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Subject:	Prosecution Team"s Evidence and Policy Statements - Recology Hay Road Landfill
Date:	Wednesday, August 13, 2014 1:29:07 PM
Attachments:	Hay Road CDO revision 1_13Aug2014 with track changes.docx Hay Road Evidence List -Final.xls Hay Road Legal and Technical Analysis for Proposed CDO.pdf Recology Hay Road Witness list.docx

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Advisory Team and Recology,

The Hearing Procedure for the proposed Cease and Desist Order for the Recology Hay Road Landfill CDO requires the Prosecution Team to submit its "Evidence and Policy Statements" by 5:00 pm on 13 August 2014. The Prosection Team is transmitting the following information:

- Evidence List
- Witness List
- Legal and Technical Analysis
- Proposed revisions to the CDO (based on Recology's draft comments and a meeting held on 8 August 2014).

As required by the Hearing Procedure, a hard copy of these documents (including a CD of the documents on the evidence list) will also being provided to the Advisory Team's primary contact and attorney. Recology will be provided a CD of the evidence documents upon request. In addition, the Prosecution Team will ask the Water Board's webmaster to post these items on the Tentative Orders webpage.

Please feel free to contact me if you have any questions.

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2014-XXXX

CEASE AND DESIST ORDER, REVISION DATED 8/13/14

FOR
RECOLOGY HAY ROAD
JEPSPON PRAIRIE ORGANICS AS A DBA OF RECOLOGY HAY ROAD
RECOLOGY HAY ROAD LANDFILL
SOLANO COUNTY

TO CEASE AND DESIST
FROM DISCHARGING CONTRARY TO REQUIREMENTS

The California Regional Water Quality Control Board, Central Valley Region (hereafter referred to as "Central Valley Water Board" or "Board") finds that:

1. Recology Hay Road (hereafter referred to as Discharger) owns and operates an active landfill and composting operation regulated by the Water Board under the name of "Recology Hay Road ~~Landfill~~" (facility). According to the WDRs, the facility consists of two Class III landfills (LF-1 and LF-2), one Class II landfill (LF-3), a Class II sewage sludge waste pile (WP-9.1), a Class II sewage sludge land treatment unit (LTU), green-waste and food-waste composting areas, and two lined compost leachate ponds, as shown on Attachment A. The Discharger performs active composting on a 22-acre all-weather pad and stores finished compost product on a 32-acre area, all within the landfill footprint.

2. The Hay Road Landfill is located on a 640-acre site, of which 256 acres are permitted for landfill disposal and composting operations~~, 160 acres are~~.. The site also includes a borrow pit ~~area,~~ and ~~224 acres~~ a habitat preserve. The Landfill is located about eight miles east of Vacaville on Hay Road in Solano County on Assessor's Parcel Numbers 42-020-02, 42-020-06, and
42-020-28.

3. Waste Discharge Requirements (WDRs) Order R5-2008-0188 was adopted ~~on~~ by the Central Valley Water Board on 5 December 2008, and regulates the operation, closure, and post-closure maintenance of the facility. The facility operations must comply with Title 27 of the California Code of Regulations.

4. The facility is also regulated under the State Water Resources Control Board's Water Quality Order No. 97-03-DWQ, the *Statewide Industrial Storm Water General Permit* (General Permit) and under the Central Valley Water Board's NPDES Limited Threat General Order R5-2013-0073 for dewatering of a borrow pit. ~~Dewatering is required both to lower the groundwater under the landfill and to allow the Discharger access to excavate soil to be used in landfill operations.~~ As described in Finding No. 65 of the WDRs, "…Dewatering of units to meet prescriptive separation and to maintain operability of the borrow

pit is accomplished by extracting groundwater from the borrow pit during the dry season…"

COMPOSTING OPERATIONS AND COMPOST LEACHATE

5. The WDRs regulate the Discharger's green-waste and food-waste composting operations, which include pre-sorting of incoming material, active composting, curing, and storage of finished product. The WDRs state that the Discharger accepts food-waste and green-waste at a 54-acre area located east of disposal module (DM) DM-1, which is composed of 22-acres of an impervious (concrete, asphalt, or similar) working surface for active composting. The WDRs state that the remaining unlined 32-acres is used for finished-product storage.

Food Waste Composting Violations

6. Discharge Specification B.27 of the WDRs states that "*Feedstock for windrow composting shall be limited to green waste and agricultural waste as defined in Title 14. Food waste feedstock shall be limited to in-vessel composting as defined in Title 14, and may be combined with green waste for in-vessel composting."* Title 14, California Code of Regulations, section 17852 subdivision (a)(41) defines "within vessel composting" as *"… a process in which compostable material is enclosed in a drum, silo, bin, tunnel, reactor or other container for purposes of producing compost . . .*".

