger adequately maintain the closure cover over

WMU LF-1 to prevent infiltration of precipitation and the creation of landfill gas. Also, to address LFG detected in perimeter probes adjacent to unit LF-1, 22 LFG extraction wells were installed in 1998 along the northern boundary of the unit. The Discharger has indicated that due to installation of the 22 LFG extraction wells along the northern boundary of LF-1 landfill gas is no longer detected in the perimeter landfill gas monitoring probes on the northern side of LF-1.

34. The Discharger submitted an *Amendment to the Report of Waste Discharge and Establishment of Evaluation Monitoring Program* on 5 April 2002 in response to the detection of one VOC above the practical quantitation limit and total and bicarbonate alkalinity above the concentration limit in well MW-8, adjacent to LF-3. The VOC, 1,1-dichloroethane, was detected at 1.1 micrograms per liter ($\mu\text{g/L}$). Total and bicarbonate alkalinity were detected at 300 milligrams per liter (mg/L), above the concentration limit of 190 mg/L . The presence of 1,1-dichloroethane and the levels of total and bicarbonate alkalinity were confirmed in later re-tests. As part of evaluation monitoring, three new groundwater monitoring wells (MW-11, MW-12, and MW-13) were installed and sampled for inorganic parameters and VOCs during the investigation. One piezometer (PZ-14) was also installed to aid in more accurately defining the groundwater flow gradient.
35. The 2 September 2002 *Engineering Feasibility Study* presented the results of the evaluation monitoring and included corrective action alternatives. The report concluded that the low-level VOC impacts to groundwater were limited to the area of well MW-8. The most likely source of impact was determined to be LFG migrating from LF-3. Some elevated inorganic results potentially indicative of LFG influence were also detected in groundwater samples from well MW-11. The primary corrective action recommended in the report targeted source control of LFG in LF-3 by constructing a passive, shallow horizontal interceptor trench, below the cover system and above the base liner system, along the northeast perimeter of LF-3.
36. Since 2002, the Discharger has conducted various actions to address the VOC detections, including constructing final closure covers on LF-2 and LF-3, installing LFG extraction wells in LF-2 and LF-3, and conducting normal maintenance and upgrades to those operations conducted on LF-1. As shown in Finding 100, the number of VOCs detected in LF-2 and LF-3 has decreased, and laboratory data indicates that most of the VOC detections are at estimated trace concentrations below the laboratory reporting limit. However, the Discharger has established as part of its water quality protection standard concentration limits for VOCs as “non-detect” at compliance monitoring points. Therefore, although the Discharger has performed corrective action measures to impede the generation of LFG and groundwater impacts, VOCs continue to exceed concentration limits.
37. On 14 April 2011, Central Valley Water Board staff issued a NOV for continued detections of VOCs in corrective action wells MW-1, MW-2, MW-3, MW-4, and MW-10. In addition to the VOCs, bicarbonate alkalinity, total dissolved solids, and chloride were also detected above their concentration limits. Based on these detections, it was

determined that a release from WMU LF-1 had occurred and was affecting the underlying unsaturated and saturated zones.

38. In response to the April 2011 NOV, the Discharger submitted a *Corrective Action Effectiveness Report* which indicated that landfill gas from LF-1 was a likely source of groundwater impacts. The report stated that “*the data indicate that infiltration into the landfill during wetter years could be the cause of increased leachate or increased landfill gas influence on groundwater.*” The report indicated that cover improvements should be considered.
39. On 12 August 2011, Central Valley Water Board staff issued a NOV for violation of WDR Facility Specification B.12, which states: “*Closed landfill units shall be maintained to promote runoff and to prevent ponding.*” During a June 2011 site inspection, staff observed severe ponding and poor drainage conditions LF-1, including settlement of the landfill cover. Central Valley Water Board staff requested a work plan to correct the drainage issues. The Discharger submitted the work plan dated 14 September 2011.
40. On 22 November 2011, Central Valley Water Board staff conducted a follow up inspection to the June 2011 inspection. During this visit, Central Valley Water Board staff verified that the Discharger had conducted grading of the southern portion of LF-1 and installed storm water controls over portions of LF-1. Concrete rubble and debris boxes had been moved. However, this was a dry weather site inspection and performance of the storm water controls could not be determined at the time of the inspection.
41. In a letter dated 30 November 2011, the Local Enforcement Agency (LEA) requested the Discharger prepare a work plan to install additional landfill gas probes to monitor LFG migrating adjacent to the eastern and southern boundaries of WMU LF-1 and LF-2.
42. In a letter dated 6 December 2011, Central Valley Water Board staff concluded that the current corrective action program was not sufficient to comply with requirements of Title 27, Section 20430, and therefore required that the Discharger submit an updated *Engineering Feasibility Study* (EFS) to address deficiencies in the corrective action program. In addition, Central Valley Water Board staff requested a work plan be submitted to install one additional groundwater monitoring well to enhance the detection/corrective action monitoring programs. This work plan was submitted in December 2011 and the well MW-15 was installed April 2012.
43. In a letter dated 29 December 2011, the Discharger submitted a work plan to install four additional perimeter LFG probes (GP-12 through GP-15) which are adjacent to LF-1 and LF-2. In a letter dated 26 January 2012, Board staff responded to the work plan. Central Valley Water Board staff recommended the gas probes be installed deeper as required by Title 27, Section 20921(a). This request was based on the fact that LFG released from WMU LF-1 was affecting groundwater as evidenced by continued VOC detections in groundwater samples. The Discharger concurred with staff’s

recommendation to install the gas probes deeper in a revised work plan dated 8 March 2012. The Discharger installed LFG probes in May 2012.

44. On 28 March 2012, Central Valley Water Board staff issued a NOV for continued detections of VOCs in groundwater monitoring wells MW-1 through MW-4, and MW-10. In addition to VOCs, other the concentrations of other analytes including specific conductance, TDS, chloride, and several metals exceeded their concentration limits. Central Valley Water Board staff recommended the EFS Report provide an evaluation of the LFG extraction system and expansion of the system into the southern portion of WMU LF-1.
45. The Discharger submitted the required EFS and Amended Report of Waste Discharge Report dated 29 June 2012. Central Valley Water Board staff reviewed the reports and responded in a letter dated 27 August 2012. The EFS described LFG as the likely source of the unsaturated zone and saturated zone impacts identified during previous investigations and ongoing monitoring. LFG was also identified in the newly installed perimeter gas probe GP-14. As part of the EFS, the Discharger voluntarily installed nine shallow temporary probes to further delineate the extent of LFG within LF-1. Methane was detected in five of the probes, indicating LFG is being generated within LF-1 and is migrating uncontrolled toward the sites southern edge of unit LF-1. Because the Discharger believes that LFG is the likely source of impacts to groundwater, the Discharger evaluated multiple corrective action measures and proposed to expand the LFG system into LF-1. In addition to expansion of the LFG system, the Discharger proposed to evaluate subsurface storm water and sewer pipelines for leaks. Central Valley Water Board staff approved these corrective action measures and requested a Corrective Action Work Plan.
46. The Local Enforcement Agency (LEA) conducted a site inspection on 27 September 2012 and noted gas monitoring and control violations. The LEA observed damage to offsite perimeter gas probe GP-14 as a result of construction work performed for storm water drainage. The LEA was unable to monitor the probe on the day of inspection. The LEA returned on 16 October 2012 to monitor the probe and found the probe had not been repaired. The Discharger was required to submit a report of repairs and functionality of the probe by 9 November 2012. Gas probe GP-14 was repaired on 7 November 2012. The LEA was able to monitor the probe on 31 December 2012 and found that GP-14 contained methane up to 20% by volume in the shallow probe and 11.5% in the deep probe.
47. On 31 October 2012, the Discharger submitted a work plan to remediate LFG migrating outside the boundaries of the landfill. The work plan focused on collecting LFG in the vicinity of GP-14. The Discharger proposed to mitigate the migration of LFG using either a solar vent flare or an induced draft utility flare. In a meeting on 18 October 2012 between Central Valley Water Board staff and the Discharger it was discussed that LFG was detected in multiple locations across LF-1 and not just at GP-14. In a letter dated 3 December 2012 Central Valley Water Board staff requested that corrective action

address LFG throughout LF-1 and for the Discharger to prepare an addendum to the work plan by 31 January 2013.

48. In a letter report dated 15 November 2012, the Discharger submitted a first phase *Evaluation of the Integrity of the Subsurface Pipelines and Paved Surfaces* at LF-1. The intent of the survey was to identify any broken or leaking pipes that could allow water to infiltrate into the waste mass of LF-1. The evaluation of the pipelines and paved surfaces was conducted over two phases and was completed by the Discharger on 29 January 2013. The pipeline survey indicated that multiple storm water pipes and sewers lines installed within the cover of LF-1 were broken or leaking, and susceptible to settlement of the underlying waste mass. The report also identified numerous areas of the LF-1 cover that had settled, allowing for water to pond and infiltrate into the waste mass. Based on these findings, the 15 November 2012 report included several recommendations, including completing the pipeline video survey, repairing damaged pipes, periodically inspecting the pipelines, filling low area where ponding can occur, repaving damaged pavement, constructing drainage swales, and inspecting the landfill surface and making repairs. In response to Central Valley Water Board staff's request, the Discharger submitted monthly status reports which indicated that repairs to the storm water and sewer pipelines along with areas of settlement within the cover of LF-1 would be conducted during the 2013 construction season.
49. Central Valley Water Board staff conducted an inspection of the facility on 30 November 2012 as mentioned earlier in Finding 16. During this inspection multiple water quality issues were identified as a result of ongoing operations on top of the final cover of WMU LF-1. Central Valley Water Board staff observed ponding of storm water on the earthen cover of LF-1, ponding of storm water on paved surfaces in the vicinity of the MRF, sediment laden runoff from the composting area discharging to the Big Pond, tire marks and ruts in the compost on the compost pad, and leachate formation in the compost area. Central Valley Water Board staff collected samples of storm water discharging from the composting operation and determined through laboratory analysis that these discharges could affect beneficial uses of surface water and groundwater.
50. In a letter report dated 31 January 2013, the Discharger submitted the Addendum to the Work Plan requested by Central Valley Water Board staff in Finding 43 above. The addendum proposed to expand the LFG system into LF-1 with five LFG extraction wells. The wells would be installed approximately 100 feet inside the eastern site boundary of LF-1 and are being located to address LFG in the vicinity of GP-14 and the site boundary. The installation and operation of the system would be completed by 30 September 2013. Central Valley Water Board staff approved the proposed scope of work and requested design details in a letter dated 12 February 2013. Since installation and operation of the five landfill gas extraction wells targeting exceedances of methane in GP-14, methane has not been detected in GP-14 since November 2013.
51. On 29 August 2013 Central Valley Water Board staff issued a Cleanup and Abatement Order (CAO) R5-2013-0704 ("CAO") requiring the Discharger to address landfill gas and leachate releases from WMU LF-1.

