7 June 2013

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Drew Lehman
Recology
Director, Environment and Planning
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San Francisco, CA 94111

TENTATIVE CLEANUP AND ABATEMENT ORDER, RECOLOGY YUBA SUTTER LANDFILL, YUBA COUNTY

Recology Inc. (referred to as "Discharger") is responsible for complying with Waste Discharge Requirements (WDRs) Order R5-2003-0093 for post closure maintenance and corrective action. The Recology Yuba Sutter Landfill facility has a confirmed release to the vadose zone and groundwater requiring the Discharger to increase corrective action measures. In addition, the Discharger conducts multiple operations on top of waste management unit (WMU) LF-1, which has degraded the closure cover of the WMU.

Any comments or evidence you may have concerning the enclosed Tentative Cleanup and Abatement Order must be submitted to this office by 5:00 p.m. on **21 June 2013.**

In order to conserve resources, this letter transmits paper copies of the documents to the Dischargers only. Interested persons may download the documents from the Central Valley Water Board's Internet website at:

http://www. Waterboards.ca.gov/centralvalley/tentative_orders/

Copies of these documents can also be obtained by contacting or visiting the Central Valley Water Board's office weekdays between 8:00 AM and 5:00 PM.

If you have any questions or wish to meet to discuss the Tentative Order, please contact Todd Del Frate at (916) 464 4737 or at tdelfrate@waterboards.ca.gov.

HOWARD F. HOLD
Senior Engineering Geologist
Title 27 and Non 15 Compliance and Enforcement Section

Enclosure: Tentative CAO

cc: Mayumi Okamoto, Office of Chief Counsel, State Water Board, Sacramento
Paul Donoho, Yuba County Environmental Health

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER XX-2013-XXXX
FOR

RECOLOGY, INC.
RECOLOGY YUBA SUTTER LANDFILL
WASTE MANAGEMENT UNIT LF-1
YUBA COUNTY

This Order is issued to Recology, Inc., (hereafter, Discharger) based on provisions of California Water Code section 13304, which authorizes the California Regional Water Quality Control Board, Central Valley Region, (hereafter Central Valley Water Board or Board) to issue a Cleanup and Abatement Order (CAO), and Water Code section 13267, which authorizes the Board to require the submittal of technical reports.

The Assistant Executive Officer of the Central Valley Water Board finds, with respect to the Discharger's acts, or failure to act, the following:

1. The Discharger owns and operates a closed municipal solid waste Class III landfill located at 3001 N. Levee Road, Marysville in Yuba County. For the purposes of this Order, the term "Landfill" refers to closed waste management units (WMUs) LF-1, LF-2, and LF-3.
2. This CAO focuses on post-closure use of WMU LF-1 and post-closure maintenance deficiencies that have led to storm water bench mark exceedences, landfill gas (LFG) generation, offsite migration of LFG, and groundwater impacts. As discussed in the Findings below, several Notices of Violation (NOVs) have been issued requiring corrective action measures to address the deficiencies. This Order requires the Discharger to install additional corrective action measures, conduct upgrades to the cover of WMU LF-1, and isolate the facility operations (including the compost facility) from the cover of WMU LF-1.
3. Waste Discharge Requirements (WDRs) Order R5-2003-0093 was adopted 6 June 2003. The WDRs regulate post-closure maintenance of the closed WMUs and require corrective actions relating to a release of LFG and groundwater degradation.
4. Several active operations are conducted on the cover of WMU LF-1 including storage and processing of green waste, green waste composting, a materials recovery facility (MRF), a vehicle maintenance yard, and storage of white goods. The compost operation covers approximately 16 acres and is permitted by the County to accept a maximum of 400 tons per day of green waste for processing and with a capacity of 40,000 tons of materials on-site at any one time.
5. The Central Valley Water Board formerly regulated green waste composting facilities under Resolution No. 96-031 *Conditional Waiver of Waste Discharge Requirements for Composting Operations*. Consistent with SB 390, all waivers expired on 1 January 2003. Since that time, the Board has not formally regulated this facility's composting facility. After the Discharger completes certain actions required by this CAO, Water Board staff will prepare updated WDRs which will include requirements for the compost facility.