7. Finding 88 of the WDRs states "*Leachate from the in-vessel composting is collected and returned to within the system*." Title 27 Section 20164 defines leachate as "*any liquid formed by the drainage of liquids from waste or by the percolation or flow of liquid through waste. It includes any constituents extracted from the waste and dissolved or suspended in the fluid."*

8. The Discharger ceased using in-vessel composting prior to April 2010[1], in violation of the WDRs. Presently, food waste composting is performed in the active composting area using windrows which are open to the elements[2]. The current system does not satisfy the within-vessel containment requirements of Title 14 or the WDRs nor does it keep leachate within the vessel system, as required by the WDRs. This Order provides the Discharger a time schedule to either return to in-vessel composting as required by the WDRs or to submit a Report of Waste Discharge (RWD) showing that non in-vessel composting is

[1] 7 April 2010 Water Board staff inspection.

[2] The Discharger states that the current "aerated static pile" system uses an air distribution system to blow or otherwise draw air through the pile. The Discharger also maintains that the change from an in-vessel system to the aerated static pile allowes for odors to be suppressed and more controlled moisture conditioning of the feedstock. In addition, the Discharger states that less compost leachate is generated with the current system because water is evaporated. However, Board staff maintain that the in-vessel system described in the WDRs allowes for more precise management of leachate, especially during the wet season.

protective of water quality. If the Water Board adopts new WDRs that authorize non in-vessel composting prior to the time schedule in this Order, then the Discharger will not need to return to in-vessel composting.

Leachate ~~Pond~~Ponds Violations

9. WDRs Prohibition A.19 states "*The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses, or groundwater is prohibited.*"

10. Finding 88 of the WDRs states that leachate from the 22-acre active composting area flows to the 60-mil HDPE lined "low-flow" pond where it is stored and then recirculated on the compost. The Finding also states that during "significant precipitation events" runoff from the active composting area flows to "a lined high-flow pond so that it does not mix with leachate in the low-flow pond~~."~~... The high-flow pond ~~is designed to hold stormwater from~~has the capacity for the average annual rainfall (20 inches) plus a 100-year, 24-hour storm~~; excess stormwater is allowed to~~ (4.82 inches). Any pond overflow ~~into the A-1 Channel~~flows through bioswales and ~~from there to surface water, as allowed by the~~ a sedimentation basin prior to off-site discharge under the general industrial ~~stormwater~~storm water permit~~."~~

11. The process water applied to the active food waste stockpiles, ~~and~~as well as the rain falling onto the stockpiles, forms a leachate which is high in nitrate, total dissolved solids (TDS~~,~~), and biological oxygen demand~~.~~ (BOD). The leachate drains out of the eastern stockpiles and flows east across the all-weather surface to a concrete-lined ditch, sump with pump, and into the low-flow pond. Contrary to the WDRs, wastewater in the low-flow pond ~~overflows to~~ is pumped into the high-flow pond. The high-flow pond contains a pipe through the berm, so that if the pond becomes full, wastewater may flow through the pipe and into the bioswales, sedimentation basin, and then ~~overflows to the A-1 Channel.~~to surface waters. The Discharger states that there have been no discharges from the ponds to surface water, but the WDRs do not require freeboard measurements or other documentation to confirm that discharges to surface waters have not occurred. In addition, the Discharger has changed the configuration of the ponds from that described in the WDRs. Therefore, there is the potential for a discharge or threatened discharge of leachate to surface waters, in violation of Prohibition A.19 of the WDRs. This Order allows the Discharger a time schedule to re-configure the ponds to comply with the WDRs or to submit a RWD requesting that the WDRs be revised to allow the current pond configuration.

~~12. This Order requires that the Discharger prepare a water balance for the two authorized ponds to show whether or not the low-flow pond has the capacity to store all leachate without overflowing, and whether the high-flow pond has the capacity to store all stormwater generated from the compost area for a 25 year return total annual precipitation~~

~~event[3]. If the water balance shows inadequate capacity, then this Order requires the Discharger to propose adequately sized ponds.~~

12. . If, during the period before the ponds were re-configured to comply with the WDRs, or the WDRs were revised, wastewater were to flow from the high flow pond into surface waters, the wastewater would be of higher strength than allowed by the WDRs[4]. Therefore, it is appropriate to require the Discharger to take interim actions to either prevent an overflow from the high flow pond or to reduce the volume of leachate entering the high flow pond.

Unauthorized ~~Leachate~~Green Waste Pond ~~Violations~~

13. Leachate and stormwater generated on the western section of the compost area currently flows south through ~~dirt~~unlined ditches to an unlined stormwater pond known as the "green waste runoff pond[5]". The pond overflows to an unlined drainage course, which eventually discharges to the A-1 Channel and surface waters. The Discharger states that the depth of the green waste runoff pond is 18.2 feet MSL[6]. The closest groundwater monitoring wells are 4B and G-2, which had a groundwater elevation of 19.10 and 19.12 feet on 22 March 2011, respectively[7]. These elevations indicate that, at times, groundwater ~~rises~~has the potential to rise into the bottom of the green waste runoff pond. The unlined ditches, unlined pond, and off-site discharge of leachate are not described, nor permitted, by the WDRs. Use of this pond to store leachate or stormwater generated from the compost area is a violation of the WDRs. The Discharger has committed to construct improvements to rectify this issue.