52. Title 27 section 20425(d)(3) states that where the release likely involves landfill gas the Regional Water Board “*shall coordinate, as appropriate, with the EA and (as appropriate) the CIWMB in developing those aspects of the corrective action program involving the design, installation, and operation of the landfill-gas control and monitoring systems at the Unit, such that the resulting gas control program satisfies the needs of all agencies concerned.*” Since the Discharger contends that landfill gas being generated in LF-1 is the source of groundwater contamination the Central Valley Regional Water Board has the regulatory authority to require the discharger to manage landfill gas within LF-1 to correct the identified source of groundwater contamination. Therefore, as described in this section above, the Discharger must take additional steps to remove landfill gas from within unit LF-1 to prevent groundwater impacts. To date, the Discharger has verified the presence of landfill gas within portions of LF-1 using temporary vapor probes, which only allow for a one-time sampling of the landfill gas within the unit. However, they are not designed for long-term monitoring. The CAO required the Discharger to (a) install a new gas monitoring network for LF-1, (b) after installation of the five LFG extraction wells described in this section above, evaluate whether or not the existing LFG extraction system removes sufficient gas to prevent further groundwater degradation, and (c) if not, propose either an expansion of the LFG extraction system or active groundwater remediation.
53. On 30 December 2014, the Discharger submitted a Landfill Gas Extraction Report as required by CAO Order #14 in which the Discharger concluded that the current LFG extraction system is effectively capturing LFG throughout LF-1 and that “*no expansion of the LFG extraction system or active groundwater remediation is proposed or warranted.*” Although the report clearly showed that the five extraction wells were effective in reducing LFG concentrations below the 5% limit required by CalRecycle at the perimeter of a landfill property boundary, the ground water monitoring data continues to show that VOCs and bicarbonate alkalinity concentrations exceed the concentration limits set forth by the Discharger's Water Quality Protection Standard indicating that gas and leachate related groundwater impacts continue at the facility. Furthermore, in the Landfill Gas Extraction Report the Discharger reports oxygen levels in many of its LFG extraction wells at over 1%. Based on the age of the WMUs and the typical four phases exhibited in the life of a WMU once a final closure cover is placed on the Unit LFG concentrations of oxygen in a WMU in phases III or IV should not consistently exhibit more than 1% oxygen levels under anaerobic conditions². The Discharger's report indicates that the Discharger has not been operating their LFG extraction system effectively in removing LFG especially within LF-1.
54. On 13 May 2015, as a corrective action measure for releases of landfill gas at LF-1 as previously mentioned, the Discharger in a meeting with Central Valley Water Board staff verbally agreed to expand its LFG extraction system in lieu of installing additional gas monitoring probes within the interior area of WMU LF-1. This Order in Provisions H.7 requires that an installation report for the additional LFG extraction wells be submitted. As part of the installation report, this Order requires the Discharger to determine the

² Source: EPA Guidance for Evaluating Landfill Gas Emissions from Closed or Abandoned Facilities (EPA-600/R-05/123a)

current unsaturated zone monitoring system's ability to evaluate the effectiveness of the proposed expanded LFG extraction system within the interior area of LF-1 to correlate improvements in groundwater quality due to the proposed LFG extraction system expansion as required per Title 27 section 20415(d)(2)(D). This Order in Provisions H.7 also requires an effectiveness evaluation report of the LFG extraction system to be submitted after the expanded LFG extraction system has operated for a year.

GROUNDWATER DETECTION MONITORING SYSTEM

55. At the time this Order was adopted, the Discharger's detection monitoring program for groundwater at the landfill **did not** satisfy the requirements contained in Title 27. Title 27 section 20415(b)(1)(B)(1) requires a detection monitoring program to have "*a sufficient number of Monitoring Points (as defined in §20164) installed at appropriate locations and depths to yield ground water samples from the uppermost aquifer that represent the quality of ground water passing the Point of Compliance and to allow for the detection of a release from the Unit.*" Title 27 section 20405 defines a Point of Compliance as "*a vertical surface located at the hydraulically downgradient limit of the Unit that extends through the uppermost aquifer underlying the Unit.*"
56. The Discharger in its historical groundwater elevation contour maps but most recently in its 2014 second semiannual MRP Report provided a *Groundwater Elevation Contour Map* dated December 2014 which shows points of compliance at groundwater monitoring wells MW-2, -2R, -3, -4, -8, -11, and -12 in the detection monitoring program as not being "hydraulically downgradient" to the WMUs. The *Groundwater Elevation Contour Map* shows these points of compliance as hydraulically side gradient to the WMUs. These WDRs in Provisions H.7 require the Discharger to provide a Workplan that describes how the Discharger will comply with Title 27 requirements by establishing a sufficient number of Points of Compliance within the DMP that are hydraulically downgradient of the WMUs.

UPDATES TO OPERATIONS AND MAINTENANCE PLANS

57. The Discharger in response to several NOV's issued since 2011 and the CAO has submitted post-closure operations and maintenance (O&M) plans for maintaining the integrity of the closure cover over LF-1 while continuing current operations over the closed WMU. These revised WDRS incorporate the provisions of the submitted postclosure O&M plans so long as the approved postclosure O&M plans are effective in providing correction action. These WDRs in Provisions H.7 require the Discharger to consolidate all previously submitted approved O&M plans in response to a NOV or CAO into a Consolidated Post Closure O&M Plan where the O&M for the entire facility is addressed to ensure that the entire Facility is operated and maintained throughout the entire post closure period.

IMPLEMENTATION OF REGULATIONS THROUGH ISSUANCE OF WDRs

58. 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.
59. 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 January 2012 which is part of this Order. Monitoring and reporting requirements are included in the Monitoring and Reporting Program (MRP) R5-2015-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.
60. 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

61. California Code of Regulations, Title 27, sections 20200 through 20230 establishes a waste classification system. Wastes covered under California Code of Regulations, Title 27 are classified as either inert, nonhazardous solid, or designated. Inert wastes pose minimal risk to water quality, nonhazardous solid wastes present a greater risk than inert wastes, and designated wastes pose the greatest risk to water quality. Allowable compostable materials per this Order meet the definition of nonhazardous solid waste under California Code of Regulations, Title 27, section 20220, subdivision (a).
62. California Code of Regulations, Title 27, section 20200, subdivision (a)(1) allows a finding to be made that, "...a particular waste constituent or combination of constituents presents a lower risk of water quality degradation than indicated by classification

according to this article." Therefore, to the extent that a particular compostable material could be characterized as designated waste, such material shall be regulated as a nonhazardous solid waste pursuant to California Code of Regulations, Title 27, section 20200, subdivision (a)(1) because the compostable material presents a lower risk to water quality than typical designated wastes when managed as required by this Order.

63. The Discharger proposes to continue composting operations above closed unlined Class III landfill unit LF-1. The composting operation discharges nonhazardous solid waste in the form of compost leachate, originating from composting feedstock material limited to green material, food material, and agricultural material as further described in the Facility Specifications and Prohibitions of these WDRs. These classified wastes may be discharged only in accordance with Title 27, Resolution 93-62, and Subtitle D as required by this Order.
64. Active unlined landfill units are "existing units" under Title 27 that were permitted before 27 November 1984 and may continue to accept waste in the "Existing Footprint" until ready for closure unless waste receipts do not meet the timeframes and amounts in Title 27, section 21110, or they are required to close sooner to address environmental impacts or other regulatory concerns. The "Existing Footprint" as defined in Title 27, section 20164 is the area that was covered by waste as of the date that the landfill unit became subject to Subtitle D. There are no active unlined units at the RYS Landfill facility. The existing footprint for the closed unlined WMU LF-1 of the landfill facility is shown on Attachment B.
65. The landfills, into which municipal solid wastes and agricultural wastes were placed by area fill method, are described as follows:
 - a. **LF-1 (South Area)** - This landfill covers about 42 acres in the south and west central area of the facility. Wastes were placed in this unlined area from 1967 through 1984, after which it was closed in accordance with regulations that existed at the time. The Discharger's EFS 2012 Report approximated the base of waste in LF-1 at 65-feet MSL. Therefore, no engineered final closure cover was placed over LF-1. The LF-1 cover consists of a soil layer. However, much of this soil layer cover has since been covered by building structures and paved parking, and is graded to drain toward an on-site storm water collection and removal system. In support of ongoing operations above LF-1, the Discharger has installed a sewer and storm water collection system, and water supply system within the soil layer. Furthermore, the Discharger has installed a levelling system on structure(s) within LF-1 to compensate for settling due to waste decomposition and consolidation. The remaining area is used for composting operations and as described in previous findings. This area has been covered with an engineered low permeability aggregate base layer with a minimum thickness of six inches, a maximum permeability or 1×10^{-6} cm/sec, and a minimum 3% positive slope to drain. There is no leachate collection and removal system (LCRS) in LF-1.

- b. **LF-2 (Peach Orchard)** - This landfill covers about 25 acres in the central area of the facility. This unit was constructed with a clay liner and a small portion of the total area has a gravel blanket LCRS that drains towards an interior sump. Wastes were accepted in this area from 1984 through 1988. A final cover system, consisting of two feet of foundation soil, a one foot thick low-permeable soil layer with permeability of 1×10^{-6} cm/sec or less, and a one foot thick vegetative layer was constructed in 1995.
- c. **LF-3 (North Area)** - This landfill covers about 38 acres in the north and east central area of the facility. This area accepted waste between 1988 and 1996. The Discharger's EFS 2012 Report approximated the base of waste in LF-3 at 70-foot MSL. Phases I and II were constructed in 1989 and are lined with a single 60-mil high density polyethylene (HDPE) geomembrane on a prepared subgrade. Title 27 CCR Section 20240(c) requires five feet of separation between wastes and the highest groundwater level. Water is first encountered about three feet below the waste under LF-3. Therefore, on 3 April 1989, the Discharger requested approval of an engineered alternative. The engineered alternative, which allows a three-foot separation between wastes and groundwater consisting of a HDPE liner was approved by the Regional Board in Order No. 89-091, adopted 26 May 1989. Therefore, phase III was constructed with a composite liner system consisting of a one foot thick low-permeability soil layer with 1×10^{-6} cm/sec permeability or less overlain by a 60-mil HDPE flexible membrane liner and LCRS, followed by a one foot operations layer. Phase IV was constructed with a composite liner system consisting of a two foot thick low-permeability soil layer with a permeability of 1×10^{-7} cm/sec or less overlain by a 60-mil HDPE flexible membrane liner and LCRS, followed by a one foot operations layer. Leachate is extracted via submersible pumps and disposed of via a sewer line to the City of Marysville Wastewater Treatment Plant.

