



VIA EMAIL AND OVERNIGHT MAIL

March 31, 2016

Mr. Marty Hartzell, PG, CHG
Mr. John Moody, PE
Title 27 Permitting and Mining Unit
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670

RE: Comments on Tentative Waste Discharge Requirements for Recology Hay Road in Solano County, California, Order R5-2016-XXXX

Dear Mr. Hartzell and Mr. Moody:

Thank you for the productive meetings on March 3 and March 23, 2016. We appreciate the time spent discussing our questions and concerns about the Tentative Waste Discharge Requirements for Recology Hay Road in Solano County, California. Attached to this letter you will find our specific comments to the Tentative WDRs (Attachment 1) and a red-lined version of the Tentative WDRs (Attachment 2). In general, Attachment 1 provides comments on substantive proposed edits. Attachment 2 suggests proposed edits (in MS Word tracked changes) based on the comments, as well as typographic and minor factual corrections, and suggested date changes.

You will find that our comments and proposed edits are aligned with our conversations on March 3 and 23, 2016. As summarized in our February 29, 2016 letter, the following three issues are of critical concern to Recology Hay Road:

- The coordination of corrective action and monitoring with landfill development;
- The engineered alternative design (EAD) groundwater separation specification for existing landfill units; and
- The compliance timeframe for tasks mandated in the Tentative WDRs.

Our comments and proposed edits center on these and several other important issues which can be summarized as follows:

- There is an existing stockpile of C-soil on LF-2, DM-1A and LF3-, DM-2.1B. The Tentative WDRs will prohibit future stockpiling on LF-2 and require placement of an interim cover over LF-2 that meets Title 27 Section 21090 requirements for final cover. However, these Tentative WDRs do not reflect our understanding that the interim cover may be placed over the existing stockpile on LF-2 and that, in the future, Recology Hay Road would be permitted to remove the interim cover to gain access to the C-soil. Our proposed revisions would provide the additional clarity needed.
- The Tentative WDRs require the installation of piezometers directly below the base of LCERS sumps to monitor groundwater elevation and continuous monitoring. This approach would require angled drilling at shallow depth. Because of the potential for accidental rupture of the nearby landfill liners, this approach is not practical. Also, because groundwater moves slowly and fluctuates seasonally, not daily, at Recology Hay Road continuous monitoring is not necessary. Our proposed revisions indicate that the piezometers may be installed adjacent to the LCERS sumps and outside of the liner system, which is typically a distance of about 50 feet, across which because of the gentle groundwater gradient, the potentiometric head data may be accurately extrapolated. Monthly monitoring is proposed until such time that the data support approval of a different frequency by the Executive Officer.
- The new leak response process outlined in the Corrective Action Specifications allows for definition of fluid profiles on an annual basis to help identify the source of water that enters a leak detection monitoring device, and provides for a defined short term and long term response process in the event that the leak is determined not to be a landfill leachate release. Rainwater infiltration is a reoccurring situation at several sumps and we are implementing measures to minimize this in the future. In addition, Recology is building background pan lysimeters to develop a fluid profile for infiltrating rainwater. In general, we agree with the revised approach proposed in the Tentative WDRs, although in the event of a confirmed leachate release (not infiltrating stormwater or surface water) the EFS/EMP process defined in Title 27 remains appropriate. Suggested edits in the Corrective Action Specifications, and in the MRP reflect this approach. We recognize that the revisions proposed to the Corrective Action Specifications may require further discussion so that we can develop a mutual understanding of this new leak response process prior to adoption of the WDRs.
- In a related matter, the Tentative WDRs acknowledge approved EAD/Ss for existing disposal modules; however, in some instances, the Tentative WDRs are unclear with respect to the definition of the separation of waste and groundwater. Our understanding is that separation is measured between the lowest elevation of wastes (i.e. the primary LCERS sump) and the highest anticipated elevation of underlying groundwater, including capillary fringe. Our proposed changes reflect this understanding, and to make this clear, we also clarified in some instances the use of the term "Primary LCERS."

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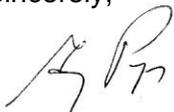
Mr. John Moody and Mr. Marty Hartzell

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- Throughout the Tentative WDRs engineering and construction specifications are defined. In some cases, the specifications are not in accordance with standard engineering practice or do not provide the Regional Board or Recology the flexibility provided within Title 27. In particular, changes are proposed with respect to slope stability analysis, sump depths, and liner system requirements including addition of Engineered Alternative Design/Liners that are found in the 2015 Joint Technical Document.
- In the proposed Tentative WDR Monitoring and Reporting Program, the statistical analysis required to determine significant evidence of a release is changed for the western half of the site from an intra-well to an inter-well method. In a separate section of the Tentative WDRs, a revised Water Quality Protection Standard (WQPS) is required to be submitted by Recology within the next several months. Rather than abruptly shift from the existing statistical method to another at the time of adoption of the WDRs, our preferred approach is to evaluate the efficacy of inter-well and intra-well analysis given the spatial and temporal variability in groundwater quality on both the east and west sides of the site. The WQPS will include a full assessment of which method will be more robust.
- These Tentative WDRs require the submission of numerous operational and management plans. Three of those plans are not needed because Recology Hay Road has previously provided the information to the Regional Board or, in the instance of the De-Watering Contingency Plan, because the operational requirement for separation of waste and groundwater is set at the approved EAD/Ss. In these instances, we request that the requirement to submit the plan be eliminated.
 - a) Interim Cover O&M Plan – Please see comment for Finding 92.
 - b) Contingency Plan for De-Watering – Please see comments for Findings 68 and 108.
 - c) Compost Facility Leachate Collection/Pond System Improvement Plan – Please see Finding 162.

Recology would like to thank you again for working closely with us over the last half year to develop the Tentative WDRs. If you have any questions or concerns with the requested revisions, please do not hesitate to call me or Bryan Clarkson.