6. 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). General Permit requirements are based, in part, on the Standard Industrial Classification (SIC) Code for the industrial activity. The Discharger has determined the activities conducted at the facility that are subject to the General Permit include SIC Codes 4953-refuse, 5093-scrap metal, and 4212-trucking. This CAO requires that the Discharger file the appropriate forms to include the compost operation (SIC 2875) under the General Permit and to update its Storm Water Pollution Prevention Plan (SWPPP) accordingly.

STORM WATER AREAS OF CONCERN

7. The facility was issued NOVs for bench mark exceedences reported in the Discharger's 2006/2007 and 2009/2010 annual reports. In response, the Discharger made several improvements including: installing inlet filters in nine drain inlets, upgrading Material Bunker #1, installing a wood chip berm along northern boundary of compost operation, installing river rock sediment filter, installing hydrocarbon absorbent packets in drain inlets, increasing the frequency of site inspections, and cleaning of all 40 drain inlets.

8. Storm water flows off the facility at multiple locations, all of which are directed to an offsite pond. The pond is referred to as the "Big Pond" and is within the 100-year flood plain of the Yuba River. Based on the location, groundwater elevations, and wetlands characteristics, Board staff has determined that the Big Pond is a jurisdictional water of the United States (US). This determination affects the location at which samples must be collected under the Storm Water Permit. This CAO allows the Discharger an opportunity to show that the Big Pond should not be considered a jurisdictional water of the US.

9. Due to the number of operations being conducted on top of the cover of WMU LF-1, storm water flow from numerous operations comingles prior to discharge to the Big Pond. Board staff are concerned about the discharge and drainage from all LF-1 operations and whether appropriate sampling is being conducted per the required SIC Codes. .

10. During a site inspection on 16 May 2013, Board staff noted several areas of concern. Standing water was observed in storm drains beneath the asphalt apron of the MRF. Drainage of storm water beneath the MRF appeared to be non-existent and no inlet filters were observed. Material Bunker #1 was overflowing and had standing water around the bunker, It was indiscernible whether upgrades to Bunker #1 were providing a higher level of storm water protection. Hydrocarbon absorbant packets were not observed in drain inlets in the metal yard's storm drain system, even though the Discharger had stated that they would be installed in response to the benchmark exceedences.

11. During the wet season, leachate generated at the compost operation is allowed to comingle with storm water, creating "contact storm water". The discharge of "contact storm water" is a violation of the Industrial Storm Water Permit. The Discharger has

constructed a wood chip berm along the northern boundary of the compost operation which drains via a single 6-inch diameter pipe installed in a low area. However, a wood chip berm at this location has the potential of allowing storm water to pond on the landfill cover, in violation of the WDRs. In the past, Board staff has noted that the ground surface of the compost area has been rutted and uneven, which does not provide positive drainage. During the May 2013 inspection, staff observed several locations along the wood chip berm where contact storm water had ponded.

RELEASE FROM WMU LF-1

12. According to the WDRs, WMU LF-1 covers about 42 acres. Municipal solid wastes and agricultural wastes were place in this unlined unit from about 1967 through 1984, after which it was closed in accordance with the regulations that existed at that time. Most of the unit has since been covered with building structures, paved parking, a white goods recycling area, a green waste area, and a compost area. The unit does not contain a bottom liner or a leachate collection and recovery system (LCRS). The northern boundary of LF-1 contains a line of LFG extraction wells.

13. On 14 April 2011, Board staff issued a Notice of Violation (NOV) for detections of volatile organic compounds (VOCs) in corrective action wells MW-1, MW-2, MW-3, MW-4, and MW-10. In addition to the VOCs, bicarbonate, 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.

14. 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 also suggested that rainfall ponding over LF-1 contributes to changes in groundwater quality and that LF-1 cover improvements should be considered.