An engineered alternative for closure of the top deck, as described in the *Final Report* dated 24 November 1997 for LF-3's closure cap, consists of the following (from bottom to top): compacted soil subgrade; arterial gas collection piping system with 1-½ inch drain gravel; 6-inch gas collection sand layer; geosynthetic clay liner (GCL) with 40-mil HDPE textured geomembrane backing; 7 ounces per square yard (oz/sy) geotextile cushion fabric; and 1 foot vegetative soil cover. The side slope sections consists of the following: compacted soil subgrade; 6-inch gas collection sand layer; 40-mil textured HDPE geomembrane; 7 oz/sy geotextile cushion fabric along the toe of the slope; 1 ½ inch drain gravel placed at the toe of the slope; geocomposite drain net; and 1 foot thick vegetative soil cover. The Regional Board approved this engineered alternative in WDRs Order No. 97-250.

66. A summary of the existing closed landfill units regulated by this Order are described as follows:

<u>Unit</u>	<u>Area</u>	<u>Liner/LCRS¹ Components</u>	<u>Unit Classification & Status</u>
LF-1	42 acres	Unlined	Pre-1984 regulations, Class III, closed. Operated from 1967 through 1984
LF-2	25 acres	Predominantly clay liner with small portion having gravel blanket LCRS sloped towards an interior sump.	Pre-Subtitle D, Class III, closed. Operated from 1984 through 1988
LF-3	38 acres	Phases I and II lined with single 60-mil high density polyethylene (HDPE) geomembrane on prepared subgrade. Phase III liner consists of one-foot maximum 1×10^{-6} cm/sec low permeability barrier soil overlain with 60-mil HDPE geomembrane, LCRS, and one-foot operations layer. Phase IV liner consists of two-foot maximum 1×10^{-7} cm/sec low permeability barrier soil overlain with 60-mil HDPE geomembrane, LCRS, and one-foot operations layer.	Pre-Subtitle D (Phases I and II). Post-Subtitle D (Phases III and IV). Class III, closed. Operated from 1988 through 1996.

¹ LCRS – Leachate collection and removal system

67. Leachate collected in the LCRS of WMUs LF-2 and LF-3 is stored in above ground storage tanks and periodically transferred to tanker trucks where it is disposed into the sanitary sewer manhole on site, or at the City of Marysville Wastewater Treatment Plant. The Discharger reported through its annual MRP the following leachate volumes removed in gallons from WMUs LF-2 and LF-3:

WMU	2006	2007	2008	2009	2010	2011	2012	2013	2014
LF-2	NR ¹	NR	4,800						
LF-3	201,000	276,000	206,200	220,800	202,300	385,500	257,700	385,300	154,800

¹ Not Reported

The Discharger's MRP from 2005 through 2014 characterizing the landfill leachate collected in LCRS sumps S-1 through S-5 as follows:

Leachate sumps S-1 through S-5 (Composite Results)						
Leachate Parameter	Units	# Samples	# ND/Trace	Mean	Range	Std. Dev
pH	Std. Units	79	0	6.81	4.94-7.98	0.40
Specific Conductance	umhos/cm	79	0	6918	2430-12400	1603
Calcium, dissolved	mg/l	76	0	170	23-320	82
Magnesium, dissolved	mg/l	76	0	224	20-360	85
Sodium, dissolved	mg/l	76	0	632	92-1000	188
Potassium, dissolved	mg/l	76	0	249	50-690	157
Alkalinity, bicarbonate	mg/l	76	0	1824	0-4300	786
Alkalinity, carbonate	mg/l	17	0	1986	870-4300	811
Chloride	mg/l	76	0	1297	87-1800	378
Nitrate/Nitrite as N	mg/l	76	24	8	0-150	27
Sulfate	mg/l	76	18	63	0-510	129
TDS	mg/l	76	5	3761	100-8200	1491
Benzene	µg/l	76	8	2.16	0-7.7	1.43
Chlorobenzene	µg/l	76	27	0.63	0-11	1.30
Chloroethane	µg/l	76	24	0.46	0-6.3	0.94
1,2-Dichlorobenzene	µg/l	76	48	0.10	0-0.29	0.09
1,4-Dichlorobenzene	µg/l	76	3	5.60	0-17	3.42
1,1-Dichloroethane	µg/l	76	36	0.47	0-2.2	0.54
1,2-Dichloroethane	µg/l	76	22	0.14	0-1.3	0.28
cis-1,2-Dichloroethene	µg/l	76	32	0.19	0-1.6	0.34
Ethylbenzene	µg/l	76	37	0.62	0-7.5	1.41
Styrene	µg/l	76	10	0.01	0-0.22	0.04
Toluene	µg/l	76	30	3.34	0-140	16.65
Vinyl chloride	µg/l	76	24	0.37	0-1.9	0.44
Total Xylenes	µg/l	4	0	1.46	0.64-2.3	0.71
Acetone	µg/l	76	7	788	0-16,000	2978
2-Hexanone	µg/l	76	3	20.05	0-530	80.62
2-Butanone	µg/l	76	13	421.5	0-12,000	1609

68. The laboratory results indicate leachate removed from the WMUs poses a threat to surface and ground water beneficial uses. Central Valley Water Board finds that consistent with Title 27 section 20950(a)(2)(A)(1), closure of the final covers on WMUs LF-1, LF-2, and LF-3 constitutes the WMU's principle waste containment facility. These revised WDRs require the Discharger to control all postclosure uses above the closure covers and operate and maintain the closure covers such that the production of leachate and gas within the WMUs is minimized.

GENERAL SITE DESCRIPTION

69. On-site facilities at the Recology Yuba-Sutter landfill include: three closed Class III WMUs, a composting facility, a material recycling facility (MRF), an administration office, an equipment maintenance area, an active landfill gas extraction system, a landfill gas flare, and an open space area known as the Hog Farm area.
70. The Hog Farm area is located between WMU units LF-2 and LF-3. The Discharger has never used this area for discharge of municipal solid waste. Storm water that drains to the Hog Farm area is discharged through a discharge culvert with a manually-operated gate valve to the Yuba River 100-year floodplain. The Hog Farm area is protected from a flood with a 100-year return period by a flood control levee permitted by the Central Valley Flood Control Board and closure of the gate. The Discharger has proposed installation of above ground storage tank(s) for containment of compost wastewater in the Hog Farm area. These WDRs permit the construction and operation of above ground storage tank(s) in this area so long as the above ground storage tank(s) meet the exemption requirements of Title 27 section 20090(i), the above ground storage tank(s) are protected from a 100-year return period flood, and the Discharger complies with all permitting requirements from other agencies with which approval must be granted.
71. Land within 1,000 feet of the site is primarily agricultural and residential. There is an abandoned landfill adjacent to the south/southwest edge of the facility that was once separately owned, but currently non-operational.
72. There is one water supply well located at the facility as shown on Attachment C. The ROWD submitted by the Discharger did not include any additional information regarding municipal, domestic, industrial, or agricultural groundwater supply wells within one mile of the facility as required by Title 27 section 21750(h)(1). These WDRs in Provisions H.7 require the Discharger to provide additional information regarding wells surrounding the facility.
73. The site is underlain by the Victor Formation consisting of about 500 feet of consolidated and unconsolidated sand, clay, silt and gravel. These sediments generally have moderate permeabilities with locally high permeabilities in the sand and gravel lenses.
74. Based on a site-specific seismic analysis, the controlling maximum probable earthquake (MPE) for the site is a moment of magnitude 5.7 event along the Sierran Foothills fault system at a closest rupture distance of 29 kilometers (18 miles) from the site. It is estimated that a MPE event would produce a peak ground acceleration of 0.20g at the site.
75. The site receives an average of 21 inches of precipitation per year (Western Regional Climate Center, 1897 - 2007). The mean evaporation for this facility is 55.63 inches per year (State of California, Department of Water Resources, recorded at the Marysville Station, 1949 - 1953).

76. The 100-year, 24-hour precipitation (duration) event for the site is 5.82 inches (National Oceanic and Atmospheric Administration (NOAA) Atlas 14, Volume 6, Version 2). The 25-year 24-hour duration rainfall event is 3.16 inches and the 25-year return period annual rainfall is 32.48 inches (Department of Water Resources, Marysville Station).
77. The waste management facility is within a 100-year flood plain based on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map, Community-Panel Number 06115C0345D (February 2011). The FEMA flood map estimates flow of a 100-year flood to reach 82-84 feet MSL elevation at the facility. The Discharger reports that the approximate base of waste in the WMUs to range from 65-70 feet MSL. Subtitle D (40 C.F.R. section 258.11) requires the Discharger to demonstrate that any new or existing MSW landfill located in 100-year floodplain does not (1) restrict the flow of a 100-year flood, (2) reduce the temporary water storage capacity of the floodplain, or (3) result in washout of solid waste so as to pose a hazard to human health and the environment. Finding 13 of WDRs Order 89-091 found that *"levees and berms constructed to elevations above the 100-year flood level will prevent inundation or washout of waste management units due to floods with a 100-year return period. Berm construction will be done as filling proceeds from module to module and will be documented to the Board as construction proceeds."* WDRs Order 94-305 required the Discharger to submit a report by 1 April 1995 specifying that the landfill meets the Subtitle D restrictions applicable to floodplains. The Discharger certified in an engineering report dated 27 January 1995 that the facility is protected from flows from a 100-year flood by a perimeter flood control levee. Central Valley Regional Board staff approved the submittal on 9 February 1995. Title 27 section 21750(d)(2) alludes to the Discharger having to operate and maintain the flood protection structures if such structures are relied upon to comply with flood protection requirements. These WDRs in Provisions H.7 require the Discharger to provide a postclosure maintenance plan and annual cost estimate including financial assurances that demonstrates that the flood protection structures are maintained such that waste placed in the closed WMUs continues to not pose a hazard to human health and the environment due to inundation or washout.
78. The facility is also regulated under the State Water Resources Control Board's Water Quality Order 2014-0057-DWQ, the Statewide Industrial Storm Water General Permit (General Permit). General Permit requirements are based, in part, on the Standard Industrial Classification (SIC) Code for the industrial activity. In response to the CAO R5-2013-0704 Order #1 the Discharger has determined the current activities conducted at the facility that are subject to the General Permit include SIC Codes 2875-fertilizers, 4953-refuse, 5093-scrap metal, and 4212-trucking. However, the Discharger has indicated prior to adoption of these WDRs that the types of operations at the Facility may change over time and that the SIC codes identified above may be removed or replaced with other types of operations.
79. Storm water sedimentation basins are located south of the landfill as shown on Attachment B. The basins detain storm water for sedimentation control during the rainy

season and are normally dry during the summer months. The sedimentation basins discharge to Yuba River.