Sincerely,



Greg Pryor
General Manager, Recology Hay Road

cc: E. Farewell, B. Clarkson, and C. Taylor, Recology
M. Bruner, Perkins Coie

Attachment 1: General and Specific Comments to Tentative WDRs
Attachment 2A&B: Suggested Modifications to Tentative WDRs and attached Tables (MS Word)

**Attachment 1
Comments to Tentative WDRs
Recology Hay Road/Jepson Prairie Organics**

COMMENTS

For each suggested edit (redline) presented in Attachment 2, explanatory remarks are presented below.

General Comment A:

Certain deadlines have proposed revisions marked in the Tentative WDR, but in the essence of streamlining, are not listed in this document. In general, the requested extension in due dates are either to provide sufficient time to complete the task after adoption of the Tentative WDRs, or are corrected to be consistent with the final and interim closure dates for LF-1 and LF-2 discussed at our March 3, 2016 meeting.

General Comment B:

For installation and completion reports, the Discharger requests due dates to be 90 days after approval of the work plans so that the Discharger is not in a position of having to perform work without approval to meet installation and completion deadlines in the WDRs.

General Comment C:

In general, the method used to calculate average historical constituent concentrations does not appear to include non-detections and has not taken the context of the data into consideration. The Discharger can provide more representative tables upon request and, in certain circumstances, has done so here.

Three examples are provided below that illustrate our concern with the tables as presented:

- As explained in the discussion for MRP Table A.1.c., the hexavalent chromium concentrations provided for DM-1B and LF-2 are higher than the average concentration using the non-detections. In addition, the single high detection for each location appears to be an error. Please see comments to Table A.1.c.
- The calculations in the tables included in Finding 55 and Finding 77 do not take into account occasional VOC detections in groundwater that have been unverified. These detections may have been the result of sample/lab contamination, or a source other than the landfill. For example, in Finding 55 2001 monitoring data reported detections of acetone and methylene chloride which may have been the result of contamination from well construction at two wells, G-15 and G-16. The vendor acknowledged that one of their bentonite suppliers had quality issues with their bentonite coating. This could have resulted in acetone contamination in the pellets. As a result, the acetone detected in wells G-15 and G-16 is likely from the contaminated, coated bentonite. VOCs have subsequently not been detected in these wells. However, the table presented in Finding 55 incorporates these erroneous data. Please see comments to Finding 55.
- Monitoring data from the fourth quarter of 2015 detected one VOC in two site wells, carbon disulfide in well G-9 and tert-butyl alcohol in G-4R. Both wells were re-sampled and both re-samples were non-detect for the previously-detected VOC, indicating the initial VOC detections were false-positives. Nevertheless, Finding 76 and the table in Finding 77 incorporate this type of unconfirmed data. Please see comments to Finding 76 and 77.

Finding 7.a:

As reflected in the previous WDRs, the Discharger has been allowed to dispose of inert wastes and hazardous asbestos in both DM-1A and DM-1B; thus the term “monofill” is incorrect.

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Finding 8:

Consistent with our discussion during our March 23, 2016 meeting, DM-7.2 should be classified as active since DM-7.1 has already been constructed. Also, DM-10 is deleted from LF-4 (is also found in LF-3). Lastly, Footnote 5 is missing.

Finding 18:

Please see comments to Finding 7. Please note the corrected date of October 1992.

Finding 21:

As reflected in Finding 7, LF-1B accepted waste until 1992.

Finding 25:

The conclusion that LF-2 is out of compliance with Subtitle D regulations is inconsistent with SWRCB Resolution 93-62, which implements Subtitle D, and makes clear that composite lined landfills constructed prior to October 9, 1993 and which do not meet Subtitle D criteria, are specifically allowed to accept new waste discharge (Article III.A.2). On that basis, the Discharger requests that this finding be eliminated.

Finding 30:

As stated in the JTD, 593,000 CY have been stockpiled on LF-3, not 190,000 tons. Additionally, the Discharger requests revisions to clarify that existing C-soil stockpiled on DM-2.1A and DM-2.1B can remain until needed for future site use; that is, only future stockpiling of C-soil on DM-2.1A and DM-2.1B is prohibited. The previously approved closure plan allowed for stockpiling of C-Soils on DM-2.1A and DM-2.1B. Note also that the January 2013 date is erroneous.

Finding 31:

Discharger requests that the WDRs reflect that leachate currently flows from LF-3 to LF-2 because DM-2.1A and DM-2.1B share a leachate sump at DM-2.1B.

Finding 52:

LF-1 was designed to handle a 24-hour, 100 year storm event. LFs-2 through 4 were designed to handle a 24-hour, 1,000 year storm event. At final closure of LFs-1 through 4, all landfill units and drainage facilities will be designed to handle a 24-hour, 1,000 year storm event. The Discharger requests that this distinction be reflected in these WDRs. Additionally, the drainage designs for the landfill and compost facilities differ. The drainage requirements for the composting facility should be added to avoid confusion.

Finding 55:

To be meaningful, the table summarizing average leachate constituent concentrations must take into account relevant sampling data and control for anomalies. The table presented in the Tentative WDRs did not account for non-detect values. In particular, the table skewed sample results for hexavalent chromium as described in General Comment C.

To more accurately portray leachate quality, average concentrations from December 2015 were added to the table. Discharger requests that the revised constituent concentrations be incorporated into the WDRs.

Finding 58:

After initial installation of seven gas monitoring probes in 2003, methane at well GP-8 was detected at relatively high concentrations. However, the probe was found to be installed into landfill materials and was replaced with GP-9, which has not had methane detected since it was installed in 2005. The Discharger requests that the following clarifications be added to more clearly describe historic landfill gas monitoring probe measurements, or recommends deletion of the discussion regarding GP-8.

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Finding 60:

Monitoring of soil gas probes installed along the perimeter of the facility has been conducted on a quarterly, not semi-annual basis. The Discharger requests correction of this factual error.

Finding 62:

The suction lysimeter that underlies the LCRS sump at LF-2 was non-operational; however, this monitoring device was replaced in 2015. Soil pore liquid is now being monitored using this device. The Discharger requests that Finding 62 be updated to reflect this fact.

Finding 63:

Please see comments to Finding 62. Also, the LTU is no longer in service; therefore item (f.) would be deleted.

