40

Recology
Yuba - Sutter
WASTE ZERO

July 30, 2014

Ms. Wendy Wyels
California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Re: Quarterly Progress Report, 2nd Calendar Quarter 2014, Recology Yuba Sutter (RYS) Landfill Waste Management Unit LF-1 - Cleanup and Abatement Order R-5-2013-0704

Dear Ms. Wyels,

This Quarterly Progress Report for the 2nd Calendar Quarter of 2014 is being submitted in response to Requirement # 15 of the August 29, 2013 Cleanup and Abatement Order (CAO) R5-2013-0704, which requires quarterly reports describing the work completed to comply with the requirements in the CAO and the work to be conducted in the next quarter.

Requirement 1 - *By **1 September 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).*

Recology Yuba-Sutter submitted the Annual Storm Water Report for 2013/2014. SIC code 2875 has been added to the facility information page and the SWPPP/MPRR have been amended to include the additional parameters for SIC code 2875. . Prior to the 2013/2014 rainy season, RYS environmental staff worked with Kiff Analytical to ensure chain-of-custodies and sampling bottles were included for the parameters required by SIC Code 2875. All qualifying stormwater discharges will be analyzed for the additional SIC code 2875 parameters.

Requirement 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 the Big Pond 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 leachate 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.*

a. RYS submitted an updated SWPPP as required by the CAO on October 30, 2013. RYS submitted an application to USACE for a jurisdictional determination on March 19, 2014; based on subsequent contact with the USACE, RYS sent in a revised submittal to the Corps on April 22, 2014. RYS continued communication with USACE to obtain a determination for the lower portion of "Big Pond" in 2nd Quarter 2014 and await their response to information submitted.

   RYS received correspondence from the Board, dated April 29, 2014, requesting modification of the facility's storm water compliance point upstream of the wetland portion of the "Big Pond" and verification that RYS has contacted the USACE regarding the status of the wetlands in the "Big Pond". On May 15, 2015, RYS, submitted maps showing modified compliance points upstream of the wetlands of the "Big Pond" and documentation of submittal to the USACE.

b. Rainfall during 4th Quarter 2013 was minimal and RYS did not have a meaningful opportunity to evaluate the interim system performance. During the 1st and 2nd quarters of calendar year 2014, RYS evaluated the current system during rain events and the interim system operated as designed.

Requirement 3 - *By **31 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.*

Landfill gas extraction well construction began July 31, 2013 and concluded on September 18, 2013. In total, five LFG extraction wells were installed: EW-22, EW-23, EW-24, EW-25, and EW-26. A CQA report including construction drawings, well and trench logs, compaction test results, construction photographs, and field daily reports was included with the letter report submitted to the Regional Board on October 31, 2013.

The repair of subsurface pipelines and storm water drains within LF-1 began July 15, 2013 and concluded on September 30, 2013. A CQA report including site maps and surveys, daily construction reports with photographs, and compaction test information was included with the report letter submitted on October 31, 2013.

Also included in the above noted October 31, 2013 report, RYS proposed a schedule for routine inspections. No approvals or comments have been received from RWQCB staff on the proposed schedule for routine inspections. Inspections included in the October 31, 2013 letter were performed and necessary repairs will be completed in 3rd Quarter 2014.

Requirement 4 - *Beginning with the month of **October 2013**, the Discharger shall monitor the LFG system as described on Attachment A of this Order. Monitoring reports shall be submitted by the 1st day of the second month following sampling (i.e., the October 2013 monitoring report is due by 1 December 2013).*

RYS submitted monthly LFG reports for October and November as required and on time. The monthly LFG monitoring report for December 2013 and 4th Quarter 2013 was submitted on January 31, 2014. The monthly LFG reports for January and February were submitted as required and on time. The LFG report for March 2014 and 1st Quarter 2014 was submitted on April 28, 2014. The monthly LFG reports for April and May were submitted as required and on time. The LFG report for June 2014 and 2nd Quarter 2014 was submitted on July 28, 2014.

Requirement 5 - *By **31 October 2013,** the Discharger shall submit a Compost Area Work Plan that describes 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 shall include:*

a. A description of how the composting activities will be completely separated from the closure cover of LF-1 through the modification or installation of a "compost pad". The Discharger shall not rely on the existing closure cover to impede percolation of liquids into the underlying waste. The work plan shall:

(1) Evaluate the installation of different types of a low permeability (i.e. less than 1x10-6 cm/sec) barrier such as asphalt or concrete to create a compost pad with the separation needed to protect the cover from degradation. If the Discharger desires, it may also evaluate an engineered compacted soil pad and compare it1 to the low permeability barriers;

(2) Identify and justify the type of compost pad surface that will be installed or be upgraded, and clearly show, through engineering calculations, how this surface will be graded to drain and will be designed, constructed, and operated to prevent the infiltration of liquids, to the maximum extent possible, into the closure cover of LF-1.