14. Because the green waste runoff pond is not described in the WDRs, Monitoring and Reporting Program (MRP) R5-2008-0188 does not require the Discharger to analyze its contents. However, it is assumed that the green waste runoff pond would contain ~~designated waste,~~ leachate from the compost area,, similar in ~~content~~concentration to the high-flow pond[8]. The use of ~~this~~the green waste pond for storage of leachate and stormwater ~~has likely~~may have caused or contributed to groundwater pollution in the eastern portion of the landfill. This Order requires that the Discharger document that it has constructed improvements such that runoff from the compost pad is no longer discharged to the green waste runoff pond or to unlined ditches. The Discharger has stated that it will

[3] ~~This size storm event is proposed by the State Water Resources Control Board in its draft General WDRs for composting.~~

[4] This is because the wastewater would be composed of both compost leachate and stormwater, whereas the WDRs require leachate be separated from stormwater.

[5] The name "green waste runoff pond" is found on the Recology's 2011 Exhibit A to the Solano County Use Permit U-11-09. Recology also refers to this pond as the "western compost area pond".

[6] 5 June 2014, Recology response to Draft CAO

[7] Recology first semiannual 2011 monitoring report, Table 2.

[8] ~~The Discharger has submitted analytical data for a sample collected from the green waste pond on 28 February 2014 and reports that the pond contained nitrate-N at 1.5 mg/L, TKN at 22 mg/L, and ammonia-N at 2.5 mg/L. Results for the remainder of the constituents listed in Table 1, below, were not reported.~~

construct these facility improvements by 31 September 2014.

Designated Waste

~~15.~~ Historical analysis of the high-flow ~~pond contents~~and low-flow ponds content shows elevated concentrations of inorganic constituents, as shown below. According to the WDRs, the high-flow pond is only to contain stormwater runoff from the active composting area, not leachate, which is why it is allowed to overflow to surface waters. However, the data below show that designated waste[9] is contained in the low-flow and high-flow ~~pond~~ponds, and that the concentrations exceed the water quality goals and the US EPA Benchmark values used for reference in the Industrial Storm Water General Order. Therefore, it is not appropriate to allow this waste to overflow and discharge to surface waters.

~~High-Flow Pond~~ Waste Constituent	~~Concentration (Nov 2013)~~Sump[1]	Low Flow Pond[2]	High Flow Pond[3]	Parameter Benchmark Values[4]	Water Quality Goals
Specific Conductance, umhos/cm	10,445	3,815	9,395 ~~umhos/cm~~		900 ~~umhos/cm~~ (CA secondary MCL)
Total Dissolved Solids, mg/L			6,900 ~~mg/L~~		500 ~~mg/L~~ (CA secondary MCL)
Total Suspended Solids, mg/L	1,362	330		~~88/27~~ 100	
Biochemical Oxygen Demand, mg/L	15,750	2,150		~~140/37~~ 30	
Chemical Oxygen Demand, mg/L	32,000	3,900		120	
Chloride, mg/L			1,600 ~~mg/L~~	860	250 ~~mg/L~~ (CA secondary MCL)
Total Kjeldahl Nitrogen, mg/L			320 ~~mg/L~~		NA
Sulfate, mg/L			320 ~~mg/L~~		250 ~~mg/L~~ (CA secondary MCL)
Lead, mg/L			0.~~15mg/L~~15	0.0816	0.015 ~~mg/L~~ (USEPA Primary MCL)
Phosphorous, mg/L			150 ~~mg/L~~	2.0	NA
Nitrate as N, mg/L			14 ~~mg/L~~		10 ~~mg/L~~ (CA secondary MCL)
Ammonia as N, mg/L	895	145	11 ~~mg/L~~	~~10/4.9~~ 19	30 ~~mg/L~~ (USEPA Health Advisory)

[9] Designated waste is defined in Section 13173 of the California Water Code as a nonhazardous waste that, under ambient conditions, "could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of the waters of the state…" Because the concentrations in the ponds exceed both the water quality goals and the US EPA benchmark values, it is appropriate to classify the pond wastewater as designated waste.

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Nitrite as N, mg/L			0.66 ~~mg/L~~		1 ~~mg/L~~ (USEPA Primary MCL)~~-~~

[1]Sump in which wastewater from the compost pad is collected prior to being pumped to the low-flow pond. Average values from samples collected in February and April 2010.
[2]Average of values from samples collected in February and April 2010.
[3]Samples collected in November 2013
[4]From Table B of the State Water Resources Control Board's *Sampling and Analysis Reduction Certification* to satisfy the requirements of Section B.12.b of the stormwater Industrial General Permit No. 97-03-DWQ.

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~~16.~~15. The MRP does not require sampling of the low-flow pond, nor does it require freeboard measurements for either pond. A Revised MRP has recently been issued for this facility and it contains these requirements.

Compost Leachate Used for Dust Control Violation

~~17.~~16. As reported in the Discharger's 26 January 2011 *Report of Remedial Actions High-Flow and Low-Flow Ponds*, during the summer of 2010, "*Water was removed from the pond and used for dust control over lined portions of the landfill. Draining the pond required removal of approximately 10 million gallons of liquid through evaporation and dust control*."