Finding 67:

The Discharger requests that the WDRs be revised such that no new multi-level piezometers are required. As described below, the degree of lateral and vertical communication between permeable layers has been verified during several past investigations and continues to be monitored quarterly at nine nearby sets of piezometers/wells that measure vertical hydraulic gradients. Based on the historic results summarized below and the long history of water level measurements at Hay Road, the work plan for additional multi-level piezometers is not necessary.

The degree of lateral and vertical communication between permeable layers was demonstrated in an October 1991 report: Hydrogeological Report, Landfill Expansion and Borrow Pit Areas, B&J Drop Box Sanitary Landfill, Solano County, California, EMCON Associates. This report was included as an appendix in the January 1993 Report of Waste Discharge prepared by EMCON Associates. The Hydrogeological Report presented the results from four step-discharge and five constant-discharge pumping tests performed on wells in the western and eastern areas of the site. During the deep well D-1 pumping test, drawdown was observed in both the shallow well G-8 and the intermediate depth well A-1. In addition, when shallow wells MW-5 and MW-7 were pumped, drawdown was observed in deep wells D-5 and D-6. The EMCON report concluded that the hydraulic conductivity of the deeper zone was much lower in magnitude than the shallow zone.

When the groundwater drain below the western edge of DM-1 was active prior to the borrow pit dewatering, the water levels in the shallow and deep wells at DM-1 were similar, indicating that even though groundwater was being removed from the shallow groundwater, the deeper groundwater levels were affected.

The similar groundwater levels in the shallow and deep zones (as shown by the following nine well pairs: G-8/D-1, P-1[and former MW-3]/D-2, MW-4/D-4, former wells 4B/D-3, MW-7/D-6, MW-5/D-6, G-10M/G-10R, G-11M/G-11R, and deep well D-7 compared to nearby well G-18), in addition to the interconnection between the shallow and deep zones shown by the 1990/1991 pumping tests, lead to the conclusion presented in the 1995 Geologic and Hydrogeologic Report (Einarson Geoscience, Inc.): "Data collected during the groundwater pumping tests provides additional information regarding the hydraulic communication of the sediments underlying the site. During the tests, significant drawdown was measured in deeper wells D-5 and D-6 when wells screened in shallower sediments were pumped. In addition, Wells G 8 and A 1 (considered an "aquitarde" well, which is installed in the clay layer underlying the sand monitored by Well G-8) had drawdown when deep Well D 1 was pumped. This hydraulic response supports the revised conceptual hydrogeologic model of one unconfined groundwater body occurring beneath the site."

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The current combination of shallow and deep monitoring wells provides sufficient information regarding the vertical communication between permeable layers at the site and the installation of additional multi-level piezometers is not needed to confirm the hydrogeological model for the site. All cited references are on GeoTracker or can be provided upon request.

Finding 68:

As we discussed at our March 3, 2016 meeting, the presence of a confirmed leachate leak shall be addressed with corrective action measures in accordance with Title 27, it does not impact the calculation of separation between the base of waste and groundwater.

Also, both DM-7.1 (the existing phase) and DM-7.2 (a planned phase) together comprise DM-7 which is designed and has been partially constructed under an approved EAD/S. Therefore, the WDRs should specify that DM-7.2 is permitted to operate consistent with the EAD/S. This designation was discussed at our March 3, 2016 meeting.

A leak or release does not affect the calculation of the distance between waste and groundwater. This separation is fixed and is equal to the distance from the base of the primary LCRS to the groundwater table. This principle was discussed at our meeting with Regional Board staff on March 3, 2016. On this basis, the Discharger requests that the statement to the contrary in this Finding be eliminated.

Because the operational definition for the base of waste is fixed, and because the approved EAD/S for each existing unit is set, a Contingency Plan for Dewatering is unnecessary. In the event of a sustained leachate release from the landfill, the need for groundwater dewatering would be considered as a corrective action. Therefore, the proposed revisions require the Discharger to follow the procedures set forth in SPRRs J.1 (in accordance with procedures set up in Title 27), and evaluate the possible need for groundwater dewatering.

Additionally, to place piezometers directly beneath each LCRS sump, the Discharger would be required to angle-drill to install monitoring devices. This installation methodology has the significant potential to damage the liner containment system. This risk is too great to warrant getting the data in this manner. The alternate method of extrapolating data from piezometers outside the liner limit, approximately 50 feet away from the LCRS sump, eliminates the risk of damaging the landfill liner system and is a reliable methodology to obtain the data. On this basis, the Discharger requests changes to this finding to reflect alternative locations for piezometers that are not directly beneath the LCRS sumps.

Lastly, the use of the term continuous monitoring is unclear. Because groundwater moves slowly and fluctuates in elevation seasonally, Discharger requests that continuous monitoring be defined as on a monthly basis until the Executive Officer authorizes monitoring on a less frequent basis.

Finding 70:

The Discharger's Engineering Feasibility Study for Groundwater Separation at Disposal Modules DM-1 and DM-3.3 (Golder Associates, November 2015) concludes that in DM-3.3, which is on the eastern half of the site, the separation between the lowest elevation of waste and the highest anticipated elevation of groundwater has never been less than 2.5 feet, the required EAD/s. On this basis, the Discharger requests the last sentence of Finding 70 be eliminated.

Finding 72:

Background groundwater quality data indicates that the natural groundwater exceeds secondary drinking water MCLs for chloride, TDS, and sulfate. The Discharger requests that the finding be supplemented with this fact.

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Finding 74:

The information presented is not accurate because all of the listed wells are not in corrective action. The only corrective action wells are G-21, G-22, G-23, G-8 and G-9. Discharger requests edits to the text to be factually accurate.

Finding 76:

Please see General Comment C and Finding 55.

Finding 77:

Landfill gas impacts to groundwater have not been confirmed at Recology Hay Road. Sporadic detections of VOCs have not been in the vicinity of any groundwater pumping wells or borrow area dewatering activities. On that basis, the Discharger requests the sentence asserting landfill gas has impacted groundwater be eliminated and the table title to be modified.

The method used to calculate historic groundwater impacts on the eastern half of the site do not appear to include non-detections and therefore, the values may not be representative. As a result, the Discharger proposes additional footnotes to clarify the methodology for the calculations presented.