(3) Contain design specifications for the compost pad, including dimensions, slope, thickness, drainage patterns, and location.
b. A description of how the compost pad shall be graded to drain all leachate and excess process water to a central collection point(s) and designed to prevent, to the maximum extent possible, liquids from infiltrating into the closure cover of LF-1. Precipitation and drainage controls shall be constructed of low permeability materials to contain and convey liquids generated from this operation to a dedicated containment system, and shall meet the standards of Title 27, Section 20365 (a) and (c).

c. A description of how the compost pad and surrounding area shall be marked such that Board staff and the Discharger can visually determine the extent of the compost pad, can easily determine whether composting activities are taking place on or off the compost pad, and can inspect the pad to determine if conditions such as cracking, checking, dipping, etc. indicate that maintenance must be performed. The markings shall include monuments or other devices to determine whether composting operations have resulted in a decrease in the thickness of the pad.

*d. A proposed scheduled for construction, not to exceed beyond **1 October 2014.***

e. A proposed monitoring plan, including sample collection, to determine whether or not the compost operations are separated from (i.e., not impacting) the closure cover.

f. A proposed Operations and Maintenance Manual which shall describe:

(1) How day-to-day operations on the compost pad will be conducted to prevent ponding of liquids to the maximum extent possible, maintain the Board-approved thickness of the compost pad material, and prevent compost operations from extending outside the compost pad;

(2) The type and frequency of inspections, both during the dry season and after each major storm event during the wet season;

(3) The type and frequency of maintenance actions, both in response to inspections and on a routine basis, and

(4) Documentation that will be submitted to the Board.

The Compost Area Work Plan, meeting the above requirements, was submitted to the Regional Board on October 30, 2013. RYS received approval of the Compost Area Work Plan from the Board in a letter dated May 7, 2014. As of July 30, 2014, RYS has resurfaced approximately 70% of the original compost pad at FRO consistent with the methods described in the work plan. RYS received approval of the Compost Area Work Plan from the Board in a letter dated May 7, 2014. The pad is on schedule for completion by September 30, 2014.

Requirement 6 - *By **31 January 2014**, the Discharger shall submit a Southern Area Work Plan that describes how activities conducted in the Southern Area of LF-1(i.e., vehicle maintenance, administration, white good storage, and materials recovery facility) shall be modified and/or constructed, operated, and maintained to protect the cover of LF-1. The work plan shall include a description of how the asphalt drive paths and graveled storage areas shall be inspected, surveyed, prioritized, repaired, and maintained to comply with the precipitation and drainage controls requirements of Title 27, Section 20365. Repairs shall be made with material which has the same or similar permeability as the cover material. Inspections and maintenance shall occur during the dry season as well as after each major storm event in the wet season. The work plan shall also describe how diversion and drainage facilities will be inspected and upgraded to meet the requirements of Section 20365(c). The work plan shall include a proposed timeline and a long-term Operation and Maintenance Plan.*

The "Southern Area Work Plan" was submitted on January 31, 2014. Regional Board staff approved the "Southern Area Work Plan" in a letter dated April 29, 2014.

As previously reported, RYS began performing the inspections detailed in the "Southern Area Work Plan" in the 1st Quarter of 2014 and continued these inspections through 2nd Quarter 2014. Necessary improvements identified during routine inspections will occur as required during the 3rd Quarter 2014. The drainage facilities including surface grades, ditches, as well as subsurface piping have been evaluated by Golder Associates for a 100-year, 24-hour storm event as required by Section 20365(c) of the California Code of Regulations, Title 27. As stated in the Southern Area Work plan this review will be completed by July 31, 2014 and a report will be submitted under separate cover. Drainage upgrades that were identified as needed and associated repairs will be completed by October 1, 2014.

Requirement 7 - *By **30 November 2013**, the Discharger shall submit a Groundwater Monitoring Network Update Work Plan that proposes the installation of two new detection monitoring wells. The work plan shall include the information listed in Attachment B of this Order. Each well shall be designed, installed and developed in compliance with all applicable local, state and federal regulations. The first well shall be placed adjacent to MW1, while the second well shall be placed adjacent to MW2. The work plan shall propose the elevation for the top and bottom of the screen interval based on historical water level data from MW1 and MW2. The newly installed wells shall be sampled on the same schedule as monitoring wells MW1 and MW2.*

The initial Groundwater Monitoring Network Update Work Plan was submitted to the Regional Board on November 27, 2013. Regional Board staff issued a letter on January 22, 2014 providing comments on the Work Plan and requesting additional information prior to February 15, 2014. A revised "Groundwater Monitoring Network Update Work Plan" was submitted on March 28, 2014.
On April 21, 2014, Recology received an "Approval of Revision 2: Groundwater Monitoring Network Update Work Plan" from the Regional Board. RYS will proceed with work according to the timeframe in the above noted CAO schedule and according to the plans set forth in Recology's March 27, 2014 "Revision 2 to the Groundwater Monitoring Network Update Work Plan"

RYS completed drilling and development of MW-1R and MW-2R on July 16, 2014. The Construction Quality Assurance report will be submitted to the Regional Board by August 19, 2014, which is within 120 days of the original approval as required by the CAO.