15. On 12 August 2011, 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. Staff requested a work plan to correct the drainage issues. The Discharger submitted the work plan dated 14 September 2011.

16. On 22 November 2011, Board staff conducted a follow up inspection to the June 2011 inspection. During this visit, 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.

17. 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.

18. In a letter dated 6 December 2011, 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* to address deficiencies in the corrective action program. In addition, staff requested a work plan be submitted to install one additional groundwater monitoring well to enhance the detection/corrective action monitoring programs. This workplan was submitted in December 2011 and the well MW-15 was installed April 2012.

19. 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. 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.

20. On 28 March 2012, 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. 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.

REPORT OF WASTE DISCHARGE AND CORRECTIVE ACTION

21. In a letter dated 17 May 2012, Board staff requested an updated *Report of Waste Discharge* to revise the WDRs to accurately reflect current operations at the site. Staff requested the Discharger provide detailed information on the composting facility and its potential impacts to surface water and groundwater.

22. The Discharger submitted the required *Engineering Feasibility Study (EFS)* and *Amended Report of Waste Discharge Report* dated 29 June 2012. 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 site boundaries. 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. Staff approved these corrective action measures and requested a Corrective Action Work Plan.

23. In a letter dated 26 September 2012, Board staff requested an Amended Report of Waste Discharge to further describe the composting operation. Staff requested the Discharger to address the composting operation and the use of BPTC that will meet the requirements of Title 27, Sections 20950 and 21090, and State Water Board Resolution No. 68-16.

24. 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.

25. On 31 October 2012 the Discharger submitted a work plan to remediate LFG migrating offsite. 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 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 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.

26. 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. Monthly status reports submitted by the Discharger indicate that repairs to the storm water and sewer pipelines along with areas of settlement within the cover of LF-1 will be conducted during the 2013 construction season.

27. In preparation of revising the WDRs, 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. 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, rutting of the earthen compost pad, and leachate formation in the compost area. 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.

28. In a letter report dated 31 January 2013, the Discharger submitted the Addendum to the Work Plan requested by staff in Finding 25 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 steady state operation of the system would be completed by 30 September 2013. Staff approved the proposed scope of work and requested design details in a letter dated 12 February 2013.

29. In a report dated 15 February 2013, the Discharger submitted an *Amendment to Report of Waste Discharge*. This Amendment provided additional information focused on the composting area. The Discharger had conducted a "Pad Study" within the composting area to evaluate if the operations pad still meets their consultants 2001 recommended specifications and whether the operation pad is a conduit for leachate entering into the waste mass of LF-1. The soil investigation included 13 test pits and 10 hand auger borings. Test pits were excavated to various depths between 1.5 to 3 feet below surface grade (bsg) to evaluate pad thickness, soil density, and moisture content. The report recommended adding aggregate base material to areas lacking a minimum of 6-inches of base material (Consultants 2001 specifications), conducting periodic verification of pad thickness, and periodically re-grading the operations pad for positive drainage. The report did not discuss a groundwater seep identified in test pit 11 or refuse encountered in four test pits at depths between one and three feet bsg. Groundwater in test pit 11 is an indication that free water is within the waste mass, which suggests water is either percolating through the cover, is groundwater rising into the waste mass, or is a result of broken subsurface pipeline.

BASIS FOR CLEANUP AND ABATEMENT ORDER

30. The Discharger conducts multiple operations on top of the closure cover of WMU LF-1. Although it is highly unusual for a Discharger to conduct operations on top of a closed landfill, it is not disallowed by the regulations. However, the Discharger must adjust its operations and complete additional maintenance activities such that the cap and associated closure structures are maintained in accordance with the regulations. As

described above, the cap has settled over time. This settlement has created low spots where storm water ponds on the cover, has cracked paved surfaces allowing infiltration of storm water into the underlying waste mass, and has broken storm water pipes and sewer lines also allowing storm water to infiltrate in to the underlying waste mass. As a result of infiltration of water into the waste mass, LFG is generated and has impacted the underlying groundwater. Furthermore, current composting operations generate leachate that is not properly controlled, drained, or collected, which then mixes with storm water from the site. This is an unpermitted discharge of waste. These operations conducted on top of the WMU LF-1 are currently detrimental to the final containment structure of LF-1 and are currently contributing to degradation of surface water and the underlying groundwater.