~~18.~~17. The use of compost ~~pond~~ leachate for dust control on the landfill units is a violation of Discharge Specification B.13 which states "*Leachate or landfill gas condensate from a lined landfill module shall be discharged either to a publicly owned treatment works under permit, or to the composite-lined landfill unit from which it was generated….*" This section does not mention the use of compost water for dust control. In addition, the use of compost leachate as dust control is a violation of section 20375(d) of Title 27, which states "*There shall be no discharge from a surface impoundment except as authorized by WDRs".* ~~The application of compost pond~~Section 20340(g) of Title 27 also states that leachate may only be applied to the unit from which it was derived, unless the Water Board specifically authorizes otherwise. The application of compost leachate as dust control is not authorized by the WDRs and therefore this action is a violation of the WDRs. This Order provides the Discharger a timeline to ~~comply with Discharge Specification B.13.~~ either cease the use of compost leachate for dust control, or to submit a RWD to revise the WDRs to allow this action.

Separation Between Waste and Groundwater ~~(Engineered Alternative)~~

~~19.~~18. Section 20240 subdivision (c) of Title 27 requires a minimum of five feet of separation between waste and the highest anticipated elevation of underlying groundwater, unless a discharger can show that an engineered alternative provides equivalent or better protection. For the Hay Road Landfill, the Discharger proposed an engineered alternative of either a 1-foot or ½-foot gravel layer to serve as a capillary break and underdrain. Construction Specification D.2 of the WDRs allows this engineered alternative for the separation distance between "*wastes or leachate and the highest anticipated elevation of groundwater*" and states that the following minimum separations must be met:

Construction Specification D.2

Module	Engineered Alternative Required Separation Between Wastes or Leachate and the Highest Anticipated Elevation of Groundwater
DM-1 (see WDR Finding 65)	5 feet
DM-2.1	3 feet
DM-2.2 through DM-16	2.5 feet
Sludge storage (WP-9.1)	2.5 feet
Land treatment unit (LTU)	5 feet

~~20.~~19. Prohibition A.4 of the WDRs prohibits a discharge of waste constituents to the unsaturated zone. The engineered alternative to the prescriptive five feet of separation between waste and groundwater is intended to ensure that the Prohibition is met. The WDRs require that the Discharger report the separation distance between the disposal module leachate collection and removal system (LCRS) sumps (i.e., the bottom of the waste) and groundwater. Groundwater is typically highest in the spring. The separation reported for the spring monitoring events from 2011 through 2013 is summarized below:

Separation Data for Spring-time Monitoring, 2011 to 2013

Module	**Required Separation**	**March 2011**	**May 2011**	**Jan 2012**	**May 2012**	**Feb 2013**	**Apr 2013**
DM-1	5 feet	***0***	***3***	7	6	6	6
DM-2.1	3 feet	8	8	12	10	10	12
DM-2.2 through DM-16	2.5 feet	3-17	3-17	4-26	3-26	3-23	4-26
Sludge storage (WP-9.1 A, B)	2.5 feet	4, 5	6, 7	7, 8	6, 7	6, 7	6, 8
Land treatment unit (LTU)	5 feet	Not reported	Not reported	Not reported	Not reported	Not reported	Not reported

~~21.~~20. As shown above, the Discharger was in violation of Construction Specification D.2 at DM-1 for the March and May 2011 monitoring events[10]. It is unknown if there were other violations as, in general, the monitoring reports do not clearly show whether the Discharger is complying with Construction Specification D.2 and therefore with Prohibition A.4. For example, the Discharger rounds the groundwater elevation to the nearest foot, groundwater data is interpolated from site-wide gradient maps, some of the monitoring wells that appear to be used for compliance are on the other side of the slurry wall from the pan lysimeters, and the Discharger does not monitor for groundwater elevation at the LTU. In addition, references for the source of the sump elevations (i.e., as-built drawings with final survey data) and the elevations of the lowest point in the modules (i.e., the pan lysimeters) are not provided in the Discharger's monitoring reports. Although the Discharger has stated that it believes its monitoring and reporting practices to be appropriate, Water Board staff finds that it is not possible to determine whether the

[10] The Discharger asserts that the lack of separation was due to intermittent borrow pit dewatering.

Discharger is in compliance with the required separation to groundwater.

~~22.~~21. In order to fully evaluate compliance with Construction Specification D.2, and to determine whether or not there is a threatened discharge in violation of Prohibition A.4, this Order provides a time schedule (a) for the Discharger to install monitoring devices specifically designed to determine compliance with Construction Specification D.2, (b) for the Discharger to demonstrate compliance with Construction Specification D.2 by using the closest well or piezometer to the LCRS, (c) by reporting the elevations in units of ±0.1 foot, (d) for the Discharger to propose a method to immediately lower the groundwater in the event that a violation of Construction Specification D.2 is reported, and (e) for the Discharger to submit as-built drawing records which document the surveyed elevation of the bottom of each disposal module's sump.