Requirement 8 - *By **30 November 2013**, the Discharger shall submit a Landfill Gas Monitoring Work Plan that proposes the installation of a corrective action monitoring system throughout LF-1 and the underlying vadose zone. The monitoring system shall be designed to evaluate the effectiveness of the current landfill gas extraction system and whether additional gas extraction points are necessary to prevent groundwater impacts. The work plan shall contain the information listed in Attachment B and shall provide a rationale for the proposed number of probes and their placement. Once installed, the probes shall be added to the landfill gas monitoring program listed in Attachment A.*

The Landfill Gas Monitoring Work Plan was submitted to the Regional Board on November 27, 2013. Regional Board issued a letter on January 22, 2014 providing comments on the Work Plan and requesting additional information prior to February 15, 2014. RYS provided additional information to the Regional Board on February 19, 2014 as agreed in email correspondence between RYS and the Board. Regional Board provided verbal comments regarding the additional information provided on February 19, 2014 and the Regional Board followed up with an e-mail on March 7, 2014 clarifying its thoughts on the LFG and GWM work plans. This Revision 2 included an April 4th "Document Review and Opinion Regarding Installation of Landfill Gas Corrective Action Monitoring Point – Recology Yuba Sutter", prepared by an independent third party engineering firm, SCS Engineers. Upon approval of the Revision 2 to the Landfill Gas Monitoring Work Plans, RYS will proceed with work according to the timeframe in the above noted CAO schedule and according to the approved LFG monitoring work plan.

While the Regional Board has not yet approved the above noted April 4th "Revision 2 to the Landfill Gas Monitoring Work Plan" prepared by Golder Associates, on July 2, 2014, the Regional Board sent an e-mail requesting " boring logs and construction details for soil gas probes GP-1 through GP-15 at the RYS site". As of July 30, 2014, much of this information has been received (some of it from former Emcon files) and is being compiled and formatted for transmittal to the Regional Board.

Requirement 9 - *By **1 February 2014,** the Discharger shall submit a Compost Area Leachate Collection Work Plan. The work plan shall describe how contact storm water (leachate) generated at the compost (chip/grind) and green waste areas will be managed. In particular, the work plan shall describe:*

a. The separation of leachate from facility storm water, and how the leachate will be collected and directed to containment and conveyance systems which are designed, constructed, operated, and maintained so that the leachate is separated, to the maximum extent possible, from the underlying closure cover of LF-1. These conveyance systems shall be made of a low permeability material such as asphalt, concrete, engineered compacted fill, or similar material and shall not rely on the properties of the existing closure cover to further impede percolation of liquids into the underlying waste mass. The diversion and drainage structures shall meet the standards of Title 27, Section 20365 (a) and (c).

b. The type of containment system in which the leachate shall be stored. Leachate may be discharged to an above ground tank system or to surface impoundments (ponds) constructed with at least a single liner. The work plan shall include design specifications for the tanks or pond/liner, and shall propose monitoring of the unsaturated zone beneath the tanks or pond. Pond(s) shall not be constructed over waste or on top of a WMU, unless approved by the Board through revised WDRs. The work plan shall include a water balance to justify the size of the tanks or ponds. The minimum pond volume shall meet the capacity specifications of Table 4.1 of Title 27.

c. The disposal of leachate in the containment system so that the tanks/ponds have adequate storage capacity at the beginning of each winter.

*d. A construction schedule such that the conveyance and containment systems are installed and operational by **1 October 2014.***

As required by CAO Requirement # 9, on January 31, 2014, RYS submitted the Compost Area Leachate Collection Work Plan; this plan described how stormwater generated at the compost facility will be managed.

As noted above, RYS implemented its proposed temporary system and it worked well during the 1st and 2nd quarters of calendar year 2014. The work on the compost pad is about 70% complete at this time and will be completed prior to the next (2014-2015) rainy season.

In response to Regional Board questions, RYS submitted a revised report on compost leachate collection dated May 30, 2014. In response to further input from Central Valley Water Board staff, RYS is submitting additional information on this issue by separate correspondence dated July 30, 2014. The information relates to the capacity upgrades needed to handle the 25-year, 24-hour storm event. Recology is requesting Regional Board Approval for an upgraded system to be completed by October 1, 2014.