COMPOST OPERATIONS SITE DESCRIPTION

80. The compost operation located on the eastern portion of closed landfill unit LF-1 covers approximately 16 acres. The compost operation is permitted by the County to accept a maximum of 400 tons per day of green material and food material for processing with a 40,000 ton capacity of materials on-site at any one time. The 11.6 acre compost pad consists of a minimum 6-inch thick, low-permeability aggregate graded to a minimum of three percent to promote positive drainage. The pad is protected from run-on and run-off by berms on the north and west edges and a portion of the south and east edges of the site.
81. Surface water and storm water that comes into contact with compost is managed as leachate (compost wastewater). Currently, the northern portion of the compost pad is graded to drain north and is bounded by a berm that directs compost wastewater north through a series of 6-inch diameter PVC culverts to an 18-inch HDPE corrugated plastic conveyance pipe that discharges the compost wastewater east into two vaults. Compost wastewater within the vaults is pumped to storage tanks for reuse as compost make-up water or pumped to an on-site sanitary sewer manhole where it flows by gravity to the City of Marysville WWTP. The southern portion of the compost pad is graded to drain to the southwest and is bounded by a berm that directs leachate to two sumps. Compost collected within the sumps is pumped to storage tanks for reuse as compost make-up water or, as stated above, it is pumped to an on-site sanitary sewer manhole where it flows by gravity to the City of Marysville WWTP. Due to two compost wastewater overflow events in December 2014, this Order in Provisions H.7 requires the Discharger to comprehensively evaluate its Compost Wastewater Management Plan to ensure that its compost wastewater collection, distribution, storage, and disposal system is capable of containing the waste under all conditions that can be reasonably predicted for the specified design parameters in Finding 82.
82. As presented above, the annual average precipitation for the RYS landfill facility is 21 inches. The estimated maximum annual precipitation for a wet season (15 October through 15 May) with a 25-year return period is 32.48 inches. The 25-year 24-hour duration storm event is estimated to be 3.16 inches. This Order requires that for the 2015-2016 wet season, the compost wastewater management system must be designed, constructed, operated, and maintained to contain waste from the compost area for all storm events with duration up to and including a 25-year, 24-hour duration storm event. As of 1 October 2016, this Order requires that the compost wastewater management system be designed, constructed, operated, and maintained to contain all compost wastewater as described in Title 27 section 20375(a) and 20375(b) according to an approved Operation Plan.

SURFACE WATER AND GROUNDWATER CONDITIONS

83. 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.
84. Surface water drainage from the site is to the Yuba River, which is tributary to the Feather River, which is tributary to the Sacramento River, which flows into the Sacramento-San Joaquin Delta.
85. The designated beneficial uses of the Yuba River, as specified in the Basin Plan, are municipal and domestic supply, agricultural irrigation supply, stock watering, hydroelectric power generation, recreation, freshwater habitat, fish migration and spawning, wildlife habitats, groundwater recharge, fresh water replenishment, preservation of rare and endangered species, and aesthetic enjoyment.
86. The depth to groundwater measured in groundwater monitoring wells ranges from about 12 feet to 43 feet below the top of well casings. Groundwater elevations have ranged historically (1996 through 2014) from about 49 feet MSL to 67 feet MSL.
87. Monitoring data between 2005 through 2014 indicate background groundwater quality for first encountered groundwater has electrical conductivity (EC) ranging between 312 and 544 micromhos/cm, with total dissolved solids (TDS) ranging between 180 and 430 milligrams per liter (mg/L).
88. The Discharger reports the direction of groundwater flow as generally toward the south-southwest. The estimated average groundwater gradient is approximately 0.002 feet per foot in the area of LF-1 and LF-2 and 0.001 feet per foot in the area of LF-3. The estimated average groundwater velocity is 58 feet per year in the area of LF-1 and LF-2 and 24 feet/year in the area of LF-3.
89. 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.

GROUNDWATER AND UNSATURATED ZONE MONITORING

90. The existing groundwater monitoring network for the landfill units consists of background monitoring wells MW-5, -6, and -7, and detection monitoring wells MW-1, -1R, -2, -2R, -3, -4, -8, -9, -10, -11, -12, -13, and -15. The detection monitoring wells that are in corrective action due to water quality impacts from a measurable release are MW-1R, -2R, -3, -4, -8, -10, -11, -12, and -15. Detection monitoring wells MW-1 and MW-2 have been replaced by MW-1R and MW-2R. Once the Discharger destroys MW-1 and MW-2, these wells will no longer be considered part of the Discharger's groundwater monitoring system. These WDRs in Provisions H.7 require the Discharger to provide a report to document the destruction of detection monitoring wells MW-1 and MW-2 in accordance with local enforcement agency requirements and California Well Standards published by

Department of Water Resources (DWR) in Bulletin 74-81 and supplemented by Bulletin 74-90 Part III.

91. Background groundwater quality reported by the Discharger between 2005 through 2014 is summarized in the table below:

Composite Results of Background Monitoring Wells MW-5 through MW-7						
Monitoring Parameter	Units	# Samples	# ND/Trace	Mean	Range	Std. Dev
pH	Std. Units	60	0	7.1	6.4-7.55	0.26
Specific Conductance	umhos/cm	60	0	433	312-544	72
Calcium, dissolved	mg/l	57	0	36	22-51	9
Magnesium, dissolved	mg/l	57	0	26	14-36	7
Sodium, dissolved	mg/l	57	0	17	12-25	4
Potassium, dissolved	mg/l	57	0	1	0-2	0.5
Alkalinity, bicarbonate	mg/l	57	0	162	120-190	22
Alkalinity, carbonate	mg/l	18	0	162	120-190	22
Chloride	mg/l	57	0	13	6-19	3
Nitrate/Nitrite as N	mg/l	56	0	1	0-3.1	0.5
Sulfate	mg/l	57	0	43	7-77	16
TDS	mg/l	57	9	317	180-430	55
Volatile Organic Compounds	µg/l	Not detected since 2 nd quarter 2008				

92. Based on water quality characteristics in background groundwater monitoring wells, Central Valley Water Board finds that groundwater at the facility is high quality water as defined by State Water Resources Control Board Resolution No. 68-16 *Statement of Policy With Respect to Maintaining High Quality Of Waters In California* (Antidegradation Policy) and must be protected accordingly. No further degradation is allowed, and operation of the facility in accordance with the WDRs will improve groundwater quality.
93. At the time this Order was adopted, the Discharger's detection monitoring program for groundwater at the landfill **did not** satisfy the requirements contained in Title 27. Title 27 section 20415(b)(1)(B)(1) requires a detection monitoring program to have "a sufficient number of Monitoring Points (as defined in §20164) installed at appropriate locations and depths to yield ground water samples from the uppermost aquifer that represent the quality of ground water passing the Point of Compliance and to allow for the detection of a release from the Unit." Title 27 section 20405 defines a Point of Compliance as "a vertical surface located at the hydraulically downgradient limit of the Unit that extends through the uppermost aquifer underlying the Unit." The Discharger in its historical groundwater elevation contour maps but most recently in its 2014 second semiannual MRP Report provided a *Groundwater Elevation Contour Map* dated December 2014 which shows points of compliance at groundwater monitoring wells MW-2, -2R, -3, -4, -8, -11, and -12 in the detection monitoring program as not being "hydraulically

downgradient” to the WMUs. The *Groundwater Elevation Contour Map* shows these points of compliance as hydraulically side gradient to the WMUs. These WDRs in Provisions H.7 require the Discharger to provide a Workplan that describes how the Discharger will comply with Title 27 requirements by establishing a sufficient number of Points of Compliance within the DMP that are hydraulically downgradient of the WMU.

94. Some of the groundwater monitoring wells are over 30 years old and no longer meet the performance standards outlined in Title 27, section 20415(b)(4)(B) which states: “*The sampling interval of each monitoring well shall be appropriately screened and fitted with an appropriate filter pack to enable collection of representative samples*”. A review of the well construction logs for MW-1 and MW-2 finds that these wells were constructed with hand cut screens and that the screen interval does not intersect the water table. The CAO required the Discharger to install new wells adjacent to MW-1 and MW-2, with factory uniform screen slot size and installed at an elevation that continuously intersects the water table. The Discharger installed MW-1R and MW-2R in response to the 2013 CAO. Central Valley Water Board staff performed a complete review of well screen locations in groundwater monitoring wells based on the Discharger’s 2014 Second Semiannual and Annual Monitoring Report and found that wells screens at groundwater monitoring wells MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, and MW-13 are completely submerged and do not intersect the water table. The Discharger has stated in the past that it is inappropriate to place well screens that span the water table since the static water elevation is higher due to confined aquifer conditions. However, a review of the well borehole logs for the wells listed above shows that in all the wells the first encountered water level in these wells was always higher than the static water level. This is indication of an unconfined aquifer condition. Also, the well completion logs show that in all instances the Discharger installed the well screens below the static water level. Thirdly, the hydrographs for each well indicates that if the Discharger had installed the wells screens at static water table the Discharger would have spanned the water table including changes in groundwater elevation due to seasonal fluctuations. Finally, review of Table 4 of the Discharger’s *2014 Second Semiannual MRP Report* indicates that concentrations of VOCs such as chlorobenzene and 1,4-dichlorobenzene is attenuated in MW-1 and MW-2 due to submerged screens. The wells screens in MW-1R and MW-2R were installed to intersect the water table and provide a more representative sample of groundwater quality. In those monitoring wells chlorobenzene and 1,4-dichlorobenzene were reported above the Reporting Limit (RL). In MW-1 and MW-2 these constituents were reported lower or at trace levels (above the method detection level). Therefore, these WDRs in Provisions H.7 require the Discharger to determine if submerged well screens will provide representative samples in upgradient wells MW-5, MW-6, and MW-7 as well as best assurance of the earliest possible detection of a release and representative samples in monitoring wells MW-4, MW-8, MW-9, MW-10, and MW-13 as required by Title 27 section 20415(b)(1)(B)(3).
95. 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.

96. 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.
97. 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) [aka 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.
98. For a naturally occurring constituent of concern, 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).
99. The Discharger submitted a Water Quality Protection Standard (WQPS) report at the time of adoption of WDR Order R5-2003-0093 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 data analysis to calculate tolerance limits for the monitored constituents. The WQPS and approved data evaluation methods are included in MRP R5-2015-XXXX. The WQPS is over 10 years old and needs to be revised to include additional monitoring points and/or revisions that have occurred since the last WQPS was submitted. These WDRs in Provisions H.7

require the Discharger to submit a revised WQPS which includes an updated Sampling and Analysis Plan including all additional monitoring points and/or changes to the Water Quality Monitoring Program.