Finding 78:

See Finding 77.

Finding 79:

Please see comments to Table A.1.c and General Comment C. Additionally, the Discharger proposes to remove mercury from the table, because, in particular, mercury concentrations are skewed.

Finding 80:

Barium is a naturally occurring inorganic constituent in groundwater at the facility. Concentration limits are established for barium at well G-8 (0.48 mg/l), G-9 (0.61 mg/l), and for the eastern area wells (0.35 mg/l). The statements in this Finding that barium is non-naturally occurring and the concentration limit is non-detect are not accurate. The Discharger requests these statements be removed.

Finding 86:

Because the intrawell method is specifically listed in Title 27 Section 20400(b)(2) - (b) Adoption of Concentration Limits, an engineered alternative is not required.

The RWQCB shall review the proposed concentration limits and statements and shall approve, modify, or disapprove each proposed limit and each proposed statement. Upon final approval by the RWQCB, each concentration limit and each statement shall be specified in WDRs. The RWQCB shall approve more than one concentration limit for different Monitoring Points in the same medium only if: (1) more than one background condition exists within a particular medium; (2) the statistical method approved for a constituent uses intra well comparisons procedures; or (3) CLGBs have been established for a corrective action program at the Monitoring Points in the zone affected by a release from the Unit.

An evaluation of the spatial variability of groundwater chemistry at the site was completed in 1995 (Einarson Geoscience, Inc., November 29, 1995, Spatial Variability of Inorganic Constituents in Groundwater) that showed that there was significant spatial variability and a lack of groundwater impacts. This report was the basis in establishing the intrawell concentration limits for the western portion of the site, which were incorporated by the Regional Board into subsequent WDR/MRPs (97-145, 5-01-101, R5-2003-0118, and R5-2008-0188). It should be noted that, when justified, intra well comparisons are more statistically powerful than their interwell counterparts, because they completely eliminate the spatial component of variability (Statistical Methods for Groundwater Monitoring, Robert D. Gibbons, 1994).

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Because spatial variability is eliminated, the uncertainty in measured concentrations is decreased, thereby making intra well comparisons more sensitive to real releases. Furthermore, false positive results due to spatial variability in background water quality are completely eliminated.

The Discharger proposes to provide new analysis and required justification for the monitoring evaluation approach in the required WQPS Evaluation. See Provision I.7. Changes to the monitoring program will be proposed if the evaluations do not justify the use of intra well comparisons.

Finding 87:

Please see comments to Table A.1.c. Additionally, the Discharger proposes to prepare the WQPS in accordance with the requirements of this Order and Title 27, including an evaluation of the current monitoring approach.

Finding 88:

During the meeting on March 3, 2016 with Regional Board permitting staff, the length of the proof period was discussed. Consistent with Code of Federal Regulations Section 258.58(e)(2) and the parties discussion, the proof period will be satisfied upon demonstration that the constituents of the release have been reduced to concentration limits for at least eight consecutive monitoring events. The monitoring events may occur as frequently as once per month.

Finding 91:

As described in Finding 30, these WDRs authorize the discharge of special wastes such as C-Soil to Class II units LF-3 and LF-4. On that basis, the Discharger should be permitted to stockpile C-Soil on Class II units LF-3 and LF-4 for use in closure and construction purposes.

Finding 92:

As described in the JTD, and discussed at our meeting on March 23, 2016, wastes/materials used for Alternative Daily Cover (ADC) at the Recology Hay Road landfill are wastes/materials that have either been designated acceptable in Title 27 or wastes/materials for which the Discharger has prepared a site-specific demonstration project and obtained approval consistent with Title 27, Section 20690. On that basis, the preparation and approval of an Interim Cover O&M Plan is unnecessary.

Finding 100:

Consistent with Finding 32, these WDRs allow the Discharger to continue discharging sludge to LF-3 and LF-4 provided that the discharge complies with the applicable co-disposal provisions of this order and Title 27 and Subtitle D regulations. Additionally, the Discharger will discontinue stockpiling of dewatered sludge on LF-2. See also Finding 92 regarding deletion of Interim Cover O&M Plan.

Finding 107:

The Discharger did not discontinue operation of the dewatering trench. Rather, operation of the dewatering trench became obsolete as the water table was lowered below the base of the dewatering trench due to borrow pit pumping.

Finding 108:

Finding 108 is inconsistent with Finding 109. Finding 108 does not acknowledge approved EAD/Ss for existing disposal modules; however, as reflected in Finding 109 and as discussed in our meeting with Regional Board permitting staff on March 3, 2016, Finding 109 acknowledges and allows the previously approved EAD/Ss for existing disposal modules. On that basis, those portions of Finding 108 are unnecessary.

Please see Finding 68 regarding the location of piezometers, the definition of continuous, and the need for a Contingency Plan for Dewatering.

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Finding 111:

The amended 13301 Order adopted on February 19, 2016 imposed certain requirements on the Discharger in the event that the separation of waste to groundwater at LF-1 and LF-4, DM.3.3 did not meet the EAD/Ss approved under previous WDRs. The amended 13301 Order specified that if, at any time, separation of waste to groundwater in the northeastern corner of LF-1 is less than required, the Discharger shall immediately notify Board staff and shall immediately undertake the corrective actions specified in the Groundwater Separation Implementation Report. The Discharger requests that this requirement be added to this Finding to be consistent with the amended 13301 Order.

Finding 120:

The finding describes the excavation and historical development of LF-1A including excavation below the water table. The historic information regarding the excavation and purpose for it is speculative. Finding 120 also states that a soil boring investigation is being conducted to confirm the estimated depth of the unit, however, this investigation was completed in 2015. On these bases, the Discharger requests the inaccurate statements be eliminated and replaced with information about the base of waste elevation from the soil boring investigation.

Finding 121:

In 1984, a perimeter slurry wall was constructed around DM-1 and LF-1 around the western portion of the landfill site in an attempt to create an inward-gradient. Finding 121 states that the slurry wall was constructed in an attempt to de-water. The Discharger requests this statement be revised with the accurate information.

Finding 123:

The table inaccurately indicates that there is an additional 6 inches of gravel on the compositely lined portion of DM-1B. Please also see comments to Finding 7.