Requirement 10 - *By **30 March 2014**, or within 120 days of approval of the work plans listed in Items 7 and 8 (whichever is later), the Discharger shall submit a Groundwater and Gas Monitoring Well Installation Report. The report shall show that the wells and probes were installed in accordance with the approved work plans, and shall also contain the information listed in Attachment C to this Order.*

As noted above, RYS submitted the Groundwater Monitoring Network Update Work Plan and Landfill Gas Monitoring Work Plans on November 27, 2013. Additional information on the Groundwater Monitoring Network and the Landfill Gas Monitoring network was provided to the Regional Board on February 14, 2014 (GWM Revision 1), February 19, 2014 (LFG Revision 1), March 27, 2014 (GWM Revision 2), and April 4, 2014 (LFG Revision 2

On April 21, 2014, Recology received an "Approval of Revision 2: Groundwater Monitoring Network Update Work Plan" from the Regional Board. Development of the wells is complete. The Construction Quality Assurance report will be submitted to the Regional Board by August 19, 2014, which is within 120 days of the original approval as required by the CAO.

As noted above, an approval is still pending on the above noted April 4th "Revision 2 to the Landfill Gas Monitoring Work Plan" prepared by Golder Associates, and there is an active dialogue between Recology and the regional Board on this matter. This Revision 2 included an April 4th "Document Review and Opinion Regarding Installation of Landfill Gas Corrective Action Monitoring Point – Recology Yuba Sutter", prepared by an independent third party engineering firm, SCS Engineers. Upon approval of the Revision 2 to the Landfill Gas Monitoring Work Plans, RYS will proceed with work according to the timeframe in the above noted CAO schedule and according to the approved LFG monitoring work plan.

Requirement 11- *By **30 May 2014,** the Discharger shall submit a revised post-closure maintenance plan to implement post-closure maintenance for each landfill unit, including all structures on each unit. In addition, the Discharger shall submit an updated cost estimate for initiating and maintaining assurances of financial responsibility for post-closure maintenance and monitoring. The post closure maintenance plan shall meet the requirements of Title 27, section 21769(b), and the updated cost estimate may include a cost estimate multiplier of 15 years (as approved by CalRecycle in its 28 March 2013 letter to the Discharger).*

Recology submitted the revision of the Post Closure Maintenance Plan began on May 30, 2014. An update to this revision was submitted on July 1, 2014. RWQCB staff has submitted comments to RYS regarding the financial assurance portion of the updated revision. RYS staff will respond to RWQCB comments in a timely manner.

Requirement 12 - *By **30 May 2014,** the Discharger shall submit an updated cost estimate for initiating and maintaining assurances of financial responsibility for completing corrective actions of all known or reasonably foreseeable releases. The updated cost estimate must consider the future costs to cleanup groundwater or surface waters from contaminates that may have impacted beneficial uses from any of the historical landfilling operations at the facility as well as activities conducted on top of the units, including composting. If CalRecycle determines that 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.*

Recology submitted the revision of the Post Closure Maintenance Plan on May 30, 2014. An update to this revision was submitted on July 1, 2014. Regional Board staff has submitted comments to RYS regarding the financial assurance portion of the updated revision. RYS staff will respond to RWQCB comments in a timely manner.

Requirement 13 - *By **1 December 2014**, the Discharger shall submit a Compost Area Improvement Report describing the work completed per the work plans required by Items 5 and 9, above.*

The applicable reports will be submitted by the deadline of December 1, 2014. Please see the discussions above regarding Requirements 5 and 9. With respect to Requirement 9, Recology is submitting separate correspondence on this issue dated July 30, 2014.

Requirement 14 - *By **30 December 2014**, the Discharger shall submit a Landfill Gas Extraction Evaluation Report that evaluates the effectiveness of the LFG extraction system throughout LF-1 and in the underlying vadose zone in regard to removing sufficient LFG to prevent further groundwater degradation. If the current LFG extraction system is not clearly capturing the landfill gas throughout LF-1, or if the concentration of groundwater contaminants (i.e., VOCs and inorganics) are increasing in the groundwater monitoring wells, then the Report shall either propose an expansion of the LFG extraction system or active groundwater remediation.*

RYS placed five (5) new LFG extraction wells that came online on September 18, 2013. Initial monitoring results show that these corrective actions are working and that impact of these wells is significant. RYS is in the process of gathering data through routine monitoring and will submit a Landfill Gas Extraction Evaluation Report by December 30, 2014.

If you have any questions or require additional information, please contact me at (530) 533-4783.

Sincerely,

Joe Matz
Vice President and General Manger

cc: Andrew Altevogt, Pamela Creedon, Todd Del Frate, Howard Hold, Regional Board
Paul Donoho, Yuba County LEA
Phil Graham, Drew Lehman, Dave Vaughn, Recology