GROUNDWATER DEGRADATION AND CORRECTIVE ACTION

100. Previous findings provide information regarding groundwater degradation and ongoing corrective action activities. The table below summarizes the number of VOC detections that have occurred in detection/corrective action wells since 2005:

		# VOC Detects by monitoring well per year ¹									
WMU	Monitoring Well	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
LF-1	MW-1	14	8	12	6	7	9	14	12	12	7
LF-1	MW-2	26	25	25	12	16	20	20	24	18	12
LF-1	MW-10	12	10	4	2	3	4	4	5	4	4
LF-1	MW-15	-	-	-	-	-	-	-	5	6	7
LF-1	MW-1R	-	-	-	-	-	-	-	-	-	8
LF-1	MW-2R	-	-	-	-	-	-	-	-	-	9
LF-1 Annual Totals		52	43	41	20	26	33	38	46	40	47
LF-2	MW-3	18	11	6	3	3	3	13	8	4	3
LF-2	MW-4	6	2	1	0	1	1	0	0	1	0
LF-2 Annual Totals		24	13	7	3	4	4	13	8	5	3
LF-3	MW-8	8	4	2	0	0	0	0	0	0	0
LF-3	MW-9	6	0	1	0	0	0	0	0	0	0
LF-3	MW-11	6	2	0	0	0	0	0	0	0	0
LF-3	MW-12	7	6	0	0	1	0	1	0	0	0
LF-3	MW-13	5	0	2	0	0	0	0	0	0	0
LF-3 Annual Totals		32	12	5	0	1	0	1	0	0	0

¹Source: Discharger's laboratory results submitted to Geotracker database

The groundwater monitoring results show water quality impacts to monitoring wells MW-1, MW-2, MW-10, MW-15, MW-1R and MW-2R at WMU LF-1 where the WMU is a closed unlined Unit with an earthen closure cover and postclosure operations such as a MRF, a vehicle maintenance facility, administrative offices, and composting are occurring. Groundwater monitoring results also show water quality impacts at monitoring well MW-3 associated with WMU LF-2. These WDRs require the Discharger to enhance leachate and landfill gas control systems through corrective action at LF-1 and LF-2 to address VOC impacts to groundwater.

101. Previous findings provide information regarding groundwater degradation and ongoing corrective action activities. The table below summarizes mean values of data from 2010

through 2014 for monitoring parameters as compared to concentration limits established from background water quality. Monitoring results where the mean value of the monitoring parameter exceeds the concentration limit are highlighted in bold and underlined:

Monitoring Parameter	WMU LF-1				WMU LF-2		WMU LF-3				2014 Concentration Limits
	MW-1	MW-2	MW-10	MW-15	MW-3	MW-4	MW-8	MW-11	MW-12	MW-13	
pH (Units)	6.70	6.59	6.63	6.84	6.56	6.81	6.92	6.73	6.91	6.84	6.37 to 7.99
EC (umhos/cm)	662	1021	341	625	325	238	754	507	485	335	520
TDS (mg/L)	430	611	207	403	219	137	494	390	338	258	380
Chloride (mg/L)	30	88	8	24	<u>22</u> ³	3	8	7	6	5	19
Nitrate as N (mg/L)	0.1	1.3	0.7	0.1	0.2	0.2	1.2	0.4	1.4	2.1	1.8
Sulfate (mg/L)	16	2	11	18	10	0	21	13	40	27	63
Bicarbonate Alkalinity as CaCO3	304	401	124	288	106	97	406	269	190	127	200

The mean value of monitoring parameters exceeds the concentration limits established from background monitoring wells for those monitoring parameters in groundwater monitoring wells MW-1, MW-2, MW-15, MW-3, MW-8, MW-11, and MW-13 indicating that a release has occurred. Exceedances of bicarbonate alkalinity is typically indicative of groundwater water quality impacts due release of landfill gas from the WMU. Title 27 section 20425(d)(3) states that where the release likely involves landfill gas the Regional Water Board “shall coordinate, as appropriate, with the EA and (as appropriate) the CIWMB in developing those aspects of the corrective action program involving the design, installation, and operation of the landfill-gas control and monitoring systems at the Unit, such that the resulting gas control program satisfies the needs of all agencies concerned.” As stated in Finding 54, on 13 May 2015, as a corrective action measure for releases of landfill gas at LF-1 the Discharger in a meeting with Central Valley Water Board staff verbally agreed to expand its LFG extraction system in lieu of installing additional gas monitoring probes within the interior area of WMU LF-1. These WDRs in Provisions H.7. require the Discharger to implement a corrective action program for controlling and monitoring landfill gas within all WMUs where bicarbonate alkalinity exceed the 2014 concentration limits. Exceedances of chloride and TDS are typically indicative of water quality impacts due to leachate releases from the WMU. These WDRs also require the Discharger implement corrective action for leachate impacts to groundwater quality where chloride and TDS exceeds the concentration limits specified in the WQPS.

CONSTRUCTION AND ENGINEERED ALTERNATIVE

102. 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

³ Although the mean value of chloride during the time period of interest exceeds the 2014 concentration limits the data shows a downward trend where the last five monitoring events were below the concentration limit.

under 40 Code of Federal Regulations section 258 (aka 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.

103. 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 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).
104. 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.
105. Title 27 CCR Section 20240(c) requires five feet of separation between wastes and the highest groundwater level. Water is first encountered about three feet below the waste under LF-3. Therefore, on 3 April 1989, the Discharger requested approval of an engineered alternative. The engineered alternative allows a three-foot separation between wastes and groundwater consisting of a HDPE liner which was approved by the Regional Board in Order No. 89-091, adopted 26 May 1989.

LANDFILL CLOSURE

106. 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 1×10^{-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.
107. The Discharger reported in its June 2012 amended ROWD that WMU LF-1 was closed after it ceased receiving waste in 1984 in accordance with regulations that existed at the time which as stated in a *2001 Results of Field and Engineering Study Proposed YSDI Compost Area* consisted of minimum 2-foot thick soil final closure cover. Above the soil

closure cover additional cover material consists of building structures and paved parking and roadways where the MRF, administrative offices, and vehicle maintenance operations are occurring. In the area where compost operations are occurring, the Discharger has installed a composting pad consisting of a minimum 0.5 foot thick low-permeability aggregate base with hydraulic conductivity of 1.0×10^{-6} cm/s or less with a minimum 3% grade to drain slope.

108. The Discharger reported in its June 2012 amended ROWD that a final closure cover was placed on WMU LF-2 in 1995 consisting of two feet of foundation soil, one foot thick low-permeable soil layer with permeability of 1.0×10^{-6} cm/s or less, and a one foot thick vegetative layer.
109. Title 27 section 20950(a)(1) states that *"If a portion of a Unit was completely closed in accordance with an approved closure plan by November 27, 1984, the cover over the closed portion does not need to be modified to conform to the SWRCB's additional closure requirements in these regulations, unless monitoring data indicate impairment of beneficial uses of groundwater."* Monitoring data in monitoring well MW-2 associated with WMU LF-1 has indicated impairment of groundwater drinking water beneficial uses due to elevated concentrations of total dissolved solids (currently above secondary Maximum Contaminant Level (MCL) and VOCs detections.
110. 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.
111. An engineered alternative for closure of the top deck, as described in the Final Report dated 24 November 1997 for LF-3's closure cap, consisted of the following (from bottom to top): compacted soil subgrade; arterial gas collection piping system with 1 ½ inch drain gravel; 6-inch gas collection sand layer; geosynthetic clay liner (GCL) with 40-mil HDPE textured geomembrane backing; 7 oz/sy geotextile cushion fabric; and 1 foot vegetative soil cover. The side slope sections consists of the following: compacted soil subgrade; 6-inch gas collection sand layer; 40-mil textured HDPE geomembrane; 7 oz/sy geotextile cushion fabric along the toe of the slope; 1 ½ inch drain gravel placed at the toe of the slope; geocomposite drain net; and 1 foot thick vegetative soil cover. The Regional Board approved this engineered alternative in WDRs Order No. 97-250.

LANDFILL POST-CLOSURE MAINTENANCE

112. As required by the CAO the Discharger submitted an updated Post-closure Maintenance (PCM) Plan dated May 2014 for post-closure maintenance of all closed WMUs. The plan includes inspection, maintenance, and monitoring of the landfill during the post-closure maintenance period, and includes a post-closure maintenance cost estimate only associated with the landfill facility. Inspection and maintenance includes amongst other things 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 15 years or until the waste no longer poses a threat to water quality, whichever is greater. On 8 October 2014, Central Valley Water Board staff approved the 30 May 2014 PCM Plan.

113. Landfill post closure operation and maintenance over LF-1 will be performed under the Southern Area Work Plan as specified in Closure and Post Closure Maintenance section E.4 with any future revisions as approved by Central Valley Water Board staff on 29 April 2014. Post closure operation and maintenance over LF-1, Compost Area, will be performed under the Compost Area Work Plan as specified in Closure and Post Closure Maintenance section E.5 with any future revisions initially approved by Central Valley Water Board staff on 7 May 2014.
114. 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 beginning in May 2017.
115. The final closure covers 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. The current Postclosure Maintenance Plan does not include periodic inspection of the closure covers for damage or defects via surface emissions or other means approved by Title 27 regulations. These revised WDRs require the Discharger in Provisions H.7 to perform the periodic evaluation of the final covers for damage or defects.

FINANCIAL ASSURANCES

116. Title 27 sections 21820 and 22206 require a cost estimate for landfill closure. All WMUs at the facility are currently closed. Therefore, the Discharger has satisfied the requirement to provide funding for closure of the WMUs and these WDRs omit such future requirement.
117. Title 27 sections 21840 and 22211 require a cost estimate for landfill post-closure maintenance. The Discharger's *May 2014 Updated Post Closure Maintenance Plan (May 2014 Plan)* includes a cost estimate for landfill post-closure maintenance. The current amount of the cost estimate for post-closure maintenance in 2014 dollars is \$4.7 million for 15 years of post-closure maintenance of WMUs LF-1, LF-2, and LF-3. The Discharger has indicated prior to adoption of these WDRs that the May 2014 Plan contained numerous errors and is currently in the process of submitting a revised Post Closure Maintenance Plan for review by all approving agencies. These WDRs in Provisions H.7 allows the Discharger to maintain financial assurances other than \$4.7 million dollars so long as the Discharger's revised Post Closure Maintenance Plan's

revised cost estimates and financial assurances are approved by the appropriate regulatory agencies by the time schedule specified in Provisions H.7.

118. 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.
119. The Discharger submitted a 2014 cost estimate of \$210,291 for corrective action of all known or reasonably foreseeable releases due to a *Non-Water Release Corrective Action Cost Estimate* which was greater than their *Water Release Corrective Action Estimate* of \$155,870. 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 and requires the Discharger to update their financial assurance for corrective action of all known or reasonably foreseeable releases if CalRecycle determines that another value is more appropriate.

CEQA AND OTHER CONSIDERATIONS

120. The action to revise waste discharge requirements for this landfill 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.
121. A Notice of Determination was filed on 22 October 2012 in accordance with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.) and CEQA guidelines (Title 14, section 15000 et seq.), wherein the City of Marysville certified the final mitigated negative declaration for the compost facility's project to add food material as a permanent feedstock to its composting operation. The Central Valley Water Board considered the Negative Declaration and incorporated mitigation measures from the Negative Declaration into these waste discharge requirements designed to prevent potentially significant impacts to design facilities and to water quality.
122. 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.

123. 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."

124. 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.

125. The technical reports required by this Order and the attached Monitoring and Reporting Program R5-2015-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

126. 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.