RUNOFF AND DRAINAGE CONTROLS

~~23.~~22. Section 20365 of Title 27 defines the performance standard for landfill runoff and drainage controls, and states: "*Units and their respective containment structures shall be designed and constructed to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping under the precipitation conditions specified in Table 4.1 (of this article).* Prohibitions A.4 and A.5 of the WDRs prohibit the discharge of waste constituents to the unsaturated zone or to groundwater and prohibit the discharge of waste outside of a unit or portions of a unit.

~~24.~~23. Inadequate drainage may lead to slope failure and/or the creation of leachate, and result in a threatened discharge of waste or waste constituents, in violation of Prohibitions A.4 and A.5. The WDRs include Facility Specification C.10 which provides a performance measure for drainage controls, and states: "*Precipitation and drainage control systems shall be designed and constructed to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 1,000-year, 24-hour precipitation conditions."* Table 4.1 of Section 20365 of Title 27 shows that the 1,000-year, 24-hour precipitation event applies to Class II landfill units, while Class III units are held to a 100-year, 24-hour precipitation event.

~~25.~~24. During a 31 January 2014 site inspection, Water Board staff observed that the storm water down drains and ditches appeared to be undersized and/or inadequately graded to allow stormwater runoff to move off the landfill as quickly as possible.

~~26.~~25. Inadequate drainage may result in oversaturation of the slopes potentially resulting in a slope failure. Inadequate drainage may also allow stormwater to percolate into the waste mass which contributes to the creation of leachate and landfill gas. ~~The Discharger has reported that following periods of heavy rainfall[11,12], liquids have been detected in the pan lysimeters at DM-2.2, DM-4, DM-5.1, and DM-11. The Discharger also states that liquid found in pan lysimeters is due to stormwater infiltration, but does not believe its cause to~~

~~[11] Investigations for Pan Lysimeters PL-2.2A, PL-5.1A, and PL-5.1B, Hay Road Landfill, Inc., July 2005.~~
~~[12] WDRs R5-2008-0188, Finding 42.~~

~~be the result of inadequate sizing of the drainage control systems.~~ This Order requires the Discharger to re-evaluate its drainage control systems to ensure that ~~they~~the drainage control systems for the Class II units comply with Specification C.10 of the WDRs~~.~~ (designed for the 1,000 year, 24-hour precipitation event) while the drainage control systems for the Class III units comply with Section 20365 of Title 27 (designed for the 100 year, 24-hour precipitation event).

~~INTERIOR LANDFILL~~TEMPORARY FILL SLOPE STABILITY

26. ~~As required by Title 27, the~~Facility Specification C.2 of the WDRs states "Waste filling at landfill modules shall be conducted in accordance with a fill plan demonstrating that all temporary refuse fill slopes will be stable under both static and dynamic conditions for the design event for the unit."

~~27.~~ The Discharger prepared a slope stability analysis which is included in the 2007 Post Closure and Post Closure Maintenance Plan (PCPCMP). ~~This plan was approved in~~ While the ~~WDRs, and Findings 98 and 101 state that~~PCPCMP states that the final cover's side slopes will have a maximum slope of 4H:1V (horizontal~~-~~ to~~-~~ vertical~~). A~~), the PCPCMP does not address the appropriate slope ~~steeper than 4H:1V could result in an unstable condition and movement~~for the temporary interior areas of the ~~wastes and/or cover. This could result in a discharge of waste in violation of WDR Prohibitions A.4 and A.5.~~

~~28.~~27. landfill. Figure 1 of the Discharger's 2013 Winterization Plan indicates that the uppermost slopes and/or stockpiles at DM-1, DM-2.2, and DM-11 are in the range of approximately 2.5H:1V~~, which is steeper than the 4H:1V slope approved by the WDRs. These interior slopes may not meet the stability requirements of Facility Specifications C.2, which states: "*Waste filling at landfill modules shall be conducted in accordance with a fill plan demonstrating that all temporary refuse fill slopes will be stable under both static and dynamic conditions for the design event for the unit.*" The 2007 PCPCMP does not address the appropriate slope for interim, interior areas of the landfill.~~. It is unknown if these interior slopes meet the stability requirements of Facility Specification C.2. Therefore, this Order requires the Discharger to submit an analysis of the appropriate slope for "temporary[13] refuse fill slopes" under both static and dynamic conditions using the performance criteria of Title 27, and if necessary, make facility modifications.

FLOOD PROTECTION

~~29.~~28. Finding 11 of the WDRs states that about one-half of the existing landfill and 80% of the expansion area are within the 100 year floodplain, which is estimated to be at an elevation of 25 feet MSL. Federal regulations, as incorporated by State Water Board Resolution 93-62, require that a discharger whose new or existing landfills are located within a 100 year floodplain must demonstrate that the landfill location will not "result in the washout of solid

[13] Defined as areas which have not reached the final elevation grade.

waste so as to pose a hazard to human health or the environment". The Discharger has stated that there is a 40 foot MSL exterior perimeter berm around most of the landfill, except for portions of module DM-1. This berm is intended to prevent the washout of waste in a 100-year flood. Although not described in the WDRs, the Discharger states that the berms are also intended to provide stability in the event of an earthquake.