31. As a result of infiltration of ponded storm water on top of the existing cover of LF-1, settlement and breakage of subsurface piping, and lack of proper drainage of storm water, the underlying waste mass within WMU LF-1 remains wet and thus generates LFG. LFG is migrating outside of the WMU and has impacted the unsaturated zone and shallow groundwater beneath the landfill. These impacts are seen in soil gas probe GP-14 and groundwater wells MW-1, MW-2, MW-3, MW-8, MW-10, MW-11, MW-12, and MW-15. Gas probe GP-14 has measured upwards of 20% methane and both the shallow and deep probes exceed the 5% methane regulatory limit. The groundwater wells contain multiple volatile organic compounds (VOCs) and inorganic exceedences that are evidence of a release from the landfill WMUs.

32. This Order requires the Discharger to address the issues that have resulted in the generation of LFG and the impacts to groundwater, to prevent the discharge of compost leachate, and to implement appropriate and timely inspections and maintenance of the cover.

REGULATORY CONSIDERATIONS

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

34. Surface water drainage is to the southwest into the Yuba River, which is a tributary to the Feather River, which is a tributary to the Sacramento River, which flows into the Sacramento-San Joaquin Delta. The beneficial uses of the Sacramento 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.

35. The beneficial uses of the underlying groundwater are municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.

36. Title 27, section 21190 (a – g) Postclosure Land Use, states in relevant part:
All proposed postclosure land uses, other than non-irrigated open space, on sites implementing closure or on closed sites shall be submitted to the EA, RWQCB, local air district and local land use agency. The EA shall review and approve proposed postclosure land uses if the project involves structures within 1,000 feet of the disposal area, structures on top of waste, modification of the low permeability layer, or irrigation over waste.

37. Title 27, section 20425 (3) Coordinated Landfill Gas Control, states in relevant part:
For landfills at which the information submitted under ¶(d) indicates that the release likely involves landfill gas, the RWQCB shall notify and shall coordinate, as appropriate, with the EA and (as appropriate) the CIWMB (CalRecycle) 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.

38. Water Code section 13304(a) states, in relevant part:

    Any person who has discharged or discharges waste into the waters of this state in violation of any waste discharge requirement or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board, clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including, but not limited to, overseeing cleanup and abatement efforts.

39. Water Code section 13267(b) 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.

40. The technical reports required by this CAO are necessary to ensure compliance with this CAO and WDRs Order R5-2009-0108, and to ensure the protection of water quality. The Discharger owns and operates the facility that discharges waste subject to this CAO and WDRs Order R5-2009-0108.

41. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) pursuant to California Code of Regulations, title 14, section 15321(a)(2).

IT IS HEREBY ORDERED that, pursuant to Water Code sections 13304 and 13267, Recology Inc., shall cleanup and abate the Recology Yuba Sutter Landfill in accordance with the scope and schedule set forth below, in order to comply with WDRs Order R5-2003-0093 or its subsequent Order.and the State Water Board General Stormwater Permit.

1. **By 1 July 2013**, the Discharger shall identify the composting operation by SIC Code 2875 on the facility information page in the 2012/2013 Storm Water Annual Report, and shall beginning with the 2013/2014 reporting period include the appropriate compost analytes in the storm water sampling events and the facility's storm water Monitoring Program and Reporting Requirements (MPRR).