127. 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.
128. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.
129. 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 WDR Order R5-2003-0093, Cleanup and Abatement Order R5-2013-0704-01, and MRP Order R5-2014-0830 are rescinded except for purposes of enforcement, and that Recology Yuba-Sutter and Feather River Organics, 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

GENERAL PROHIBITIONS

1. The Discharger shall comply with all Standard Prohibitions listed in Section C of the Standard Provisions and Reporting Requirements (SPRRs) dated January 2012 which are attached hereto and made part of this Order by reference.
2. The discharge of solid or liquid waste or leachate (e.g., compost wastewater) other than to a publicly owned treatment works (POTW), either via the on-site POTW connection or by truck transport or, outside of an approved waste containment system at this facility is prohibited.
3. The discharge of solid or liquid waste or leachate (e.g. compost wastewater) to groundwater is prohibited.

4. Discharge of solid or liquid wastes to surface waters is prohibited, except as authorized by an NPDES permit.
5. The discharge shall not cause the release of pollutants or waste constituents in a manner which could cause a condition of nuisance, degradation, contamination, or pollution of groundwater to occur, as indicated by the most appropriate statistical or non-statistical data analysis method and retest method listed in this Order, the Monitoring and Reporting Program, or the Standard Provisions and Reporting Requirements.
6. The discharge shall not cause any increase in the concentration of waste constituents in soil pore gas, soil pore liquid, soil, or other geologic materials outside of the Unit if such waste constituents could migrate to waters of the State — in either the liquid or the gaseous phase — and cause a condition of nuisance, degradation, contamination, or pollution.

PROHIBITIONS APPLYING TO LANDFILL OPERATIONS

7. 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.
8. The return of landfill leachate recovered from a closed WMU or introduction of liquids into a closed landfill WMU is prohibited.
9. The conductance of operations other than those permitted by these WDRs on closed WMUs that introduce liquids into a closed landfill WMU beyond that which would occur due to natural rainfall conditions on an undisturbed final closure cover is prohibited.
10. The Discharge of liquids from air conditioning units or swamp coolers to a closure cover is prohibited.

PROHIBITIONS APPLYING TO COMPOSTING OPERATIONS

11. The construction of an in-ground compost wastewater detention pond over a closed WMU is prohibited. The construction of any future in-ground compost wastewater detention pond is prohibited unless an amended ROWD is submitted and these WDRs are revised.
12. The Discharger is prohibited from introducing feedstock or additives for composting operations other than composting feedstock permitted by the Local Enforcement Agency (LEA). Currently, the solid waste facility permit (Facility Number 58-AA-0015) describes the composting feedstock consisting of source-separated green material, food material, yard trimmings, and similar materials as defined in Title 14 section 17852(a). The Discharger if permitted by the LEA may use manure as a feedstock so long as the manure is limited to 10% by weight of all compostable material on site.

13. Any feedstock, additive, amendment, or compost (active, curing, or final product) stored, processed, or composted outside of the designated composting operation areas is prohibited.
14. Any volume of any feedstock, additive, amendment, or compost (active, curing, or final product) exceeding those specified in this WDR is prohibited.
15. Discharge of any of the following wastes, including importation and storage thereof, at the composting operation is prohibited:
 - a. Animal carcasses;
 - b. Liquid wastes other than those of food origin;
 - c. Medical wastes as defined in the Health and Safety Code, section 117690;
 - d. Radioactive wastes;
 - e. Septage;
 - f. Sludges, including but not limited to sewage sludge, water treatment sludge, and industrial sludge;
 - g. Wastes classified as “designated” as defined in Water Code section 13173;
 - h. Wastes classified as “hazardous” as defined in the California Code of Regulations, Title 22, section 66261.3;
 - i. Wood containing lead-based paint or wood preservatives, or ash from such wood;
 - j. Any feedstock, additive, or amendment other than those specifically described in this Order; or
 - k. The use of biosolids as an additive or amendment is prohibited
 - l. Discharges of feedstocks, additives, amendments, or wastes to lands not owned, leased, or otherwise controlled by the Discharger for the purposes of composting is prohibited.

B. GENERAL 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 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.

3. The Discharger shall comply with all Standard Discharge Specifications listed in Section D of the SPRRs dated January 2012 which are attached hereto and made part of this Order by reference.
4. The Discharger shall comply with all Standard Facility Specifications listed in Section E of the SPRRs dated January 2012 that are part of this Order.
5. The Discharger shall immediately notify the Regional Board of any flooding, unpermitted discharge of waste off-site, equipment failure, slope failure, or other change in site conditions that could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.
6. The Discharger shall maintain in good working order any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.
7. Methane and other landfill gases shall be adequately vented, removed from the Unit, or otherwise controlled to prevent the danger of adverse health effects, nuisance conditions, or the impairment of the beneficial uses of surface water or groundwater due to migration through the unsaturated zone.
8. All wells within 500 feet of a waste management unit shall be sealed or abandoned to the satisfaction of the Yuba County Department of Environmental Health prior to the discharge of waste to the unit. A record of the sealing and/or abandonment of such wells shall be sent to the Regional Board and to the State Department of Water Resources.
9. Leachate generation by a landfill unit shall not exceed 85 percent of the design capacity of the sump pump in the LCRS. If leachate generation exceeds this value or if the depth of fluid in an LCRS exceeds the minimum needed for safe pump operation, then the Discharger shall notify the Regional Board in writing within seven days. Notification shall include a timetable for remedial or corrective action necessary to reduce leachate production.
10. All precipitation and drainage control systems including conveyance systems (except compost wastewater containment tanks) shall be designed, constructed, operated, and maintained to accommodate the anticipated volume of precipitation and peak flows from surface runoff up to and including a 100-year, 24-hour precipitation duration event conditions.
11. Surface drainage from storm water shall be contained in conveyance structures, sumps, and detention ponds or be discharged in accordance with applicable storm

water regulations such that infiltration from such structures and ponds does not enter the WMUs nor dilute constituents of concern in downgradient groundwater monitoring wells such that monitoring of groundwater quality in aforementioned wells is no longer representative of actual groundwater conditions at the point of compliance.

12. 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.
13. Repair of existing closure covers must, at a minimum, comply with the existing approved construction plans or any additional requirements associated with corrective action to prevent liquids from entering the closed WMUs and/or the production of landfill gas within the closed WMUs.
14. Vegetation shall be planted and maintained over each closed landfill unit where postclosure reuse operations do not occur. Vegetation shall be selected to require a minimum of irrigation and maintenance and shall have a rooting depth not in excess of the vegetative layer thickness.
15. Closed landfill units shall be maintained to promote runoff and to prevent ponding.
16. The facility shall have a fully functional weather station capable of measuring rainfall totals and rainfall intensity in hundredths/inch.

GENERAL CLOSURE AND POST-CLOSURE MAINTENANCE SPECIFICATIONS

17. All WMU's at the landfill facility are closed and shall be maintained under the Discharger's post-closure maintenance plan dated May 2014 and any approved updates/amendments thereafter.
18. The Discharger shall install and maintain an active landfill gas extraction system for the closed landfill units during 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.
19. 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.
20. 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 January 2012 which are attached hereto and made part of this Order by reference.

C. WMU LF-1 SPECIFICATIONS

DISCHARGE SPECIFICATIONS

1. Landfill operations are closed at the facility. WMU LF-1 no longer accepts waste as a closure cover has been installed and the WMU is currently in the postclosure maintenance period. These WDRs prohibit the discharge of liquids, waste, or waste constituents into the closed WMUs.

COMPOSTING SPECIFICATIONS

2. The compost operation is currently permitted by the County to accept a maximum of 400 tons per day of green material and food material for processing with a 40,000 ton capacity of materials on-site at any one time. Any proposed increases to the volume, character, or location of discharge of composting material at the facility must be submitted to the Central Valley Water Board as an amended ROWD per CWC section 13260(a)(3)(c).
3. Feedstocks and compost (active, curing, or final product) must not cause, threaten to cause, or contribute to conditions of pollution, contamination, or nuisance. These discharges must comply with the applicable Basin Plan requirements.
4. Feedstocks and compost (active, curing, or final product) from a composting operation that are exposed to precipitation or run-on having the potential to either produce contaminated non-process wastewater or leachate (compost wastewater) must be located on containment structures (compost pad) constructed as required by this WDR.
5. The Discharger shall manage its compost wastewater in accordance with specification C.25 and an approved *Compost Wastewater Management Plan* that describes how compost wastewater will be managed to prevent discharge. These WDRs in Provisions H.7 require the Discharger to submit a *Compost Wastewater Management Plan* for Central Valley Water Board staff approval.
6. The Discharger shall treat only compostable waste at the Compost Facility. When treatment is complete, finished compost shall be removed from the Compost Facility to meet the requirements of specification C.2.
7. Composting operations shall be setback at least 100 feet from the nearest surface water body and/or the nearest water supply well.
8. Areas used for receiving, processing, or storing feedstocks, additives, amendments, or compost (active, curing, or final product) must be designed to limit water quality degradation. Working surfaces and containment structures must be designed, constructed, operated and maintained to: 1) Facilitate drainage and minimize ponding by sloping or crowning pads to reduce infiltration of liquids; 2) Reliably transmit free liquid present during storage, treatment, and processing of materials to a containment

structure to minimize the potential for waste constituents to enter groundwater or surface water; and 3) Prevent conditions that could contribute to, cause, or threaten to cause a condition of contamination, pollution, or nuisance.

9. Working surfaces must be capable of resisting damage from the movement of equipment and weight of piles.
10. The existing compost pad shall consist of a minimum six inch thick low-permeability aggregate base as described in specification C.24. The compost pad shall contain permanent compost pad thickness markers that clearly indicate when the compost pad thickness falls below six inches. Within 30 days of knowledge that the thickness is less than six inches, the Discharger shall rebuild the compost pad with the appropriate low permeability material.
11. Working surfaces must be constructed to allow year round equipment access to feedstocks, additives, amendments, and compost (active, curing, or final product) without damage to the working surfaces and containment structures.
12. To prevent potential impacts to waters of the state, the Discharger must minimize the potential for piles of feedstocks, additives, amendments, or compost (active, curing, or final product) to become over-saturated and generate leachate.
13. Areas used for receiving, processing, or storing feedstocks, additives, amendments, or compost (active, curing, or final product) must be designed, constructed, and maintained to control and manage all run-on, runoff, and precipitation which falls onto or within the compost area boundary.
14. Areas used for receiving, processing, or storing feedstocks, additives, amendments, or compost (active, curing, or final product) must be protected from inundation by surface flows.
15. Between adoption of this Order and 30 September 2016, the Discharger must install, operate, and maintain a compost wastewater containment system in accordance with an approved Compost Wastewater Management Plan that is designed to collect, store, and dispose of all compost leachate (compost wastewater or leachate) from all storm durations up to and including a 25-year 24-hour storm event of 3.16 inches. The Discharger has determined based on site specific conditions that wastewater flows from a 25-year 10-minute duration storm event produces maximum peak flow into the Discharger's compost wastewater collection and distribution system and will satisfy the requirement to collect, store, and dispose of all compost wastewater up to and including a 25-year 24-hour storm event of 3.16 inches. Effective 1 October 2016, the Discharger shall install and operate a compost wastewater containment system designed, constructed, operated, and maintained to contain all compost wastewater as described in Title 27 section 20375(a) and 20375(b) according to an approved Operation Plan. A 2-foot minimum freeboard shall be maintained at all times for open-ended containment systems to prevent overtopping from wave action. Open-ended

containment systems shall provide additional operational storage capacity for precipitation which falls into the open-ended containment system.