~~30.~~29. The WDRs require that the facility be protected from a 100-year flood and also prohibit the discharge of waste outside a unit. Specifically,

> Construction Specification D.9 states: *The Discharger shall construct and maintain berms along the exterior of each landfill unit as necessary to prevent inundation and washout of wastes from a 100-year flood.*
>
> Facility Specification C.12 states: *The Discharger shall prevent floodwaters from a 100-year flood from contacting wastes in a disposal module. As the site is developed, a flood protection and slope stability levee (or berm) shall be constructed around the site to at least 40 feet above mean sea level to prevent flood waters from a 100-year flood from entering the site.*
>
> Prohibition A.5 states: "*The discharge of wastes outside of a Unit or portions of a Unit specifically designed for their containment is prohibited.*"

~~31.~~30. Inadequate flood protection creates a threatened discharge of waste during a flood event, in violation of WDR Prohibition A.5. The Discharger's 2013 topographic site plan (i.e., the *Recology Hay Road 2013 Winterization Plan*) indicates that some exterior berms along the north side of the facility may not meet the ~~flood protection requirements~~specification in the WDRs of a berm height of at least 40 feet MSL around the site. In addition, the Discharger has stated[14] that in addition to providing flood protection, the berm "*provides additional stability against global failure of the waste mass (movement along the base liner system).*" However, the Discharger has also stated that the 100-year flood elevation is at about 25 feet, and therefore Facility Specification C.12 should be re-evaluated. Therefore, this Order requires that either the Discharger (a) submit a site drawing which indicates the location, distance, and height of all ~~flood-control~~perimeter berms, and indicates whether the ~~berm meets~~berms meet the requirements of the WDRs, or (b) submit a RWD requesting a change to Facility Specification C.12 and including an engineering evaluation of the height of the berms necessary to provide stability to prevent global failure of the waste mass.

REGULATORY CONSIDERATIONS

~~32.~~31. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan) designates beneficial uses, establishes water

[14] 5 June 2014 Recology comments on draft CAO

quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Board. These requirements implement the Basin Plan.

~~33.~~32. The site is in the Putah plain, which is drained by natural and man-made watercourses. The nearest surface water is the Alamo Creek A-1 Channel, which is an agricultural drainage canal that flows along the north and east sides of the site. The A-1 Channel drains to Ulatis Creek about three miles southeast of the site, then to Cache Slough and the Sacramento-San Joaquin Delta. As described in the Basin Plan, the designated beneficial uses of the Sacramento-San Joaquin Delta are municipal and domestic supply; agricultural supply, industrial supply, industrial process supply, water contact recreation, non-contact water recreation, warm fresh water habitat, cold freshwater habitat, migration of aquatic organisms, spawning, reproduction, and/or early development, wildlife habitat, and navigation.

~~34.~~33. The designated beneficial uses of the underlying groundwater, as specified in the Basin Plan, are domestic, agricultural, and industrial supply.

~~35.~~34. Water Code section 13301 states in relevant part,

> When a regional board finds that a discharge of waste is taking place or threatening to take place in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventative action.

~~36.~~35. As a result of the events and activities described in this Order, the Central Valley Water Board finds that a discharge of waste is taking place or threatening to take place in violation of WDRs Order R5-2008-0188. This Order requires the Discharger to take appropriate remedial action and to comply in accordance with the time schedule set forth below.

~~37.~~36. Water Code section 13267 subdivision (b)(1) states, in relevant part:

> 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 discharged or discharging, or who proposes to discharge waste within its region … shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

~~38.~~37. The technical reports required by this Order are necessary to ensure compliance with this Order and WDRs Order R5-2008-0188, and to ensure the protection of water quality. Recology Hay Road owns and operates the facility that discharges waste subject to this

Order and WDRs Order R5-2008-0188.

~~39.~~38. The issuance of this Order is being taken for the protection of the environment and as such is exempt from provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) pursuant to California Code of Regulations, title 14, sections 15061 subdivision (b)(3), 15306, 15307, 15308, and 15321subdivision (a)(2).

~~40.~~39. On XX October 2014, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Central Valley Water Board conducted a public hearing at which evidence was received to consider a Cease and Desist Order under Water Code section 13301 to establish a time schedule to achieve compliance with waste discharge requirements.

IT IS HEREBY ORDERED that, pursuant to Water Code sections 13301 and 13267, Recology Hay Road shall implement the following measures necessary in order to comply with WDRs Order R5-2008-0188.

This Order requires the submittal of technical reports. These technical reports shall contain the information and decisions required by the following paragraphs. If a report is submitted without the required information or decision, then the Discharger is in violation of this Order and subject to additional enforcement action.

Compost Area

1. **By 1 November 2014**, the Discharger shall submit a *Compost Area Stormwater Modification* technical report documenting that it has made facility modifications such that (a) compost area stormwater and leachate are only discharged to lined ditches, the low-flow pond, and the high-flow pond, and (b) that compost area stormwater and leachate does not flow into the green waste pond. The report shall describe the modifications that have made and include diagrams and maps indicating flow directions.