Finding 124:

Please see comments to Finding 7.

Finding 127:

Finding 127 states that DM-2.1A has a perimeter levee side slope with various containment system components. This is inaccurate - DM-2.1A does not have a perimeter levee side slope. On that basis, the Discharger requests that this information be removed.

Finding 129:

Finding 129 contains a table summarizing the containment system components of LF-3, DM-2.1B (or as named during its construction in 1993/1994, DM-2.1 Phase 2 and 3). Based on a review of the CQA reports uploaded to the GeoTracker website, certain information in the table is incomplete or incorrect. The Discharger requests that the table be updated consistent with the proposed revisions.

Finding 131:

Similar to Findings 127 and 129, the proposed revisions reflect as-built specifications.

Finding 133:

See Finding 131.

Finding 134:

The Discharger requests clarification that the capillary break layer in future LF-3 Modules will be required only in those areas where the base elevation of the liner will be below the calculated capillary rise plus the required five feet of separation from groundwater. For example, in those areas of modules having a great amount of fill resulting in the liner being well above the capillary rise, no capillary break would be installed.

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Additionally, the distinction between “less than significant changes” and “substantive changes” is unclear and should be eliminated.

Finding 138:

See Finding 131.

Finding 158:

The Discharger has historically conducted active LTU operations over a combined area of about 13 acres, but typically not more than 10-acres at any point in time. In 2011, the 4-acre area in the DM 6.1 footprint was closed, leaving the 3.2 acre area south of WP-9.1. The Discharger has clean closed all but 3.2 acres of the LTU.

Finding 159:

The ROWD that was prepared for the compost facility estimated based on compaction data and soil types that the subgrade was compacted to a maximum hydraulic conductivity of approximately 1×10^{-5} cm/sec.

Finding 162:

On December 1, 2014, the Discharger submitted the Compost Pond Interim Overflow Management Technical Report. Given that the report has already been submitted and the improvements identified therein have been installed, submission of a Compost Facility Leachate Collection/Pond System Improvement Plan is unnecessary.

Finding 165:

This Finding contains a statement about the sizing of Pond B. As reflected in the updated water balance prepared by Golder Associates, Pond B is designed to store storm water runoff from a 25-year wet year. The Discharger requests that the Finding be revised accordingly. Additionally, the reference to Finding 36 should be eliminated, because that Finding does not relate to the compost pond system design.

Finding 166:

As described in the Compost Pond Interim Overflow Management Plan, the compost Pond survey datum should be NGVD29, not MSL. On that basis, the Discharger requests that references to MSL be changed to NGVD29.

Finding 167:

Finding 167 includes a statement characterizing previous pumping of leachate from Pond A to Pond B as unauthorized. This characterization is not included in the Water Code Section 13301 Order. On that basis, the Discharger requests this statement be eliminated.

Finding 168:

Please see Finding 166.

Finding 170:

Prior to the NOV, the Discharger was working with Regional Board staff to determine if a permeable reactive barrier trench would be a feasible technology to install for the bioremediation of nitrate in the vicinity of well G-14. This Finding does not acknowledge the Discharger’s evaluation of this technology, and therefore the Discharger requests that a clarification sentence be added to reflect that.

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Finding 173:

The Discharger is permitted to demonstrate the proof period either: (1) while corrective action measures are continuing or, (2) while the corrective action measures have been suspended or modified upon approval by the Executive Officer. This proposed revision provides flexibility with respect to future modifications to the corrective action program to allow for future landfill development as we discussed in our meeting on March 23, 2016.

Finding 176:

The Discharger proposes a supplement to Footnote 1 which explains that there has been insufficient liquid in PL-9.1B since 2008 to obtain any samples.

Finding 179:

Finding 179 summarizes the average Nitrate-N concentrations in various wells at the site. However, the data appears outdated. The Discharger has prepared revisions that more accurately reflect-current groundwater quality.

Finding 181:

Please see comments to Finding 173.

Finding 184:

Borrow pit pumping to maintain groundwater separation is a corrective action measure for LF-1 area. The CAP was submitted in May 2005 and approved in August 2005. Discussion of the length of remedial measures is not necessary in this finding; it is addressed in Findings 179 and 181, Corrective Action Specification D.8, and Monitoring Specification H.10.

Finding 201:

The Discharger requests the ability to combine the PC/PCMPs for LF-3 and LF-4 into a single closure plan and LF-1A and LF-1B into a single closure plan.

Finding 204:

Please see comments to Finding 7. Additionally, please see comments to Closure and Postclosure Maintenance Specifications F.1 and F.2.

Finding 206:

Please see comments to Finding 25. Additionally, clarification is provided that the Interim Cover plan for LF-2 will be designed to meet Title 27 standards for final cover in accordance with Finding 97. Lastly, please see comments to Closure and Postclosure Maintenance Specification F.4.

Finding 207:

Finding 207 provided a limited description of the construction and approvals for the sideslope liners at LF-3. The Discharger's proposed revisions include statements summarizing additional relevant background information.

Finding 209:

Please see comments to Finding 201.

Finding 211:

The Discharger ceased sludge discharges to the east half of WP-9.1 (WP-9.1B) in 2015 in preparation for clean closure activities. As discussed with Regional Board staff, no clean closure activities were completed absent approval.

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Discharge Prohibition A.1:

Please see comments to Finding 7.

Discharge Prohibition A.4.b:

Please see comments to Finding 30.

Discharge Prohibition A.5:

Title 27 Section 20375 (d) allows discharge of liquid from a surface impoundment if authorized by WDRs. On that basis, the Discharger requests these WDRs permit the use of liquid from Pond B as dust control on landfill units underlain by a Title 27 composite base liner only between April 15 and October 15. See also Discharge Specification B.27.

Discharge Prohibition A.6:

Please see comments to Discharge Prohibition A.5.

Discharge Prohibition A.16:

Please see comments to Discharge Prohibition A.5.

Discharge Prohibition A.18:

Both Pond A and Pond B are lined surface impoundments. From an operational perspective, the ability to transfer liquids between the Ponds may be advantageous and useful. On those bases, the Discharger requests that these WDRs permit the movement of liquids between the Ponds.