2. By **30 October 2013** the Discharger shall prepare and submit an updated Storm Water Pollution Prevention Plan (SWPPP) and MPRR in accordance with the Industrial Storm Water General Permit.

    a. The SWPPP/MPRR shall identify all storm water drainages and discharge points associated with the facility and compliance sampling locations upstream of the Big Pond. If the Discharger believes that the Big Pond should not be considered a jurisdictional water of the US, then the SWPPP shall contain a detailed evaluation of the surface water and groundwater hydrology and surrounding wetlands characteristics and the rationale for why it should not be considered a jurisdictional water of the US.

    b. The SWPPP shall also identify how the Discharger shall temporarily separate contact storm water (leachate) generated at the compost and green waste areas from facility storm water, where the contact storm water will be collected for proper disposal, and how it will be disposed of. The temporary collection system shall be in place prior to the winter of 2013/2014. Permanent discharge and storage of leachate shall be identified in the work plan requested below.

3. By **30 October 2013**, the Discharger shall submit a report documenting the (a) installation of five LFG extraction wells, (b) repairs to storm water drains and sewer pipelines identified in the 15 November 2012 Report, and (c) a proposed schedule for routine inspections and maintenance of the subsurface piping and storm water drains within LF-1. The report shall provide as-built drawings showing how repairs were completed and describe to what standard repairs were made. The Discharger shall begin LFG system monitoring as described on Attachment A of this Order. The monitoring report shall be submitted by the 10th day of the following month.

4. By **31 October 2013** the Discharger shall submit a comprehensive work plan that describes how activities conducted on top of the LF-1 cover will be designed, constructed, operated, and maintained such that:

   a. The closure cover of LF-1 is maintained as a grade-to-drain closure cover. All activities occurring on LF-1, including the compost operation must be completely separate from the existing closure cover. The Discharger shall not rely on the existing closure cover to further impede percolation of liquids into the underlying waste and should consider the installation of low hydraulic conductivity surfaces (i.e. less than $1x10^{-6}$ cm/sec) such as asphalt or concrete to create the separation needed to protect the cover from further degradation.

   b. Surfaces where operations are performed, including the composting operation, shall be designed, constructed, operated, and maintained such that upon site inspection staff can visually determine that the operations are isolated from the closure cover of LF-1 and the cover is not being degraded. Board staff must be able to determine if failure of such surfaces has occurred. Examples of visual indications of failure are cracking, checking, dipping, etc.

   c. Day to day operations performed on top of LF-1 shall not impact the closure cover of LF-1 as noted by dipping or rutting of roadways, cracking of asphalt or concrete aprons, or ponding of liquids on top of LF-1. The top surface of LF-1 shall be low conductivity and graded to drain.

   d. The composting area and associated processing and storage areas shall be separtated from the closure cover of WMU LF-1 both vertically and horizontally by the installation of low hydraulic conductivity materials (i.e. $1x10^{-6}$ cm/sec) such as asphalt or similar material, making this operation fully distinct from the cover of LF-1. Precipitation and drainage controls shall be constructed of low hydraulic conductivity materials to contain and convey liquids generated from this operation and shall be directed to a dedicated pond.

   e. Liquids classified and regulated as industrial storm water under an Industrial Storm Water Permit shall be isolated from liquids in contact with composting operations. Liquids generated from the vehicle maintenance yard, the white goods and debris box storage areas, and the MRF shall be directed and discharged to the appropriate storm water discharge point(s). These liquids shall be collected and directed away from the compost area in containment and conveyance systems designed to isolate stormwater from the underlying cover of WMU LF-1. These conveyance systems shall not rely on the properties of the existing cover to impede percolation of stormwater into the underlying waste mass.

   f. Liquids generated in composting areas shall be collected and directed away from WMU LF-1 in containment and conveyance systems designed, constructed, operated, and maintained so that these liquids are separate from the underlying closure cover of LF-1. These conveyance systems shall be made of an low hydraulic conductivity material such as asphalt or similar material and not rely on

the properties of the existing closure cover to further impede percolation of liquids into the underlying waste mass.