2. **By 1 December 2014**, the Discharger shall submit either:

   (a) a *Compost Ponds ~~Re-Configuration~~ReConfiguration* technical report documenting that it has made facility ~~modification~~modifications such that ~~wastewater~~leachate is stored in the low flow ~~and~~ pond and stormwater is stored in the high flow ~~ponds~~pond as described in Finding 88 of the WDRs, or

   (b) ~~a *Compost Ponds Water Balance* showing whether or not the two ponds have the capacity to store all compost area leachate and stormwater generated during a 25 year return total annual precipitation event (i.e., 38.97 inches[15] as measured at Vacaville Station A00-9200-00). Prior to completing the water balance, the Discharger shall~~

~~[15] For Station A00 920 0000 at ftp://ftp.water.ca.gov/users/dfmhydro/Rainfall%20Dept-Duration-Frequency/Rain%20D%20DDF%20Daily/~~

~~contact Board staff to discuss the format and assumptions. The water balance shall be calculated on a month-by-month basis, and shall include inflows, outflows, evaporation, and rainfall distributed appropriately over the months of the year. The water balance shall clearly show all assumptions and shall state whether the two ponds have adequate capacity to store all flows generated during a 25 year return annual precipitation event. If they do not, then on the same date the Discharger shall also submit a *Plan for Removal and Disposal of Compost Leachate* that describes the steps that will be taken to ensure that the ponds do not overflow in a year with less than a 25 year return annual precipitation event.~~a statement that it intends to submit a Report of Waste Discharge (RWD) by 1 January 2015, with the contents as described in Item No. 3, below. For the interim period until the WDRs are revised, the Discharger shall not allow the wastewater in either pond to overflow into surface waters. In addition, the Discharger shall submit a technical report describing how it will inspect and manage the ponds in the interim period to prevent overflows (e.g. enhanced evaporation, transport to a POTW, use as compost conditioning, etc.).

3. **If the Discharger does not submit the *Compost Ponds Reconfiguration Report*,** then by **1 January 2015**, the Discharger shall submit a ~~Report of Waste Discharge (RWD)~~RWD requesting that the WDRs be revised to such that the two compost ponds may be operated in a manner other than as described in the WDRs. The RWD shall be submitted after consultation with Central Valley Water Board Permitting staff, in order to determine the supporting data which must be submitted. ~~In addition, until either the WDRs are revised or the ponds are reconfigured to comply with Finding 88 of the WDRs, the Discharger shall not allow water to overflow from either compost pond unless the yearly rainfall exceeds a 25 year return annual precipitation event.~~If the WDRs are not revised by 15 December 2015, then the Discharger must make facility modifications such that it complies with Finding 88 no later than 15 January 2016.

4. **By ~~15 December~~1 January 2015,** the Discharger shall submit either:

(a) a *Food Waste In-Vessel Composting* technical report documenting the facility modifications that have been made such that all food waste composting is conducted in an in-vessel manner, as required by Discharge Specification B.27 of the ~~WDRs. Alternatively,~~ WDR, or

~~4.~~(b) after consultation with the Central Valley Water Board's Permitting Unit, the Discharger may submit a RWD requesting that the WDRs be revised in order to allow that food waste composting take place outside of vessels. The RWD must ~~(a)~~ show how non-vessel composting will be protective of water quality and prevent nuisance conditions~~, and (b) be submitted by **1 January 2015**, in order to allow time for revised WDRs to be considered prior to this Order's 15 December 2015 date to return to in-vessel composting.~~. If the WDRs are not revised by 15 December 2015, then by 15 January 2016, the Discharger must comply with Discharge Specification B.27.

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5. **By ~~15 December~~1 January 2015**, the Discharger shall submit either:

(a) a *Compost Leachate Dust Control* technical report documenting that leachate from the compost ponds are no longer used for dust control on the landfill~~. Alternatively, after~~, or

~~5.~~(b) After consultation with the Central Valley Water Board's Permitting Unit, the Discharger may submit a RWD requesting that Discharge Specification B.13 of the WDRs be revised in order to specifically allow the use of compost leachate as dust control. The RWD must ~~(a)~~ describe how the leachate will be applied in a manner that protects water quality~~ and (b) be submitted by **1 January 2015**, in order to allow time for revised WDRs to be considered prior to this Order's 15 December 2015 date to cease the use of compost leachate for dust control.~~. If the WDRs are not revised by 15 December 2015, then the Discharger ~~must comply with Discharge Specification B.13.~~may not use compost leachate as dust control.

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~~**Prior to 15 December 2015**, if the Discharger uses compost leachate as dust control, it shall do so in a manner described by Discharge Specification B.13, and shall maintain a log of the use.~~If the Discharger chooses option 5(b), then prior to 15 December 2015, the Discharger may use compost leachate for dust control if it is done in a manner[16] that does not cause instability of the waste, does not cause leachate seeps, does not generate additional landfill gas that is not captured by the active landfill gas extraction system, does not cause contaminants to enter surface water, does not cause leachate volumes to exceed the maximum capacity of the LCRS, and does not cause the LCRS to be operated in violation of Construction Specification D.4 of the WDRs. In addition, the Discharger shall maintain a log describing the use of compost leachate as dust control. The log shall include date, volume used as dust control, source of water (i.e., which pond), and location of use. The log shall be submitted with the semiannual monitoring reports.