Discharge Specification B.8:

As described in the JTD, wastes/materials used for ADC at the Recology Hay Road landfill are wastes/materials that have either been designated acceptable in Title 27 or wastes/materials for which the Discharger has prepared a site-specific demonstration project and obtained approval consistent with Title 27, Section 20690. On that basis, the preparation and approval of an Interim Cover O&M Plan is unnecessary.

Discharge Specifications B.27:

Please see comments to Discharge Prohibition A.5.

Facility Specification C.1.d:

Please see comments to Finding 68.

Facility Specification C.1.e:

A leak or release does not affect the calculation of the distance between waste and groundwater. This separation is fixed and is equal to the distance from the base of the Primary LCRS to the groundwater table. This principle was discussed at our meeting with Regional Board staff on March 3, 2016. On this basis, the Discharger requests that the statement to the contrary in this Finding be eliminated.

Facility Specification C.2.b:

A comprehensive LCRS sump O&M Plan needs to include information relating to the removal of liquid. The Discharger requests that this specification be supplemented to require a description of removal procedures.

An LCRS Sump O&M Plan to ensure that LCRS sumps are properly operated and that appropriate short term and long term response measures are timely implemented in response to foreseeable events such as a sump leak, the detection of fluid other than leachate in a sump (i.e., non-leachate fluid), and/or a release from the unit under Title 27. The LCRS Sump O&M Plan shall include a description of the operation and maintenance procedures for all LCRS sumps at the site including landfill and waste pile modules. For each type of sump (e.g., primary, secondary/leak detection, welded pan lysimeter) at each unit, the plan shall

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describe the sump's design, purpose, operating parameters; monitoring facilities; action leak rate; short term and long term response plans in the event of a sump leak; notification of a release procedure; and the handling, removal, and disposition of any collected liquid (e.g., tanks, returned to landfill or primary LCRS). See Corrective Action Specification D.7 and Provision I.13.a.

Facility Specification C.2.d.

Please see Finding 68.

Facility Specification C.2.e:

Please see comments to Discharge Specification B.8.

Corrective Action Specification D.1:

Corrective Action Specification D.1 sets forth the structure for establishing the corrective action measures. The Discharger has covered that topic in its proposed revisions to Corrective Action Specification D.7. On that basis, the Discharger requests this specification be eliminated.

Corrective Action Specifications D.3:

Under the previous WDRs, the Discharger established corrective action plans for various units with confirmed releases of LFG, LFG-impacted liquid, or LFG condensate-impacted liquid. Since those corrective action measures are ongoing, the Discharger requests that this specification be modified to acknowledge that they may continue and may be appropriate for new releases of similar nature. Additionally, the Discharger requests that this specification acknowledge the opportunity to prepare a work plan for implementation of measures in response to a non-leachate LFG-related fluid.

Lastly, there is no LFG extraction piping within the capillary break layer of existing disposal modules. On that basis, there is no need for specification for corrective action measures for LFG extraction piping in the capillary break layer.

Corrective Action Specification D.5:

Unsaturated zone monitoring devices are specifically designed and located to monitor the unsaturated zone. Groundwater separation is calculated from depth to water measured from the designated piezometers and wells. Unsaturated zone monitoring devices should not be used to determine compliance with groundwater separation requirements. For example, if liquid is detected in landfill gas devices, which are used to monitor the unsaturated zone, the presence of that liquid should not trigger groundwater pumping. On this basis, the Discharger requests that this specification be eliminated.

Corrective Action Specification D.6:

MRP Item A.4.c.i relates to "liquid" in a "leak detection monitoring device." The Discharger proposes revising the wording here for consistency.

Corrective Action Specification D.7.a-d:

This Corrective Action Specification sets forth the structure for establishing the corrective action measures. The Discharger proposes that the first step is the determination of whether the liquid is confirmed to constitute measurably significant evidence of landfill leachate release or the presence of a non-leachate fluid. Distinct response actions for the presence of landfill leachate and non-leachate fluids are proposed. The Discharger's response to a confirmed leachate release shall not be prescribed in these WDRs but rather shall follow the protocol set forth in Title 27 and the SPRRs.

Corrective Action Specification D.10:

To allow the future development of landfill cells, the Discharger shall install a sidegradient detection well rather than a downgradient one.

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Construction Specifications E.1 through E.6:

As discussed in the meeting on March 23, 2016, there are a number of factual errors in the description and tables associated with EAD/L options for future construction of landfill modules. These errors are corrected to be consistent with standard, well accepted, engineering practice and to reflect previously approved liner system design.

Construction Specification E.10:

The installation of LFG extraction piping within the capillary break layer is inconsistent with prudent engineering design because the performance is unreliable. On that basis, the Discharger requests that a requirement to construct the modules with LFG recovery piping within the capillary break layer be eliminated. This modification provides the Discharger the flexibility to make engineering design decisions regarding the placement of LFG extraction piping.

Construction Specification E.11:

The language in this Construction Specification could lead to confusion, as the division becomes blurred as the units becoming conjoined.

Construction Specification E.12:

The expansion of LF-3 or LF-4 may physically overlap with areas where corrective actions are being performed. Rather than identifying the specific measures that are necessary to accommodate landfill operations and/or to install facilities required to comply with these WDRs, the Discharger has eliminated the specificity and requests that expansion be allowed upon submission and approval of corrective action plans.

Construction Specification E.13:

Title 27, Section 21750(f)(5)(D) permits an alternate, more rigorous method of demonstrating interim landfill slope stability. On this basis, the Discharger also requests that these WDRs recognize the availability of this method.

Construction Specification E.16:

The specification of the hydraulic conductivity of 1.0×10^{-5} cm/s or less should apply to compacted soils, not other materials such as concrete or cement. On that basis and to avoid ambiguity, the Discharger requests that the requirement be moved to subpart a.

Construction Specification E.18:

The requirement to maintain a two-foot minimum freeboard is applicable for storage ponds, but not for other features, for example ditches, sumps or pumps. For example, existing ditches were not required to be design to this standard and would immediately become non-compliant with the specification as written. On that basis, the Discharger requests that this specification be modified to reflect that two-foot minimum freeboard is only applicable to Pond A and Pond B.