16. Solids that accumulate in the compost wastewater containment system, if any, shall be periodically removed and appropriately disposed of in order to maintain minimum freeboard or operational storage requirements.
17. Above ground tanks, if used, must be designed, operated, maintained and monitored in accordance with applicable laws and regulations including specific monitoring requirements specified in MRP R5-2015-XXXX. If an open-ended above ground tank is used for containment of compost wastewater, the Discharger must maintain a minimum dissolved oxygen concentration in the upper zone (at least one foot depth) of 1.0 mg/L at all times.
18. Berms must be designed, constructed, and maintained to prevent run-on and run-off from all storms up to and including a 100-year, 24-hour duration storm event at a minimum. Berms must be adequately protected from erosion, and must not cause, threaten to cause, or contribute to conditions resulting in contamination, pollution, or nuisance.
19. Ditches must be properly sloped to prevent ponding and kept free and clear of debris to allow for continuous flow of liquid. Ditches must be adequately protected from erosion, and must not cause, threaten to cause, or contribute to conditions resulting in contamination, pollution, or nuisance. Ditches must be inspected and cleaned out prior to the wet season (15 October through 15 May) every year and maintained during the wet season to ensure that water is conveyed in the ditches as quickly as possible.
20. Drainage ditches used as part of the compost wastewater drainage conveyance system must be designed, constructed, and maintained to convey all precipitation and runoff from all storms up to and including a 100-year, 24-hour duration storm event at a minimum and have a hydraulic conductivity of 1.0×10^{-5} cm/s or less for ditches not over a WMU and 1.0×10^{-6} cm/s or less for ditches directly over a WMU, and be lined with one of the following: 1) Compacted soils, with a minimum thickness of one foot; 2) Asphaltic concrete or Portland cement concrete; or 3) An equivalent engineered alternative approved by the Water Board Executive Officer.
21. Staging or storage of food processing residuals on the ground in any area not equipped the means to prevent leachate infiltration is prohibited.
22. If an in-ground compost leachate detention pond is proposed, the Discharger must submit an amended report of waste discharge by 1 February 2016.

CLOSURE AND POST-CLOSURE MAINTENANCE SPECIFICATIONS

23. Post closure operation and maintenance over LF-1, Southern Area, shall be performed as described by the Southern Area Work Plan approved by Central Valley Water

Board staff on 29 April 2014. Current post closure maintenance requirements for the Southern Area of LF-1 are:

- a. Existing unpaved areas must have positive drainage (i.e. no sustained ponding of water) off of LF-1 to the appropriate drain inlets.
- b. Existing paved areas must have positive drainage.
- c. Existing gravel areas must have positive drainage and maintain material thickness to prevent wear of the landfill cover.
- d. Drainage features must have positive drainage off of LF-1 and be kept free of debris.
- e. Poorly draining areas must have standing water removed promptly and must be repaired in a timely manner.
- f. Asphaltic-concrete (AC) pavement cannot contain cracks greater than 3/8-inch wide. Cracks greater than 3/8-inch wide must be repaired immediately using bitumous sealant or equivalent according to section 37 of the Caltrans Standard Specifications. Loose materials and debris shall be removed from the cracks prior to sealing.
- g. Reinforced concrete pavement cannot contain cracks greater than 3/8-inch wide. Cracks greater than 3/8-inch wide must be repaired immediately using bitumous sealant or cement grout sealant or equivalent low permeability Caltrans approved sealant according to sections 40 and 41 of the Caltrans Standard Specifications. Loose materials and debris shall be removed from the cracks prior to sealing.
- h. For areas where existing AC pavement is structurally sound but contain low areas where water ponding may occur or positive drainage is not readily evident shall be repaired in accordance with sections 39 of Caltrans Standard Specifications with the following modifications to ensure that the repaired AC pavement exhibits low permeability properties:
 1. Repair AC material shall have maximum of 4% by volume air voids;
 2. Repair AC material shall have minimum 6% by weight asphalt cement content;
 3. Repair AC material fines content (fraction less than 0.074 mm) shall be between 8 to 15% by mass; and
 4. The final repaired AC pavement shall be graded to provide positive drainage off of WMU LF-1.
- i. For areas where existing AC pavement must be replaced, the replacement shall be conducted in accordance with section 39 of Caltrans Standard Specifications with

the following modifications to ensure that the repaired AC pavement exhibits low permeability properties:

1. The failed AC pavement must be completely excavated;
 2. The integrity of the subgrade must be verified by proof-rolling the repair area;
 3. Any loose subgrade must be excavated and replaced with new $\frac{3}{4}$ minus class III aggregate base material placed in accordance with section 26 of the Caltrans Standard specifications;
 4. Replacement AC material shall meet the specification C.23.h above; and
 5. The repair shall be conducted such that the interface between unrepaired areas and repaired areas do not create a preferential pathway of liquids to migrate towards the underlying WMU LF-1 final closure cover.
- j. Areas where existing reinforced concrete must be replaced it shall be conducted in accordance with section 40 of Caltrans Standard Specifications with the following modifications to ensure that the repaired reinforced concrete exhibits low permeability properties:
1. The failed reinforced concrete must be completely excavated;
 2. The integrity of the subgrade must be verified by proof-rolling the repair area;
 3. Any loose subgrade must be excavated and replaced with new $\frac{3}{4}$ minus class III aggregate base material placed in accordance with section 26 of the Caltrans Standard specifications;
 4. The approved sub-base shall be capped with reinforced concrete pavement in accordance with section 40 of Caltrans Standard Specifications. Alternatively, the Discharger may repair the area using AC pavement per specifications C.23.i above;
 5. The repair shall be conducted such that the interface between unrepaired areas and repaired areas do not create a preferential pathway of liquids to migrate towards the underlying WMU LF-1 final closure cover; and
 6. The final repaired reinforced concrete shall be graded to provide positive drainage off of WMU LF-1.
- k. Unpaved areas over WMU LF-1 that create low spots where ponding may occur or where positive drainage is not readily evident shall be repaired using the following criteria:

1. The compacted fill, if soil is used, will consist of fines content equal to or greater than the underlying WMU LF-1 soil and shall be compacted to a density equal to or greater than the underlying WMU LF-1 soil. The compacted fill soil shall have a hydraulic conductivity not to exceed 1×10^{-6} cm/sec in unpaved areas over WMU LF-1; and
 2. Aggregate base if used as infill material shall exhibit fines content equal to or greater than the underlying aggregate base material and shall have a hydraulic conductivity not to exceed 1×10^{-6} cm/sec in unpaved areas over WMU LF-1. It shall be compacted to a density equal to or greater than the underlying aggregate base in order to achieve hydraulic conductivity of less than 1×10^{-6} cm/sec in unpaved areas over WMU LF-1.
- I. Subsurface drainage pipes in WMU LF-1 in or below the WMU LF-1 closure cover shall be repaired as follows:
 1. Broken pipes shall be excavated and either repaired or replaced;
 2. Back-graded pipes shall be repaired to provide positive drainage off of WMU LF-1. Infill material used to backfill repaired area shall not create a preferential pathway below the surface for liquids to enter underlying waste in WMU LF-1 by having a higher hydraulic conductivity than surrounding undisturbed soil; and
 3. Clogged pipes shall be unclogged using in-situ remedies such as but not limited to water jet cleaning. If a clog cannot be satisfactorily cleared using in-situ methods the pipe shall be excavated and cleaned out or replaced as appropriate.
 - m. All catch basins shall be designed, operated, and maintained (e.g. cleaned out and repaired as necessary) to prevent ponding of liquid at the catch basin from all storms up to and including a 100-year, 24-hour duration storm event at a minimum. Catch basins shall not provide a preferential pathway below the surface for liquids to enter underlying waste in WMU LF-1.
 - n. All unpaved areas, paved areas, subsurface pipelines, and catch basins in WMU LF-1 shall be inspected for deficiencies and reported in accordance with MRP R5-2015-XXXX with any future revisions as approved by Central Valley Water Board Executive Officer.
 - o. All drainage from air conditioning unit condensate and swamp coolers shall be properly captured and managed such that it does not infiltrate into the closure cover of WMU LF-1 and contact underlying waste.
24. Maintenance of the LF-1 Compost Area pad will be performed as described by the Compost Area Work Plan as approved by Central Valley Water Board staff on 7 May 2014 and shall include the following:

- a. All composting operations shall be conducted on a low-permeability compost pad meeting the following specifications:
 1. The low-permeability compost pad shall at all times be sloped with a minimum three percent grade where compost wastewater is directed off of WMU LF-1;
 2. No ponding of compost wastewater on the compost pad area due to operations, wear, or settling is allowed at any time;
 3. The low-permeability compost pad shall:
 - i. consist of an aggregate comparable to a Caltrans $\frac{3}{4}$ minus Class 2 or Class 3 aggregate base with a minimum of 15 percent by weight fines e.g. percent by weight passing through a No. 200 (0.075 mm) sieve wherein the fines have a significant clay content classified as "SC", or "CL", or "CH" under ASTM Designation A2487-11;
 - ii. be compacted to and maintain a compaction of minimum density of 90 percent relative compaction per ASTM D1557;
 - iii. at all times meet the performance standard of having a hydraulic conductivity not greater than 1×10^{-6} cm/sec;
 - iv. at all times have a minimum thickness of six inches;
 - v. have additional thickness to serve as a working/wear area above the six inch minimum thickness requirement;
 - vi. have visual thickness markers installed in the compost pad that clearly indicate when six inch minimum thickness of the compost pad remains whereupon repairs must be conducted within 30 days to reestablish a working/wear area;
 - vii. have fully functional moisture probes installed to determine moisture content at the interface of compost pad and WMU LF-1 soil cover, at one-foot depth below the compost pad-soil cover interface, and at two-foot depth below the compost pad-soil cover interface; and
 - viii. have fully functional lysimeters installed in the compost pad area where the monitoring point is 0.5-feet above the waste.
25. The compost wastewater containment system shall be constructed and maintained in accordance with an approved Compost Wastewater Management Plan which shall contain at a minimum:

- a. A water balance analysis of compost wastewater containment system certified by a registered engineer competent to perform such analysis wherein the water balance analysis shall quantify and include as a minimum:
 - i. A compost wastewater containment system that is designed, constructed, operated, and maintained as of 1 October 2015 to store, and dispose of all compost wastewater from all storms up to and including a 25-year 24-hour duration storm event (design storm) of 3.16 inches. Compost wastewater storage requirements for the design storm shall be available throughout the wet season (15 October through 15 May);
 - ii. A compost wastewater containment system that is designed, constructed, operated, and maintained as of 1 October 2016 to contain all compost wastewater as described in Title 27 section 20375(a) and 20375(b) according to an approved Operation Plan. Required compost wastewater storage for the design year shall be available for use at the beginning of the wet season (15 October);
 - iii. A compost wastewater conveyance system is designed, constructed, operated, and maintained to collect and convey all compost wastewater from all storms up to and including a 100-year 24-hour duration storm event (design storm) of 5.82 inches.
 - iv. The transient compost wastewater peak flows into the compost wastewater containment system due to persistent and peak precipitation runoff from the compost pad;
 - v. The transient and steady state water balance between compost wastewater runoff from the compost pad and conveyance system to the storage tanks which includes analysis of wastewater flows and storage at each junction point i.e. berms, pipes, sumps/vaults, pumps, hoses, storage tanks;
 - vi. The detailed calculations supporting the sizing of the conveyance system and storage system based on a total dynamic head at the pumps fully accounting for frictional losses in conveyance lines and diminishing pump efficiencies;
 - vii. The detailed calculations supporting the appropriate sizing of sumps and vaults to provide necessary flow equalization capacity during peak surge influent periods where pumping capacity is temporarily unable to discharge at influent flow rates;
 - viii. Evidence of a binding contract agreement with parties who agree to take compost wastewater as part of the Discharger's water balance analysis e.g. if the Discharger includes off-property exportation of compost wastewater as part of its water balance. The contracts or other binding agreements at a

minimum shall have a term that spans the upcoming wet season (15 October to 15 May). If the water balance includes off-property exportation, then it is a violation of these WDRs for the Discharger to not secure and provide evidence to Central Valley Water Board staff of a binding contract agreement by 30 September preceding the upcoming wet season;

- ix. Appropriate factors of safety incorporated in the design for each component in the compost wastewater containment system to account for assumptions and uncertainties in the proposed design;
 - x. Detailed design of backup or redundant systems in place to accommodate failures in key components e.g. electrical power supply, failed pump, clogged hoses, etc.; and
 - xi. Contingency plan for containing compost wastewater that must be implemented if the compost wastewater containment system is likely to discharge due to failure or breakdown of waste handling facilities or containment systems or due to unforeseen weather conditions.
- b. The compost wastewater conveyance system including but not limited to sumps, pipes, hoses, pumps, vaults and associated appurtenances shall be designed and constructed based on accepted professional engineering practices associated with managing the system's total dynamic head such that a discharge of compost wastewater shall not occur; and
- c. The compost wastewater conveyance system including sumps and vaults shall be designed, constructed, and maintained such that leakage from such enclosures does not infiltrate into WMU LF-1.

26. Upon ceasing composting operations at the Facility the Discharger shall clean close the composting operation per Title 27 section 21400-21410.

D. WMUs LF-2 AND LF-3 SPECIFICATIONS

DISCHARGE SPECIFICATIONS

1. Landfill operations are closed at the facility. WMUs LF-1, LF-2, and LF-3 no longer accept waste as closure covers have been installed and the WMUs are currently in the postclosure maintenance period. These WDRs prohibit the discharge of liquids, waste, or waste constituents into the closed WMUs.

FACILITY SPECIFICATIONS

2. The performance standard per Title 27 section 20950(a)(2)(A)(1) for closure of WMUs is *"to minimize the infiltration of water into the waste, thereby minimizing the production of leachate and gas. For such Units, after closure, the final cover constitutes the Unit's principal waste containment feature."* The goal of post-closure

maintenance at closed WMUs *“is to assure that the Unit continues to comply with the performance standard of section (a)(2)(A)1 until such time as the waste in the Unit no longer constitutes a potential threat to water quality.”* The Discharger shall perform post-closure maintenance on closed WMUs LF-1, LF-2, and LF-3 such that the WMUs no longer constitute a potential threat to water quality.

3. Post closure facility specifications at the landfill facility WMUs LF-2 and LF-3 includes:
 - a. Routine inspection, maintenance, and repair of closure covers to prevent infiltration of water into the waste;
 - b. Routine inspection, maintenance, and repair of drainage slopes on closure covers to ensure liquids do not collect on closure covers;
 - c. Routine inspection, maintenance, and repair of any erosion or damage to any vegetative cover above the closure cover;
 - d. Routine inspection, maintenance, and repair of drainage conveyance and control mechanisms including ensuring that such conveyance and control mechanisms are capable of handling the facility’s design storm event;
 - e. Routine inspection, maintenance, and repair of drainage conveyance and control mechanisms such that they do not provide a source where infiltration of water into the waste contained in the WMUs;
 - f. Timely extraction of any leachate that may collect in the LCRS of the closed WMUs that poses a potential threat to water quality; and
 - g. Timely extraction of any landfill gas that may collect in the closed WMUs that poses a potential threat to water quality.

E. CONSTRUCTION SPECIFICATIONS

1. The Discharger shall comply with all Standard Construction Specifications listed in Section F of the SPRRs dated January 2012 which are attached hereto and made part of this Order by reference.
2. The Discharger shall comply with all Storm Water Provisions listed in Section L of the SPRRs dated January 2012 which are attached hereto and made part of this Order by reference.

F. FINANCIAL ASSURANCE SPECIFICATIONS

1. The Discharger shall maintain assurances of financial responsibility with CalRecycle for post-closure maintenance for the landfill in at least the amounts of \$4.7 million or an approved amount by 1 October 2015 (see Finding 117), and adjusted for inflation annually. A report regarding financial assurances for 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 post-closure maintenance plan (PCMP) any time there is a change that will increase the amount of the closure and/or post-closure maintenance cost estimate. The updated PCMP shall be submitted to the Central Valley Water Board, the Local Enforcement Agency, and CalRecycle. The PCMP 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. On 28 March 2013, CalRecycle limited the remaining post-closure maintenance period to fifteen years. However, per Title 27 section 20950(a)(1) "*the post closure maintenance period shall extend as long as wastes pose a threat to water quality.*" Reports regarding financial assurance required in F.1 above shall reflect the updated cost estimate for fifteen years of post-closure maintenance.
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 \$210,291. 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 January 2012 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) R5-2015-XXXX, and the Standard Monitoring Specifications listed in Section I of the SPRRs dated January 2012 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 R5-2015-XXXX, and the Standard Monitoring Specifications listed in Section I of SPRRs

dated January 2012 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 R5-2015-XXXX, and the SPRRs dated January 2012 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 R5-2015-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 R5-2015-XXXX and the Standard Monitoring Specifications in Section I of the SPRRs dated January 2012 which are attached hereto and made part of this Order by reference.
6. As specified in MRP R5-2015-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 submit the required reports specified in MRP R5-2015-XXXX by the report's due date.
8. The Discharger shall evaluate as part of its Corrective Action Monitoring Program the effectiveness of its corrective action program and provide as part of its reporting requirements an estimate as to when the Discharger will achieve full compliance.
9. 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 January 2012 which are attached hereto and made part of this Order by reference.

H. PROVISIONS

1. The Discharger shall maintain a copy of this Order at the facility, including the MRP R5-2015-XXXX and the SPRRs dated January 2012 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 R5-2015-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 January 2012, 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, and shall be prepared under the direction of, and certified by a registered professional competent to take responsible charge over the required report.
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>
<p>A. Submit and implement a Compost Wastewater Management Plan for 2015-2016 wet season (15 October through 15 May):</p>	
<p>1. Submit a Compost Wastewater Management Plan (CWMP) in accordance with WMU LF-1 Specifications C.25 for the wet season of 2015-2016. The Plan must describe the design, operations, and maintenance of the systems, including but not limited to: (a) water balance calculations including any contractual agreements established for the proposed duration of the composting operations (upcoming wet season) with parties that receive compost wastewater as part of the water balance, (b) pump and conveyance sizing and requirements based on engineering calculations associated with total dynamic head, and (c) detail all assumptions.</p>	<p>1 September 2015</p>
<p>2. Implement the CWMP for the 2015-2016 wet season.</p>	<p>15 October 2015</p>

<p>G. Submit a Consolidated Post Closure Operations and Maintenance (O&M) Plan (Title 27 section 21760(b) and section 21769 et seq).: The Consolidated Post Closure O&M Plan shall include operational and maintenance requirements all operations above LF-1 (vehicle maintenance, administration, composting, industrial storm water monitoring, etc.) as well as the O&M requirements for the entire facility e.g. O&M requirements for all WMUs that are necessary to minimize the infiltration of liquids through closure covers over all WMUs. The revised Consolidated Post-Closure Operations Plan shall consolidate all approved O&M Plans previously submitted in response to an NOV or CAO and shall adequately describe what areas those approved plans pertain to and reference them appropriately when describing how the entire facility will be operated and maintained. The previously submitted approved O&M plans shall be included as appendices to the Consolidated Post Closure O&M Plan.</p>	<p>1 December 2015</p>
<p>H. Submit a work plan to conduct periodic leak tests of WMU LF-2 and LF-3 final covers per Title 27, section 21090(a)(4)(A): The work plan shall provide the means and methods along with a schedule by which the Discharger shall satisfy the Title 27 requirement. The initial leak test shall be performed by 1 November 2015.</p>	<p>1 September 2015</p>
<p>I. Submit a Supply Well Survey Report per Title 27 section 21750(h)(1): The supply well survey report shall identify all water supply wells within 1 mile radius of the facility.</p>	<p>1 September 2015</p>
<p>J. Submit an addendum to the Facility's Post-Closure Maintenance Plan including Cost Estimates and Financial Assurances for Flood Protection: The addendum to Post-Closure Maintenance Plan shall describe inspection, maintenance and annual cost estimate including financial assurances that demonstrates that the flood protection structures are maintained such that waste placed in the closed WMUs continues to not pose a hazard to human health and the environment due to inundation or washout from a flood event with a 100-year return period.</p>	<p>1 September 2015</p>

<p>K. Submit an approved revised Post-Closure Maintenance Plan with revised cost estimates and financial assurances: The Discharger shall submit a revised Post-Closure Maintenance Plan for all closed WMUs and post-closure operations with cost estimates and financial assurances that are approved by the appropriate regulatory agencies.</p>	<p>1 October 2015</p>
<p>L. Submit a Monitoring Well Destruction Report: The Discharger shall submit a report that documents the destruction of detection monitoring wells MW-1 and MW-2 in accordance with local enforcement agency requirements and California Well Standards published by Department of Water Resources (DWR) in Bulletin 74-81 and supplemented by Bulletin 74-90 Part III.</p>	<p>1 November 2015</p>

8. The Discharger shall take all reasonable steps to minimize any adverse impact to the waters of the State resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature, extent, and impact of the noncompliance.
9. The post-closure maintenance period shall continue until the Regional Board determines that remaining wastes in the landfill will not threaten water quality.
10. The Regional Board will review this Order periodically and may revise requirements when necessary.
11. The Discharger shall comply with all General Provisions listed in Section K of the SPRRs dated January 2012 which are part of this Order.

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

Vkj/wmh