g. Liquids collected in item f shall be discharged to a surface impoundment (pond) constructed with at least a single liner. The work plan shall include design specifications for the pond and liner, and shall propose monitoring of the unsaturated zone beneath the pond. This pond shall not be constructed over waste or on top of a WMU. As part of the work plan and to properly size the pond, the Discharger shall prepare a water balance for the pond.

h. The work plan shall contain a proposed corrective action monitoring program to assess the effectiveness of the proposed changes to LF-1. The monitoring program must address settlement of the landfill cover, hydraulic integrity of the landfill cover, hydraulic integrity of the impermeable surfaces in composting areas, landfill gas concentrations, groundwater quality, and surface water quality. Monitoring done to comply with the Industrial Storm Water General Permit or the O&M plan (see below) may be included by reference.

i. The work plan shall include a proposed operation and maintenance (O&M) manual that will describe how the facility will be operated and maintained to perpetuate compliance. The O&M manual will define types of inspections as well as schedules for such periodic inspections, with description to how responses to inspection results will be resolved, and documentation that will be submitted to the RWQCB staff that ensures that problem resolution is occurring in a timely manner.

j. The Discharger shall provide a proposed schedule in the work plan that describes when work will be completed.

5. By **30 December 2014**, the Discharger shall submit a *Landfill Gas Extraction Evaluation Report* that evaluates the effectiveness of the LFG extraction system in the southern portion of LF-1 in regard to removing sufficient LFG to prevent further groundwater degradation. If the current extraction system is not clearly capturing the landfill gas existing in that portion of the landfill, or if the concentration of groundwater contaminants are increasing in the groundwater monitoring wells, then the Report shall either propose an expansion of the LFG extraction system or groundwater remediation.

6. In addition to the above, the Discharger shall comply with WDRs Order R5-2003-0093 and all applicable provisions of the Water Code that are not specifically referred to in this Order.

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.

Any person signing a document submitted under 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 the Discharger is unable to perform any activity or submit any document in compliance with the schedule set forth herein, or in compliance with any work schedule submitted pursuant to this Order and approved by the Executive Officer, the Discharger may request, in writing, an extension of the time specified. The extension request shall include justification for the delay. Any extension request shall be submitted as soon as a delay is recognized and prior to the compliance date. An extension may be granted by revision of this Order or by a letter from the Executive Officer.

If 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 may result in the assessment of administrative civil liability up to $10,000 per violation per day, pursuant to the Water Code sections 13268, 13350, and/or 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.

This Order is effective upon the date of signature.

_____

Kenneth D. Landau, Assistant Executive Officer

_____

(Date)

ATTACHMENT A
LANDFILL GAS (LFG) MONITORING PROGRAM

Parameter	Units	Frequency
LFG Extraction Well Field		
Gas concentrations at each well		
Methane	% by volume	Monthly
Carbon Dioxide [1]	% by volume	Monthly
Oxygen [1]	% by volume	Monthly
Remainder gas [1]	% by volume	Monthly
Gas Temperature at each well	^{o}F	Monthly
Gas Pressure at each well		
Initial static pressure in wellhead	inches H_2O	Monthly
Adjusted static pressure in wellhead	inches H_2O	Monthly
Flare Station		
Temperature into LFG Flare	^{o}F	Monthly
Pressure into the LFG Flare	inches H_2O	Monthly
LFG Flow rate into the Flare	CFM	Monthly
Total halogenated VOCs **(USEPA Method TO-15)**	µg/cm	Semi-annually
Perimeter LFG Migration Monitoring Probes GP-1 through GP-15 As Identified in the WDR and MRP		
Gas Concentration		
Methane	% by volume	Quarterly
Carbon Dioxide [1]	% by volume	Quarterly
Oxygen [1]	% by volume	Quarterly
Remainder gas [1]	% by volume	Quarterly
Probe Pressure	inches H_2O	Quarterly

Notes:

1: Measurement of CO2, O2 and "remainder gas" may be postponed due to unavailability of gas measurement instrument during factory-calibration. Measurement of methane will be made by other instruments that may not allow measurement of CO2, O2 and "remainder gas".