Construction Specification E.20:

Please see comments to Construction Specification E.16.

Construction Specification E.21:

Please see comments to Finding 162.

Construction Specification E.22:

A discharger must be able to implement winterization improvements at a landfill, such as drains or ditches without obtaining Water Board design plan review and approval. On that basis, the Discharger requests clarification that this construction specification only refers to the compost facility and does not apply to the landfill units.

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Construction Specification E.23:

Please see comments to Construction Specification E.22.

Closure and Post-Closure Maintenance Specification F.3:

The Discharger should be permitted to remove and replace portions of the DM-2.1A interim cover in the future to access and remove stockpiled C-Soil. Therefore, the specification was revised to reflect that the interim cover would be designed to meet Title 27 final closure standards.

Closure and Post-Closure Maintenance Specification F.4:

Additionally, as discussed in our meeting with Regional Board permitting staff on March 3, 2016, the closure date for LF-2 is October 15, 2020 and an interim cover work plan will be prepared similar to LF-3, DM-2.1B (designed to meet Title 27 Final Cover requirements).

Closure and Post-Closure Maintenance Specification F.5:

Please see comments to Discharge Specification B.8.

Closure and Post-Closure Maintenance Specification F.7:

Please see comments to Finding 201.

Closure and Post-Closure Maintenance Specification F.8:

This specification is duplicative of Title 27, Section 21120(a). On that basis, the Discharger requests this specification be eliminated.

Closure and Post-Closure Maintenance Specification F.11:

Title 27, Section 21140 (b) requires obtaining revised WDRs prior to closure of a unit with any other final cover design than the designs specifically authorized. Duplication of Title 27 in these WDRs is unnecessary and therefore the Discharger requests this specification be deleted.

Closure and Post-Closure Maintenance Specification F.12:

The Discharger should be permitted to construct temporary interim slopes steeper than 2.5H:1V provided they are supported by a slope stability analysis.

Closure and Post-Closure Maintenance Specification F.16:

The Discharger shall install necessary erosion and sediment controls during the period the vegetation on final slopes is being established. However, it is not necessary for the Discharger to completely prevent sediment in runoff from the closed landfill. The Discharger requests revisions to clarify this distinction.

Closure and Post-Closure Maintenance Specification F.26:

Recognizing that the intent of the specification is to clean-close composting areas before allowing landfill expansion in those areas, the existing wording could lead to unintended constraints. For example, the Discharger may wish to shrink the composting area and reestablish new ponds, while clean-closing only those composting areas needed for a planned landfill expansion. The tentative language could be interpreted to require termination of all composting operations once landfill expansion begins, even if only in only a portion of the compost area. The proposed revisions address these concerns.

Monitoring Specification H.6:

Please see comments to Finding 86.

Monitoring Specification H.10:

During the meeting on March 3, 2016 with Regional Board permitting staff, the length of the proof period was discussed. Consistent with Code of Federal Regulations Section 258.58(e)(2) the proposed revisions reflect that, the proof period will be satisfied upon demonstration that the constituents of the release have

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been reduced to concentration limits for at least eight consecutive monitoring events. The monitoring events may occur as frequently as once per month. Additionally, the Discharger is permitted to demonstrate the proof period either: (1) while corrective action measures are continuing or, (2) while the corrective action measures have been suspended or modified upon approval by the Executive Officer.

Provision I.7:

Please see comments to Finding 86.

Provision I.9.b:

Please see comments for Finding 68 and Facility Specification C.1.d.

Provision I.9.c:

Please see comment in General Comment B.

Provision I.9.d:

Provision I.9.f:

See Finding 68 and Finding 92. Discharger respectfully requests deletion of unneeded plans and modifications of dates to allow sufficient time for development.

Provision I.10:

Title 27, Section 21780 (c)(3) states that final closure and postclosure maintenance plans for solid waste landfills shall be submitted two years prior to the anticipated date of closure. The Discharger requests that the due dates for the Interim Cover Installation Work Plan and the Certification Report account for this two year period considering LF-2 must be covered by 15 October 2020.

Provision I.12:

Please see comments to Finding 201.

Provision I.13.d:

Please see comments to Discharge Specification B.8.

Provision I.14.b:

Please see comments to Finding 162.

Tentative Monitoring and Reporting Program R5-2016-XXXX

Item A.1:

Please see comments to Finding 86. Additionally, historical monitoring at the site has never detected verified dissolved volatile organic compounds in groundwater.

The current monitoring program should be incorporated into the well table lists and any changes should be the result of the required WQPS report required in the MRP (1. Groundwater Monitoring). Some of the proposed background monitoring wells are downgradient of existing disposal units or are within nitrate remediation areas and have elevated nitrate concentrations. A more thorough evaluation of the monitoring system is warranted and will be included in the required WQPS.

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Table A.1.c:

The following parameters identified as “general minerals” - TDS, chloride, sulfate, calcium, magnesium, sodium, potassium, and bicarbonate alkalinity - occur at the site naturally and should not be identified in the list of monitoring parameters as a reliable indicator of a release. This lack of reliability was acknowledged in the current WDR/MRP, where the following footnote was added to the monitoring parameter tables: “These parameters have been excluded from detection monitoring in order to reduce the risk of false positive indications and to therefore increase the reliability of detecting a leachate release. They are included as supplemental parameters for water quality trend analysis.” The discharger requests that an identical footnote be added to Table A.1.c as footnote 6.

The addition of hexavalent chromium to the monitoring parameter list appears to be the result of the appearance of hexavalent chromium detections with relatively high average concentrations in the WDR leachate table in Finding 55. The hexavalent chromium concentrations in leachate cited in the table under Finding 55 are overstated: (1) the calculated averages do not include non-detect values; (2) the high concentrations for DM-1B and LF-2 are the result of single detections in 1994 which were followed by results with much lower concentrations and non-detections, plus the 1994 hexavalent chromium results were higher than the total chromium results indicating that the hexavalent chromium results were wrong. On this basis, the Discharger requests that hexavalent chromium be eliminated as a monitoring parameter.