[16] From Discharge Specification B.13 of the WDRs

~~Engineered Alternative~~
Separation to Groundwater

6. **Beginning with the fourth quarter 2014**, the Discharger shall report compliance with Discharge Specification D.2 (separation between waste and groundwater) using the groundwater monitoring point closest to each LCRS sump and reporting data in units of 0.1 foot.

7. By **15 March 2015**, in order to demonstrate whether the facility is in compliance with the required separation between waste and underlying groundwater, the Discharger shall submit (a) as-built drawing records which document the surveyed elevation of the bottom of each disposal module's sump, and (b) a *Well Installation Workplan* that contains the items listed in the first section of Attachment A to this Order. The workplan shall propose the installation of a piezometer or monitoring well as close as possible to *each* LCRS sump, and screened from the bottom of the LCRS sump to at least 5' below the sump. If the Discharger believes that an existing monitoring well is close as possible to an LCRS sump, then prior to the date that this workplan is due, the Discharger may discuss the issue with staff. However, unless provided written approval from the Executive Officer otherwise, the workplan due on 15 March 2015 shall contain a proposal for installation of a piezometer or monitoring well as close as possible to *each* LCRS sump.

8. By **15 June 2015**, the Discharger shall submit a *Well Installation Report of Results* that contains the information listed in the second section of Attachment A to this Order. The report shall document the installation of piezometers or monitoring wells next to each LCRS sump.

9. By **15 June 2015**, the Discharger shall submit a *Groundwater Lowering Workplan* containing a proposed method to immediately lower the groundwater in the event that a violation of Construction Specification D.2 is reported. If facility modifications are needed to implement the workplan, then a proposed timeline shall be included.

Runoff and Drainage Controls

10. By **15 March 2015**, the Discharger shall submit a *Runoff and Drainage Controls* technical report which evaluates whether the current controls for the Class II units comply with Specification C.10 of the WDRs~~.~~ (i.e., 1000 year, 24 hour precipitation), and whether the current controls for the Class III units comply with section 20365 of Title 27 (i.e., 100 year, 24 hour precipitation). If they do not, then the report shall also include a workplan and proposed schedule to return to compliance.

~~Interior Landfill~~Temporary Fill Slope Stability

~~11.~~ **By 15 March 2015**, the Discharger shall submit ~~an *Interior Landfill*~~a *Temporary Fill Slope Stability* technical report containing an ~~evaluation~~analysis of ~~whether or not interior~~the appropriate slope for "temporary[17] refuse fill slopes ~~that are steeper than 4H:1V comply with the~~" under both static and dynamic conditions using the performance criteria of Title 27 ~~section 21750.~~Section 2170(f)(5). The report shall show whether or not the temporary refuse fill slopes comply with Facility Specification C.2 and shall contain a map showing the existing slope (H:V) for all ~~interior landfill~~temporary fill areas. If the evaluation shows that the current ~~interior~~ slopes do not meet ~~the Title 27~~ criteria of Facility Specification C.2, then the Discharger shall include a workplan and proposed timeline to ~~correct the slopes~~make facility modifications.

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[17] Defined as areas which have not reached the final elevation grade.

Flood Protection

~~12.~~11. **By 1 January 2015**, the Discharger shall either submit (a) a *Flood Protection* technical report containing a site drawing which indicates the location, distance, and height of all ~~flood control~~perimeter berms, and description of whether the berms comply with WDR Specifications C.12 and D.9, and if not, a workplan and proposed timeline to return to compliance, or (b) a RWD requesting a change to the flood control requirements of Specifications C.12 and D.9, ~~including~~which includes an engineering evaluation of the height of the berms necessary to provide stability to prevent global failure of the waste mass.

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Other Requirements

~~13.~~12. ~~**Effective immediately,** all~~ All data, technical reports and plans, and monitoring reports prepared by the Discharger after the date of this Order shall be uploaded to the State Water Resources Control Board's web-based Geotracker database system (http://geotracker.waterboards.ca.gov), in compliance with the requirements of Title 23 Section 3890 et seq. This includes uploading all reports, plans, and data required under this Order and under any Order or permit issued by the State Water Quality Control Board.

~~14.~~13. As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, all reports shall be prepared by, or under the supervision of, a California Registered Engineer or Professional Geologist and signed by the registered professional. Each technical report submitted by the Discharger shall contain the professional's signature and/or stamp of the seal.

~~15.~~14. As required by Provision G.6a and G.6e of WDRs Order R5-2008-0118, all reports and transmittal letters shall be signed by a principal executive officer of the corporation with at least the level of senior vice-president, and any person signing a document submitted to comply with this Order shall make the following certification:

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

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement or may issue a complaint for administrative civil liability.

Failure to comply with this Order or with the WDRs may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

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

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on XX October 2014.

PAMELA C. CREEDON, Executive Officer

(Date)

Attachment: Requirements for Monitoring Well Installation Workplans and Monitoring Well Installation Reports