The addition of mercury to the monitoring parameter list appears to be the result of the appearance of mercury detections in the WDR leachate table in Finding 55. Mercury is not an appropriate monitoring parameter because groundwater concentrations of mercury are substantially similar to leachate concentrations of mercury. On this basis, the Discharger requests that mercury be eliminated as a monitoring parameter.

Item A.1.c.i:

Please see comments to Finding 68.

Item A.2.a.ii:

The Constituents of Concern are to be monitored every five years, not semiannually.

Table A.2:

Please see comments to MRP Table A.1.c.

Table A.2.b.ii:

Consistent with Finding 61 and the previous WDRs, this Monitoring and Reporting program requires that the Discharger conduct field monitoring for total organic vapors and sample for VOCs if such vapors exceed a given trigger level (i.e., >1% methane and/or >1 ppmv total organic vapors). Field instruments capable of detecting organic vapors at 50 ppbv are not industry standard.

Table A.3.b:

Semiannual monitoring is not needed to adequately characterize the constituents in leachate. On that basis, the Discharger requests that the frequency of leachate monitoring for electrical conductivity, pH, and the other monitoring parameters be changed to annual. Additionally, please see comments to Item A.2.a.ii.

Item A.3.d:

LCRS testing can be conducted only if the LCRS is equipped with a test port. Some of the Discharger’s existing LCRSs are not equipped with a test port (DM-1, DM-2.1, and DM2.2), and therefore LCRS testing cannot be performed. The Discharger requests this Item be revised to clarify that testing must occur on all LCRSs, except those not equipped with a test port.

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Item A.4.b:

Please see comments to Finding 68.

MRP Item A.4.c.i:

It is the Discharger's understanding that profiling that liquids detected in a leak detection monitoring device is required for all new detections in the device regardless of whether the device was previously dry. On that basis, the Discharger requests that the reference to "previously dry" be eliminated.

Additionally, the profiling required by this item is described in greater detail in Corrective Action Specification D.6. The Discharger has proposed revisions to cross-reference that specification.

Further, in light of the bifurcation of response measures proposed by the Discharger in Corrective Action Specification D.7, the reference to short term and long term measures is no longer applicable. On that basis, the Discharger requests these references be eliminated.

Lastly, please see comments to Facility Specification C.1.e relating to the relationship between liquid in a leak detection monitoring device and groundwater separation.

The Discharger shall be provided an opportunity to confirm each release that is identified and to determine whether it constitutes measurably significant evidence of a release of leachate.

Item A.5:

The facility is regulated under the NPDES General Permit for Storm Water Dischargers Associated with Industrial Activities (Water Quality Order No. 2014-005-DWQ, NPDES No. CAS000001). Separate and additional requirements for storm water monitoring in these Tentative WDRs are duplicative and unnecessary. Consistent with the previous WDRs, the Discharger must monitor storm water in accordance with the General Permit.

Table A.5.a.i:

Surface water monitoring points have long been established at the facility. These Tentative WDRs propose renaming the established monitoring points. To avoid confusion, the monitoring points should not be renamed and should retain their original names. All new surface water monitoring points will be named sequentially. Additionally, existing surface water monitoring point SW-5 is sufficient to monitor the Bird Sanctuary Pond. New surface water monitoring point S-4 is not warranted because it is monitoring the same surface water as SW-5 and there is no basis in these Tentative WDRs for the need for additional monitoring.

Table A.5.a.ii, et. Seq.:

Please see Item A.5. Also, leachate seep monitoring is required in MRP A.3.c and MRP A.5.c.

Item A.5.b:

Please see Item A.5.**Item A.7.c.ii:**

Please see comment to Closure and Postclosure Maintenance Specification F.4.

Item A.8.b.ii:

These WDRs require conducting LFG condensate monitoring on the same schedule as that for leachate monitoring. However, sampling LFG condensate sumps for leachate parameters is unnecessary because the condensate is merely moisture from the landfill gas extraction. Moreover, landfill gas condensate is known to have low pH values, be low in dissolved solids, and contains VOCs, usually at higher concentrations than in leachate. On that basis, the Discharger requests that the monitoring requirement be eliminated.

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Table A.9.a.ii – Compost Pond Monitoring:

The Total Coliform Organism monitoring parameter for the compost ponds should be eliminated from the list of monitoring parameters as its presence is highly variable spatially and temporally in addition to being difficult to reproduce.

Item A.9.b.ii:

The monitoring parameter Total Coliform Organisms should be eliminated from the monitoring schedule for groundwater monitoring points because it is difficult to obtain a reliable sample from a groundwater monitoring well.

Item B.7:

Please see comments to Closure and Postclosure Maintenance Specification F.4.

Item C.4.a.ii:

Please see comments to Finding 86.

Information Sheet

Revised WDRs:

Please see comments to Finding 86, Finding 68 and Finding 92.

Tentative WDR Attachments

Table 1:

Table 1 describes waste acceptance by waste type and landfill unit. The information in the table related to asbestos containing waste was inaccurate. The Discharger has proposed revisions to correct these inaccuracies. Please see comments to Finding 7.a. Additionally, stockpiled C-Soil is present on LF-2 (DM-2.1A) and LF-3 (DM-2.1B). The Discharger plans to use this C-Soil in the future in the LF-3 and LF-4 units. The table did not acknowledge this future use. The Discharger has proposed an additional footnote to clarify this.

Table 3:

Facility Specification C.1.b. states that the lowest elevation of waste in lined units shall be the lowest elevation of leachate in the unit's Primary LCRS sump. Table 3 and Table 4 identifies the maximum allowable groundwater elevation for the western half of the site. They include waste and groundwater elevations measured at the leak detection sump (Secondary LCRS) and pan lysimeter. This information is unnecessary because groundwater separation compliance is only measured from the unit's primary LCRS sump. On that basis, the Discharger requests the two columns for leak detection sump and pan lysimeter waste and groundwater elevations be eliminated. Additionally, errors identified in the elevations for DM-2.1A, DM-2.1B, and DM-2.2B, DM-4 and DM-7 have been corrected in the Discharger's proposed revisions.

Table 4: Please see comment for Table 3.